Informatica®

10.2 HotFix 1

Release Guide

Informatica Release Guide
10.2 HotFix 1
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Preface

The *Informatica Release Guide* lists new features and enhancements, behavior changes between versions, and tasks you might need to perform after you upgrade from a previous version. The *Informatica Release Guide* is written for all types of users who are interested in the new features and changed behavior. This guide assumes that you have knowledge of the features for which you are responsible.

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Part I: 10.2

This part contains the following chapters:

CHAPTER 1

New Features, Changes, and Release Tasks (10.2 HotFix 1)

This chapter includes the following topics:

New Features (10.2 HotFix 1)

Application Services

This section describes new application service features in version 10.2 HotFix 1.

Model Repository Service

Git Version Control System

Effective in version 10.2 HotFix1, you can integrate the Model repository with the Git version control system. Git is a distributed version control system. When you check out and check in an object, a copy of the version is saved to the local repository and to the Git server. If the Git server goes down, the local repository retains all the versions of the object.

For more information, see the "Model Repository Service" chapter in the *Informatica 10.2 HotFix 1 Application Service Guide*.

Business Glossary

This section describes new Business Glossary features in version 10.2 HotFix 1.

Import Glossary Assets as Plain Text

Effective in 10.2 HotFix 1, you can import business glossary assets as plain text into the Analyst tool.

For more information about export and import of glossary assets, see the "Glossary Administration" chapter in the *Informatica 10.2 HotFix 1 Business Glossary Guide*.

Command Line Programs

This section describes new commands in version 10.2 HotFix 1.

infacmd isp Commands

The following table describes new infacmd isp commands:

Command	Description
PingDomain	Pings a domain, service, domain gateway host, or node.
ListPasswordRules	Lists the rules to set up complex passwords.
ListWeakPasswordUsers	Lists the users with passwords that do not meet the password policy.

For more information, see the "infacmd isp Command Reference" chapter in the *Informatica 10.2 HotFix 1 Command Reference*.

infacmd wfs Commands

The following table describes new infacmd wfs commands:

Command	Description
pruneOldInstances	Deletes workflow process data from the workflow database.

To delete the process data, you must have the Manage Service privilege on the domain.

For more information, see the "infacmd wfs Command Reference" chapter in the *Informatica 10.2 HotFix 1 Command Reference*.

Connectivity

This section describes new connectivity features in version 10.2 HotFix 1.

Connectivity to Cloud Databases

Effective in version 10.2 HotFix 1, you can configure relational connections in Informatica Developer and PowerCenter to connect to Cloud databases.

You can configure the following connections:

- Oracle connection to connect to Oracle Autonomous Data Warehouse Cloud version 18C
- Oracle connection to connect to Oracle Database Cloud Service version 12C
- Microsoft SQL Server connection to connect to Azure SQL Database
- IBM DB2 connection to connect to DashDB

For more information, see the *Informatica 10.2 HotFix 1 Installation and Configuration Guide*.

Data Types

This section describes new data type features in 10.2 HotFix 1.

Microsoft SQL Server Data Types

Effective in version 10.2 HotFix 1, you can read or write the date data type when you use the Microsoft SQL Server connection in an Informatica mapping.

For more information, see the Data Type Reference appendix in the *Informatica 10.2 HotFix 1 Developer Tool Guide*.

Installer

This section describes new Installer feature in version 10.2 HotFix 1.

Docker Utility

Effective in version 10.2 HotFix 1, you can use the Informatica PowerCenter Docker utility to create the Informatica domain services. You can build the Informatica docker image with base operating system and Informatica binaries and run the existing docker image to create the Informatica domain within a container.

For more information about installing Informatica PowerCenter Docker utility to create the Informatica domain services, see https://kb.informatica.com/h2l/HowTo%20Library/1213-InstallInformaticaUsingDockerUtility-H2L.pdf.

Informatica Transformations

This section describes new features in Informatica transformations in version 10.2 HotFix 1.

Address Validator Transformation

This section describes new Address Validator transformation features.

The Address Validator transformation contains additional address functionality for the following countries:

All Countries

Effective in version 10.2 HotFix 1, the Address Validator transformation supports single-line address verification in every country for which Informatica provides reference address data.

In earlier versions, the transformation supported single-line address verification for 26 countries.

To verify a single-line address, enter the address in the Complete Address port. If the address identifies a country for which the default preferred script is not a Latin or Western script, use the default Preferred Script property on the transformation with the address.

Austria, Germany, and Switzerland

Effective in version 10.2 HotFix 1, the Address Validator transformation supports the uppercase character ß in Austria, Germany, and Switzerland addresses.

The transformation supports the character ß in the following ways:

- If you set the Casing property to UPPER, the transformation returns the German character ß as ß. If you set the Casing property to LOWER, the transformation returns the German character ß as ß.
- The transformation treats ß and ß as equally valid characters in an address. In reference data matches, the transformation can identify a perfect match when the same values contain either ß or ß.
- The transformation treats ß and ss as equally valid characters in an address. In reference data matches, the transformation can identify a standardized match when the same values contain either ß or ss.

- If you set the Preferred Script property to ASCII_SIMPLIFIED, the transformation returns the character ß as S.
- If you set the Preferred Script property to ASCII_EXTENDED, the transformation returns the character ß as SS.

Bolivia

Effective in version 10.2 HotFix 1, the Address Validator transformation improves the parsing and validation of Bolivia addresses. Additionally, Informatica updates the reference data for Bolivia.

The transformation also includes the following improvements for Bolivia:

- Address validation to street level.
- Geocoordinates at street mid-point level for addresses in major cities.

Canada

Informatica introduces the following features and enhancements for Canada:

Support for the Global Preferred Descriptor property in Canada Addresses

Effective in version 10.2 HotFix 1, you can configure the transformation to return the short or long form of an element descriptor.

Address Verification can return the short or long form of the following descriptors:

- Street descriptors
- Directional values
- Building descriptors
- Sub-building descriptors

To specify the output format for the descriptors, configure the Global Preferred Descriptor property on the transformation. The property applies to English-language and French-language descriptors. By default, the transformation returns the descriptor in the format that the reference data specifies. If you select the PRESERVE INPUT option on the property, the Preferred Language property takes precedence over the Global Preferred Descriptor property.

Support for CH and CHAMBER as Sub-Building Descriptors

Effective in version 10.2 HotFix 1, Address Validator transformation recognizes CH and CHAMBER as sub-building descriptors in Canada addresses.

Colombia

Effective in version 10.2 HotFix1, the Address Validator transformation improves the processing of street data in Colombia addresses. Additionally, Informatica updates the reference data for Colombia.

The Address Validator transformation validates an address in Colombia to house number level. The transformation can verify a Colombia address that includes information for the street on which the house is located and also for the nearest cross street to the house.

For example, the transformation can verify the following addresses:

AVENIDA 31 65 29 APTO 1626

AVENIDA 31 DIAGONAL 65 29 APTO 1626

Consider the following guidelines for Colombia addresses:

- The Address Validator transformation can verify the address with and without the cross street descriptor DIAGONAL.

- The transformation can verify the address with and without a dash symbol between the cross street number and the house number. The transformation does not include a dash symbol in this position in the output address.
- The transformation can recognize the # symbol before the cross street number in an input address. The transformation recognizes the address as a reference data match and not a correction.

  For example, address validation recognizes the following input address as a reference data match and omits the # symbol from the verified output address:

  AVENIDA 31 #65 29 APTO 1626

France

Effective in version 10.2 HotFix 1, Informatica introduces the following improvements for France addresses:

- Informatica improves the supplementary reference data for France.
- The Address Validator transformation assigns addresses to IRIS units in France with greater accuracy. The transformation uses the house number in the address to verify the IRIS unit to which the address belongs. The use of house numbers can improve the assignment accuracy when the address lies close to the border between different units.

India

Effective in version 10.2 HotFix 1, the Address Validator transformation validates an address in India to house number level.

Peru

Effective in version 10.2 HotFix 1, the Address Validator transformation validates a Peru address to house number level. Additionally, Informatica updates the reference data for Peru.

South Africa

Effective in version 10.2 HotFix 1, the Address Validator transformation improves the parsing and verification of delivery service descriptors in South Africa addresses.

The transformation improves the parsing and verification of the delivery service descriptors in the following ways:

- Address Verification recognizes Private Bag, Cluster Box, Post Office Box, and Postnet Suite as different types of delivery service. Address Verification does not standardize one delivery service descriptor to another. For example, Address Verification does not standardize Postnet Suite to Post Office Box.
- Address Verification parses Postnet Box as a non-standard delivery service descriptor and corrects Postnet Box to the valid descriptor Postnet Suite.
- Address Verification does not standardize the sub-building descriptor Flat to Fl.

South Korea

Effective in version 10.2 HotFix 1, the Address Validator transformation introduces the following features and enhancements for South Korea:

- The South Korea address reference data includes building information. The transformation can read, verify, and correct building information in a South Korea address.

- The transformation returns all of the current addresses at a property that an older address represents. The older address might represent a single current address or it might represent multiple addresses, for example if multiple residences occupy the site of the property.

  To return the current addresses, first find the address ID for the older property. When you submit the address ID with the final character A in address code lookup mode, the transformation returns all current addresses that match the address ID.

  Note: The Address Validator transformation uses the Max Result Count property to determine the maximum number of addresses to return for the address ID that you enter. The Count Overflow property indicates whether the database contains additional addresses for the address ID.

Sweden

Effective in version 10.2 HotFix 1, the Address Validator transformation improves the verification of street names in Sweden addresses.

The transformation improves the verification of street names in the following ways:

- The transformation can recognize a street name that ends in the character G as an alias of the same name with the final characters GATAN.
- The transformation can recognize a street name that ends in the character V as an alias of the same name with the final characters VÄGEN.
- The Address Validator transformation can recognize and correct a street name with an incorrect descriptor when either the long form or the short form of the descriptor is used.

  For example, The transformation can correct RUNIUSV or RUNIUSVÄGEN to RUNIUSGATAN in the following address:

  RUNIUSGATAN 7

  SE-112 55 STOCKHOLM

Thailand

Effective in version 10.2 HotFix 1, the Address Validator transformation introduces the following features and enhancements for Thailand:

Improvements to Thailand Addresses

The transformation improves the parsing and validation of Thailand addresses in a Latin script.

Additionally, the transformation validates an address to house number level.

Native Support for Thailand Addresses

The Address Validator transformation can read and write Thailand addresses in native Thai and Latin scripts. Informatica updates the reference data for Thailand and adds reference data in the native Thai script.

Informatica provides separate reference databases for Thailand addresses in each script. To verify addresses in the native Thai script, install the native Thai databases. To verify addresses in a Latin script, install the Latin databases.

Note: If you verify Thailand addresses, do not install both database types. Accept the default option for the Preferred Script property.

United Arab Emirates

Effective in version 10.2 HotFix 1, the Address Validator transformation verifies street names in United Arab Emirates addresses. To verify street names in United Arab Emirates, install the current reference address databases for the United Arab Emirates.

United Kingdom

Effective in version 10.2 HotFix 1, the Address Validator transformation can return a United Kingdom territory name.

The transformation returns the territory name in the Country_2 element and returns the country name in the Country_1 element. You can configure an output address with both elements, or you can omit the Country_1 element if you post mail within the United Kingdom. The territory name appears above the postcode in a United Kingdom address on an envelope or label.

To return the territory name, install the current United Kingdom reference data.

United States

Effective in version 10.2 HotFix 1, the Address Validator transformation can recognize up to three sub-building levels in a United States address.

In compliance with the United States Postal Service requirements, the transformation matches the information in a single sub-building element with the reference data. If the Sub-building_1 information does not match, the transformation compares the Sub-building_2 information. If the Sub-building_2 information does not match, the transformation compares the Sub-building_3 information. The transformation copies the unmatched sub-building information from the input address to the output address.

For comprehensive information about the features and operations of the address verification software engine version that Informatica embeds in version 10.2 HotFix 1 see the *Informatica Address Verification 5.13.0 Developer Guide*.

Metadata Manager

This section describes new Metadata Manager features in version 10.2 HotFix 1.

SAML Authentication for Metadata Manager

Effective in version 10.2 HotFix 1, Metadata Manager supports Security Assertion Markup Language (SAML)-based single sign-on. SAML-based single sign-on authenticates users against account credentials stored in Microsoft Active Directory. Accounts are imported from Active Directory into a security domain within the Informatica domain.

For information, see the "SAML Authentication for Informatica Web Applications" chapter in the *Informatica 10.2 HotFix 1 Security Guide*.

Skip Lineage During Metadata Manager Repository Backup or Restore Operations

Effective in version 10.2 HotFix 1, use the `[<-sl|--skipLineage> skipLineage]` option in the `backupRepository` and `restoreRepository` command to skip lineage during Metadata Manager repository back up and restore operations.

For information, see the *Informatica 10.2 HotFix 1 Metadata Manager Command Reference Guide*.

PowerCenter

This section describes new PowerCenter features in version 10.2 HotFix 1.

Pushdown Optimization for SAP HANA

Effective in version 10.2 HotFix 1, when the connection type is ODBC, you can select the ODBC provider sub-type as **SAP HANA** to push transformation logic to SAP HANA. You can configure source-side, target-side, or full pushdown optimization to push the transformation logic to SAP HANA.

For more information, see the *Informatica PowerCenter 10.2 HotFix 1 Advanced Workflow Guide*.

Pushdown Optimization for Snowflake

Effective in version 10.2 HotFix 1, when the connection type is ODBC, you can configure source-side or full pushdown optimization to push the transformation logic to Snowflake.

For information, see the *Informatica PowerCenter 10.2 HotFix 1 Advanced Workflow Guide*.

PowerExchange Adapters for Informatica

This section describes new Informatica adapter features in version 10.2 HotFix 1.

PowerExchange for Microsoft Azure Blob Storage

Effective in version 10.2 HotFix 1, PowerExchange for Microsoft Azure Blob Storage includes the following functionality:

- You can run mappings on the Spark engine.
- You can use the file port to store the file name from which the Data Integration Service reads the data at run-time.
- You can read and write .csv, Avro, and Parquet files when you run a mapping in the native environment.
- You can read a directory when you run a mapping in the native environment.
- You can generate or skip header rows when you run a mapping in the native environment. On the Spark engine, the header row is created by default.
- You can append an existing blob. The append operation is applicable to only to the .csv files in the native environment.
- You can override the blob or container name. In the Blob Container Override field, specify the container name or sub-folders in the root container with the absolute path.
- You can read and write .csv files compressed in the gzip format in the native environment.

For more information, see the *Informatica PowerExchange for Microsoft Azure Blob Storage 10.2 HotFix 1 User Guide*.

PowerExchange for Microsoft Azure SQL Data Warehouse

Effective in version 10.2 HotFix 1, PowerExchange for Microsoft Azure SQL Data Warehouse includes the following features:

- You can configure key range partitioning when you read data from Microsoft Azure SQL Data Warehouse objects.
- You can override the SQL query and define constraints when you read data from a Microsoft Azure SQL Data Warehouse object.
- You can configure pre-SQL and post-SQL queries for source and target objects in a mapping.
- You can configure the native expression filter for the source data object operation.

- You can perform update, upsert, and delete operations against Microsoft Azure SQL Data Warehouse tables.
- You can configure an uncached lookup operation in the native environment.

For more information, see the *Informatica PowerExchange for Microsoft Azure SQL Data Warehouse 10.2 HotFix 1 User Guide*.

PowerExchange for Netezza

Effective in version 10.2 HotFix 1, you can configure dynamic mappings to change Netezza sources and targets at run time based on parameters and rules that you define.

When you configure dynamic mappings, you can also create or replace the target at run time. You can select the **Create or replace table at run time** option in the advanced properties of the Netezza data object write operation.

PowerExchange for Teradata Parallel Transporter API

Effective in version 10.2 HotFix 1, you can configure dynamic mappings to change Teradata sources and targets at run time based on parameters and rules that you define.

When you configure dynamic mappings, you can also create or replace the Teradata target at run time. You can select the **Create or replace table at run time** option in the advanced properties of the Teradata data object write operation.

PowerExchange Adapters for PowerCenter

This section describes new PowerCenter adapter features in version 10.2 HotFix 1.

PowerExchange for Amazon Redshift

Effective in version 10.2 HotFix 1, PowerExchange for Amazon Redshift includes the following new features:

- In addition to the existing regions, you can also read data from or write data to the `AWS GovCloud` region.
- You can specify the part size of an object to download the object from Amazon S3 in multiple parts.
- You can encrypt data while fetching the file from Amazon Redshift using the AWS-managed encryption keys or AWS KMS-managed customer master key for server-side encryption.
- You can provide the number of files to calculate the number of the staging files for each batch. If you do not provide the number of files, PowerExchange for Amazon Redshift calculates the number of the staging files.
- You can use the TRUNCATECOLUMNS option in the copy command to truncate the data of the VARCHAR and CHAR data types column before writing data to the target.
- PowerExchange for Amazon Redshift supports version 11 and 12 of SuSe Linux Enterprise Server operating system.

For more information, see the *Informatica PowerExchange for Amazon Redshift 10.2 HotFix 1 User Guide for PowerCenter*.

PowerExchange for Amazon S3

Effective in version 10.2 HotFix 1, PowerExchange for Amazon S3 includes the following new features:

- In addition to the existing regions, you can also read data from or write data to the `AWS GovCloud` region.

- You can specify the line that you want to use as the header when you read data from Amazon S3. You can specify the line number in the **Header Line Number** property under the source session properties.
- You can specify the line number from where you want the PowerCenter Integration Service to read data. You can configure the **Read Data From Line** property under the source session properties.
- You can specify an asterisk (*) wildcard in the file name to fetch files from the Amazon S3 bucket. You can specify the asterisk (*) wildcard to fetch all the files or only the files that match the name pattern.
- You can add a single or multiple tags to the objects stored on the Amazon S3 bucket to categorize the objects. Each tag contains a key value pair. You can either enter the key value pairs or specify the absolute file path that contains the key value pairs.
- You can specify the part size of an object to download the object from Amazon S3 in multiple parts.
- You can configure partitioning for Amazon S3 sources. Partitioning optimizes the mapping performance at run time when you read data from Amazon S3 sources.
- PowerExchange for Amazon S3 supports version 11 and 12 of SuSe Linux Enterprise Server operating system.

For more information, see the *Informatica PowerExchange for Amazon S3 10.2 HotFix 1 User Guide for PowerCenter*.

PowerExchange for Cassandra

Effective in version 10.2 HotFix 1, the Informatica Cassandra ODBC driver supports asynchronous write.

To enable asynchronous write on a Linux operating system, you must add the **EnableAsynchronousWrites** key name in the `odbc.ini` file and set the value to 1.

To enable asynchronous write on a Windows operating system, you must add the **EnableAsynchronousWrites** property in the Windows registry for the Cassandra ODBC data source name and set the value as 1.

For more information, see the *Informatica PowerExchange for Cassandra 10.2 HotFix 1 User Guide for PowerCenter*.

PowerExchange for Microsoft Dynamics CRM

Effective in version 10.2 HotFix 1, PowerExchange for Microsoft Dynamics CRM includes the following new features:

- You can select either **Discovery Service** or **Organization Service** as a service type for passport authentication in the Microsoft Dynamics CRM run-time connection.
- You can configure an alternate key in update, upsert, and delete operations.
- You can specify an alternate key as a reference for Lookup, Customer, Owner, and PartyList data types.

For more information, see the *Informatica PowerExchange for Microsoft Dynamics CRM 10.2 HotFix 1 User Guide for PowerCenter*.

PowerExchange for Salesforce

Effective in version 10.2 HotFix 1, PowerExchange for Salesforce includes the following new features:

- You can use version 42.0 of Salesforce API to create a Salesforce connection and access Salesforce objects.
- You can configure OAuth for Salesforce connections.

For more information, see the*Informatica PowerExchange for Salesforce 10.2 HotFix 1 User Guide for PowerCenter*.

PowerExchange for SAP NetWeaver

Effective in version 10.2 HotFix 1, PowerExchange for SAP NetWeaver includes the following new features:

Connection resiliency support for business content integration mappings

You can configure the following connection resiliency parameters in the listener session of business content integration mappings:

- **Number of Retries for Connection Resiliency**. Defines the number of connection retries the PowerCenter Integration Service must attempt in the event of an unsuccessful connection with SAP.
- **Delay between Retries for Connection Resiliency**. Defines the time interval in seconds between the connection retries.

New SAP data types support

You can use the following new SAP data types based on the integration method you use:

Data Type	Data Integration using the ABAP Program (Table Reader and Ttable Writer)	Data Integration using BAPI/RFC Functions	IDoc Integration using ALE
INT8	Supported	Not supported	Not supported
DF16_DEC	Supported	Supported	Not supported
DF34_DEC	Supported	Supported	Not supported
DF16_DEC	Supported	Supported	Not supported
DF34_DEC	Supported	Supported	Not supported
DF16_RAW	Supported	Supported	Not supported
DF34_RAW	Supported	Supported	Not supported
RAWSTRING	Supported	Not supported	Supported
STRING	Supported	Supported	Supported
SSTRING	Supported	Supported	Not supported

For more information, see the *Informatica PowerExchange for SAP NetWeaver 10.2 HotFix 1 User Guide for PowerCenter*.

PowerExchange for Snowflake

Effective in version 10.2 HotFix 1, PowerExchange for Snowflake includes the following new features:

- You can configure a custom SQL query to configure a Snowflake source.
- You can override the database and schema name when you create temporary tables in the Snowflake staging database. You must add the database and schema name that you want to override in the JDBC URL parameters of the Snowflake connection.
- You can override the imported Snowflake source table name by specifying the table name in the Snowflake session properties. You can also configure a SQL override to override the default SQL query used to extract data from the Snowflake source.

- You can override the Snowflake target table name by specifying the table name in the Snowflake target session properties.
- You can configure source-side or full pushdown optimization to push the transformation logic to Snowflake when you use the ODBC connection type. For information about the operators and functions that the PowerCenter Integration Service can push to Snowflake, see the *Informatica PowerCenter 10.2 HotFix 1 Advanced Workflow Guide*.
- You can join multiple Snowflake source tables by specifying a join condition.
- You can configure an unconnected lookup transformation for the source qualifier in a mapping.
- You can configure pass-through partitioning for a Snowflake session. After you add the number of partitions, you can specify an SQL override or a filter override condition for each of the partitions.
- You can configure the HTTP proxy server authentication settings at design time or at run time to read data from or write data to Snowflake.
- You can configure Okta SSO authentication by specifying the authentication details in the JDBC URL parameters of the Snowflake connection.
- You can read data from and write data to Snowflake that is enabled for staging data in Azure or Amazon.

For more information, see the *Informatica PowerExchange for Snowflake 10.2 HotFix 1 User Guide for PowerCenter*.

PowerExchange for Teradata Parallel Transporter API

Effective in version 10.2 HotFix 1, when you use the Load operator, you can set the maximum buffer size in kilobytes that the Teradata PT API uses for writing data. You can set the maximum buffer size value in the Teradata target session properties.

Security

This section describes new security features in version 10.2 HotFix 1.

Security - Password Complexity

Effective in version 10.2 HotFix 1, you can enable password complexity to validate the password strength. By default this option is disabled.

For more information, see the "Security Management in Informatica Administrator" chapter in the *Informatica 10.2 HotFix 1 Security Guide*.

Changes (10.2 HotFix 1)

Support Changes

This section describes the support changes in 10.2 HotFix 1.

Big Data Management Hadoop Distributions

The following table lists the supported Hadoop distribution versions and changes in Big Data Management 10.2 HotFix 1:

Hadoop Distribution	Supported Distribution Versions	10.2 HotFix 1 Changes
Amazon EMR	5.8	Dropped support for version 5.4.
Azure HDInsight	3.5.x 3.6.x	No change.
Cloudera CDH	5.10.x 5.11.x 5.12.x 5.13.x	Dropped support for version 5.9.
Hortonworks HDP	2.5x 2.6x	Dropped support for version 2.4.
IBM BigInsights	Not supported.	Dropped support for IBM BigInsights.
MapR	5.2 MEP 3.0.x	Dropped support for version 5.2 MEP 2.0.x.

Informatica big data products support a variety of Hadoop distributions. In each release, Informatica adds, defers, and drops support for Hadoop distribution versions. Informatica might reinstate support for deferred versions in a future release.

To see a list of the latest supported versions, see the Product Availability Matrix on the Informatica network: https://network.informatica.com/community/informatica-network/product-availability-matrices

Intelligent Streaming Hadoop Distributions

The following table lists the supported Hadoop distribution versions and changes in Intelligent Streaming 10.2 HotFix 1:

Distribution	Supported Versions	Changes Since 10.2
Amazon EMR	5.8	Dropped support for version 5.4.
Cloudera CDH	5.10 5.11 5.12 5.13	No change.
Hortonworks HDP	2.5.x 2.6.x	No change.
MapR	5.2 MEP 3.0	Dropped support for version 5.2 MEP 2.0.

To see a list of the latest supported versions, see the Product Availability Matrix on the Informatica network: `https://network.informatica.com/community/informatica-network/product-availability-matrices`.

Application Services

This section describes changes to application services in version 10.2 HotFix 1.

Model Repository Service

Monitoring Model Repository Service

Effective in version 10.2 HotFix 1, configure a Model Repository Service as a monitoring Model Repository Service to monitor the statistics for ad hoc jobs, applications, logical data objects, SQL data services, web services, and workflows. Use separate database user accounts when you configure monitoring Model repository and Model repository.

Previously, you could use a Model Repository Service to store design-time and run-time objects in the Model repository.

For more information, see the "Model Repository Service" chapter in the *Informatica 10.2 HotFix 1 Application Service Guide*.

Big Data Management

This section describes the changes to Big Data Management in version 10.2 HotFix 1.

Precision and Scale on the Hive Engine

Effective in version 10.2 HotFix 1, the output of user-defined functions that perform multiplication on the Hive engine can have a maximum scale of 6 if the following conditions are true:

- The difference between the precision and scale is greater than or equal to 32.
- The resultant precision is greater than 38.

Previously, the scale could be as low as 0.

For more information, see the "Mappings in the Hadoop Environment" chapter in the *Informatica Big Data Management 10.2 HotFix 1 User Guide*.

Business Glossary

This section describes changes to Business Glossary in version 10.2 HotFix 1.

Alerts and Notifications

Effective in 10.2 HotFix 1, the Analyst tool displays glossary name in addition to the names of the sender and asset submitted for review. Previously, the Analyst tool displayed only the name of the sender and name of the asset that was submitted for review.

For more information, see the "Finding Glossary Content" chapter in the *Informatica 10.2 HotFix 1 Business Glossary Guide*.

Documentation

This section describes changes to guides in Informatica documentation in version 10.2 HotFix 1.

Informatica PowerCenter 10.2 HotFix 1 Repository Guide

Effective in version 10.2 HotFix 1, the *Informatica PowerCenter 10.2 HotFix 1 Repository Guide* includes appendices MX Views Reference and PowerCenter Reports Reference. The *Informatica PowerCenter 10.2 HotFix 1 PowerCenter Reports Guide* and the *Informatica PowerCenter 10.2 HotFix 1 Using PowerCenter Reports Guide* are moved into the *Informatica PowerCenter 10.2 HotFix 1 Repository Guide* as one appendix.

For more information, see the *Informatica PowerCenter 10.2 HotFix 1 Repository Guide*.

Informatica Development Platform

This section describes changes to Informatica Development Platform in version 10.2 HotFix 1.

Informatica Connector Toolkit

Effective in version 10.2 HotFix 1, you can use the Informatica Connector Toolkit to build connector for Informatica Intelligent Cloud Services by default. If you want to publish a connector developed using Informatica Connector Toolkit versions earlier than 10.2 HotFix 1, set `YES` as the value of the `CTK_ADAPTER` system environment variable. For example, `CTK_ADAPTER =YES`.

Previously, you could use the Informatica Connector Toolkit to build connector for Informatica Cloud Services.

For more information, see the *Informatica Development Platform 10.2 HotFix 1 User Guide*.

Informatica Transformations

This section describes the changes to the Informatica transformations in version 10.2 HotFix 1.

Address Validator Transformation

This section describes the changes to the Address Validator transformation.

The Address Validator transformation contains the following updates to address functionality:

All Countries

Effective in version 10.2 HotFix 1, the Address Validator transformation uses version 5.13.0 of the Informatica Address Verification software engine. The engine enables the features that Informatica adds to the Address Validator transformation in version 10.2 HotFix 1.

Previously, the transformation used version 5.11.0 of the Informatica Address Verification software engine.

Parcel Centroid and Rooftop Geocodes

Effective June 2018, Informatica ceases to update the reference data files that contain Parcel Centroid and Rooftop geocode data, and Informatica ceases to provide the files to first-time users. Current reference data files for Parcel Centroid and Rooftop geocodes remain operational.

For more information, see the *Informatica 10.2 HotFix 1 Developer Transformation Guide* and the *Informatica 10.2 HotFix 1 Address Validator Port Reference*.

For comprehensive information about the updates to the Informatica Address Verification software engine from version 5.11.0 through version 5.13.0, see the *Informatica Address Verification 5.13.0 Release Guide*.

PowerCenter

This section describes changes to PowerCenter in version 10.2 HotFix 1.

Microsoft Analyst for Excel

Effective in version 10.2 HotFix 1, Informatica supports Mapping Analyst for Excel with Microsoft Excel 2016. Mapping Analyst for Excel includes an Excel add-in that you can use to configure mapping specifications in Microsoft Excel 2016.

Previously, Informatica supported Mapping Analyst for Excel with Microsoft Excel 2007 and Microsoft Excel 2010.

For more information about installing the add-in for Microsoft Excel 2016, see the *Informatica PowerCenter 10.2 HotFix 1 Mapping Analyst for Excel Guide*.

PowerExchange Adapters for PowerCenter

This section describes changes to PowerCenter adapters in version 10.2 HotFix 1.

PowerExchange for Amazon Redshift

Effective in version 10.2 HotFix 1, PowerExchange for Amazon Redshift has the following changes:

- You can provide the number of files in the **Number of Files per Batch** field under the target session properties to calculate the number of the staging files for each batch.
  Previously, the number of the staging files for each batch was calculated based on the values you provided in the **Cluster Node Type** and **Number of Nodes in the Cluster** fields under the connection properties.
- The session log contains information about the individual time taken to upload data to the local staging area, upload data to Amazon S3 from the local staging area, and then upload data to an Amazon Redshift target by issuing copy command.
  Previously, the session log contained only the total time taken to write data from source to target.

For more information, see the *Informatica PowerExchange for Amazon Redshift 10.2 HotFix 1 User Guide for PowerCenter*.

PowerExchange for Cassandra

Effective in version 10.2 HotFix 1, PowerExchange for Cassandra has the following changes:

- The name and directory of the Informatica PowerExchange for Cassandra ODBC driver file has changed.

  The following table lists the Cassandra ODBC driver file name and file directory based on Linux and Windows operating systems:

Operating System	Cassandra ODBC Driver File Name	File Directory
Linux	`libcassandraodbc_sb64.so`	`<Informatica installation directory>\tools\cassandra\lib\libcassandraodbc_sb64.so`
Windows	`CassandraODBC_sb64.dll`	`<Informatica installation directory>\tools\cassandra\lib\CassandraODBC_sb64.dll`

  On Linux operating systems, you must update the value of the `Driver` property to `<Informatica installation directory>\tools\cassandra\lib\libcassandraodbc_sb64.so` for the existing Cassandra data sources in the `odbc.ini` file.

On Windows, you must update the following properties in the Windows registry for the existing Cassandra data source name:

```
Driver=<Informatica installation directory>\tools\cassandra\lib\CassandraODBC_sb64.dll
Setup=<Informatica installation directory>\tools\cassandra\lib\CassandraODBC_sb64.dll
```

- The new key name for Load Balancing Policy option is **LoadBalancingPolicy**.
  Previously, the key name for Load Balancing Policy was **COLoadBalancingPolicy**.
- The default values of the following Cassandra ODBC driver properties has changed:

Driver Property Name	Key Name	New Default Value
Concurrent Requests	NumConcurrentRequests	100
Insert Query Threads	NumInsertQueryThreads	2
Iterations Per Insert Thread	NumIterationsPerInsertThread	50

For more information, see the *Informatica PowerExchange for Cassandra 10.2 HotFix 1 User Guide*.

PowerExchange for Google BigQuery

Effective in version 10.2 HotFix 1, PowerExchange for Google BigQuery installs with the Informatica services.

Previously, PowerExchange for PowerExchange for Google BigQuery had a separate installer.

For more information, see the *Informatica PowerExchange for Google BigQuery 10.2 HotFix 1 User Guide for PowerCenter*.

PowerExchange for Salesforce

Effective in version 10.2 HotFix 1, the error messages that you encounter during a Salesforce session might differ because of a change in the Salesforce API.

For example, when you reconnect to Salesforce the following error message appears:

```
[ERROR] Reattempt the Salesforce request [getBatchInfo] due to the error [Server error
returned in unknown format].
```

Previously, for the same scenario the following error message was displayed:

```
[ERROR] Reattempt the Salesforce request [getBatchInfo] due to the error [input stream
can not be null].
```

PowerExchange for Salesforce Analytics

Effective in version 10.2 HotFix 1, PowerExchange for Salesforce Analytics installs with Informatica services.

Previously, PowerExchange for Salesforce Analytics had a separate installer.

For more information, see the *Informatica PowerExchange for Salesforce Analytics 10.2 HotFix 1 User Guide for PowerCenter*

PowerExchange for Snowflake

Effective in version 10.2 HotFix 1, PowerExchange for Snowflake installs with the Informatica services.

Previously, PowerExchange for PowerExchange for Snowflake had a separate installer.

For more information, see the *Informatica PowerExchange for Snowflake 10.2 HotFix 1 User Guide for PowerCenter*.

Reference Data

This section describes changes in reference data operations in version 10.2 HotFix 1.

Content Installer

Effective Spring 2018, Informatica no longer provides a Content Installer utility for accelerator files and reference data files. To add accelerator files or reference data files to an Informatica installation, extract and copy the files to the appropriate directories in the installation.

Previously, you might use the Content Installer to extract and copy the files to the Informatica directories.

For more information, see the *Informatica 10.2 HotFix 1 Content Guide*.

Properties Files in PowerCenter

Effective in version 10.2 HotFix 1, the upgrade process and the HotFix installation process maintain the contents of the reference data properties files from an earlier PowerCenter version. You do not need to edit any reference data properties file after you install the HotFix or upgrade to version 10.2 HotFix 1.

PowerCenter reads configuration information for reference data from the following properties files:

- AD50.cfg. Contains properties for address reference data.
- CLASSIFIER.properties. Contains properties for classifier models.
- IDQTx.cfg. Contains properties for identity populations.
- NER.properties. Contains properties for probabilistic models.

The HotFix installation or upgrade process writes backup versions of the properties files to the Informatica 10.2 HotFix 1 directories. The backup files are the default versions of the files and do not contain any value that you set in the earlier installation. Each backup file name ends with the extension .bak.

Previously, the upgrade operation renamed any reference data properties file that it found with the extension .bak. The upgrade operation also created default versions of any properties file that it renamed.

Note: Previously, if you installed a HotFix for an installation, so that the Informatica directory structure did not change, the installation process preserved the AD50.cfg file. The HotFix installation otherwise added the extension .bak to each reference data properties file that it found and created a default version of each file.

For more information, see the *Informatica 10.2 HotFix 1 Content Guide*.

Release Tasks (10.2 HotFix 1)

PowerExchange Adapters for Informatica

This section describes release tasks for Informatica adapters in version 10.2 HotFix 1.

PowerExchange for Netezza

Effective in version 10.2 HotFix 1, if you want to run dynamic mappings for Netezza objects, you must add the Netezza JDBC jar in the following location: `<Informatica installation directory>/externaljdbcjars`.

For more information, see the *Informatica 10.2 HotFix 1 PowerExchange for Netezza User Guide*.

PowerExchange for Teradata Parallel Transporter API

Effective in version 10.2 HotFix 1, if you want to run dynamic mappings for Teradata objects, you must add the Teradata JDBC jar in the following location: `<Informatica installation directory>/externaljdbcjars`.

For more information, see the *Informatica 10.2 HotFix 1 PowerExchange for Teradata Parallel Transporter API User Guide*.

PowerExchange Adapters for PowerCenter

This section describes release tasks for PowerCenter adapters in version 10.2 HotFix 1.

PowerExchange for Amazon Redshift

Effective in version 10.2 HotFix 1, PowerExchange for Amazon Redshift has the following release tasks:

- The **Cluster Node Type** and **Number of Nodes in the Cluster** fields are not available in the connection properties. After upgrade, PowerExchange for Amazon Redshift calculates the number of the staging files and ignores the value that you specified in the previous version for the existing mapping.
  You can specify the number of files in the **Number of Files per Batch** field under the target session properties to calculate the number of the staging files for each batch.
- The AWS SDK for Java is updated to the version 1.11.250.
- The following third party jars are updated to the latest version 2.9.5:
  - jackson-annotations
  - jackson-databind
  - jackson-core

For more information, see the *Informatica 10.2 HotFix 1 PowerExchange for Amazon Redshift User Guide for PowerCenter*.

PowerExchange for Amazon S3

Effective in version 10.2 HotFix 1, the AWS SDK for Java is updated to the version 1.11.250.

For more information, see the *Informatica 10.2 HotFix 1 PowerExchange for Amazon S3 User Guide for PowerCenter*.

PowerExchange for Teradata Parallel Transporter API

Effective in version 10.2 HotFix 1, you can define a maximum buffer size in kilobytes that the Teradata PT API uses for writing data.

When you upgrade from an earlier version, you must re-register the `TeradataPT.xml` plug-with the PowerCenter Repository Service to enable the maximum buffer size property. After you register, you can define the maximum buffer size in the Teradata target session properties.

For more information about configuring the maximum buffer size, see the *Informatica 10.2 HotFix 1 PowerExchange for Teradata Parallel Transporter API User Guide for PowerCenter*.

CHAPTER 2

New Products (10.2)

This chapter includes the following topic:

PowerExchange Adapters

PowerExchange Adapters for Informatica

This section describes new Informatica adapters in 10.2.

PowerExchange for Microsoft Azure Data Lake Store

Effective in version 10.2, you can create a Microsoft Azure Data Lake Store connection to specify the location of Microsoft Azure Data Lake Store sources and targets you want to include in a data object. You can use the Microsoft Azure Data Lake Store connection in data object read and write operations. You can validate and run mappings in the native environment or on the Blaze engine in the Hadoop environment.

For more information, see the *Informatica PowerExchange for Microsoft Azure Data Lake Store User Guide*.

CHAPTER 3

New Features (10.2)

This chapter includes the following topics:

Application Services

This section describes new application service features in 10.2.

Model Repository Service

This section describes new Model Repository Service features in 10.2.

Import Objects from Previous Versions

Effective in version 10.2, you can use infacmd to upgrade objects exported from an Informatica 10.1 or 10.1.1 Model repository to the current metadata format, and then import the upgraded objects into the current Informatica release.

For more information, see the "Object Import and Export" chapter in the *Informatica 10.2 Developer Tool Guide*, or the "infacmd mrs Command Reference" chapter in the *Informatica 10.2 Command Reference*.

Big Data

This section describes new big data features in 10.2.

Big Data Management Installation

Effective in version 10.2, the Data Integration Service automatically installs the Big Data Management binaries on the cluster.

When you run a mapping , the Data Integration Service checks for the binary files on the cluster. If they do not exist or if they are not synchronized, the Data Integration Service prepares the files for transfer. It transfers the files to the distributed cache through the Informatica Hadoop staging directory on HDFS. By default, the staging directory is /tmp. This process replaces the requirement to install distribution packages on the Hadoop cluster.

For more information, see the *Informatica Big Data Management 10.2 Hadoop Integration Guide*.

Cluster Configuration

A cluster configuration is an object in the domain that contains configuration information about the Hadoop cluster. The cluster configuration enables the Data Integration Service to push mapping logic to the Hadoop environment.

When you create the cluster configuration, you import cluster configuration properties that are contained in configuration site files. You can import these properties directly from a cluster or from a cluster configuration archive file. You can also create connections to associate with the cluster configuration.

Previously, you ran the Hadoop Configuration Manager utility to configure connections and other information to enable the Informatica domain to communicate with the cluster.

For more information about cluster configuration, see the "Cluster Configuration" chapter in the *Informatica Big Data Management 10.2 Administrator Guide.*

Processing Hierarchical Data

Effective in version 10.2, you can use complex data types, such as array, struct, and map, in mappings that run on the Spark engine. With complex data types, the Spark engine directly reads, processes, and writes hierarchical data in Avro, JSON, and Parquet complex files.

Develop mappings with complex ports, operators, and functions to perform the following tasks:

- Generate and modify hierarchical data.
- Transform relational data to hierarchical data.
- Transform hierarchical data to relational data.

- Convert data from one complex file format to another.

When you process hierarchical data, you can use hierarchical conversion wizards to simplify the mapping development tasks. Use these wizards in the following scenarios:

- To generate hierarchical data of type struct from one or more ports.
- To generate hierarchical data of a nested struct type from ports in two transformations.
- To extract elements from hierarchical data in a complex port.
- To flatten hierarchical data in a complex port.

For more information, see the "Processing Hierarchical Data on the Spark Engine" chapter in the *Informatica Big Data Management 10.2 User Guide*.

Stateful Computing on the Spark Engine

Effective in version 10.2, you can use window functions in an Expression transformation to perform stateful calculations on the Spark engine. Window functions operate on a group of rows and calculate a single return value for every input row. You can use window functions to perform the following tasks:

- Retrieve data from previous or subsequent rows.
- Calculate a cumulative sum based on a group of rows.
- Calculate a cumulative average based on a group of rows.

For more information, see the "Stateful Computing on the Spark Engine" chapter of the *Big Data Management 10.2 User Guide*.

Data Integration Service Queuing

Effective in version 10.2, if you deploy multiple mapping jobs or workflow mapping tasks at the same time, the Data Integration Service queues the jobs in a persisted queue and runs the jobs when resources are available. You can view the current status of mapping jobs on the Monitor tab of the Administrator tool.

All queues are persisted by default. If the Data Integration Service node shuts down unexpectedly, the queue does not fail over when the Data Integration Service fails over. The queue remains on the Data Integration Service machine, and the Data Integration Service resumes processing the queue when you restart it.

By default, each queue can hold 10,000 jobs at a time. When the queue is full, the Data Integration Service rejects job requests and marks them as failed. When the Data Integration Service starts running jobs in the queue, you can deploy additional jobs.

For more information, see the "Queuing" chapter in the *Informatica Big Data Management 10.2 Administrator Guide*.

Blaze Job Monitor

Effective in version 10.2, you can configure the host and port number to start the Blaze Job Monitor application in the Hadoop connection properties. The default value is <hostname>:9080. If you do not configure the host name, the Blaze engine uses the first alphabetical node in the cluster.

For more information, see the "Connections" chapter in the *Big Data Management 10.2 User Guide*.

Data Integration Service Properties for Hadoop Integration

Effective in version 10.2, the Data Integration Service added properties required to integrate the domain with the Hadoop environment.

The following table describes the new properties:

Property	Description
Hadoop Staging Directory	The HDFS directory where the Data Integration Services pushes Informatica Hadoop binaries and stores temporary files during processing. Default is /tmp.
Hadoop Staging User	Required if the Data Integration Service user is empty. The HDFS user that performs operations on the Hadoop staging directory. The user needs write permissions on Hadoop staging directory. Default is the Data Integration Service user.
Custom Hadoop OS Path	The local path to the Informatica Hadoop binaries compatible with the Hadoop operating system. Required when the Hadoop cluster and the Data Integration Service are on different supported operating systems. Download and extract the Informatica binaries for the Hadoop cluster on the machine that hosts the Data Integration Service. The Data Integration Service uses the binaries in this directory to integrate the domain with the Hadoop cluster. The Data Integration Service can synchronize the following operating systems: - SUSE 11 and Redhat 6.5 Changes take effect after you recycle the Data Integration Service.

As a result of the changes in cluster integration, the following properties are removed from the Data Integration Service:

- Informatica Home Directory on Hadoop
- Hadoop Distribution Directory

For more information, see the *Informatica 10.2 Hadoop Integration Guide*.

Sqoop

Effective in version 10.2, if you use Sqoop data objects, you can use the following specialized Sqoop connectors to run mappings on the Spark engine:

- Cloudera Connector Powered by Teradata
- Hortonworks Connector for Teradata

These specialized connectors use native protocols to connect to the Teradata database.

For more information, see the *Informatica Big Data Management 10.2 User Guide*.

Autoscaling in an Amazon EMR Cluster

Effective in version 10.2, Big Data Management adds support for Spark mappings to take advantage of autoscaling in an Amazon EMR cluster.

Autoscaling enables the EMR cluster administrator to establish threshold-based rules for adding and subtracting cluster task and core nodes. Big Data Management certifies support for Spark mappings that run on an autoscaling-enabled EMR cluster.

Transformation Support on the Blaze Engine

Effective in version 10.2, the following transformations have additional support on the Blaze engine

- Update Strategy. Supports targets that are ORC bucketed on all columns.

For more information, see the "Mapping Objects in a Hadoop Environment" chapter in the *Informatica Big Data Management 10.2 User Guide*.

Hive Functionality for the Blaze Engine

Effective in version 10.2, mappings that run on the Blaze engine can read and write to bucketed and sorted targets.

For information about how to configure mappings for the Blaze engine, see the "Mappings in a Hadoop Environment" chapter in the *Informatica Big Data Management 10.2 User Guide*.

Transformation Support on the Spark Engine

Effective in version 10.2, the following transformations are supported with restrictions on the Spark engine:

- Normalizer
- Rank
- Update Strategy

Effective in version 10.2, the following transformations have additional support on the Spark engine:

- Lookup. Supports unconnected lookup from the Filter, Aggregator, Router, Expression, and Update Strategy transformation.

For more information, see the "Mapping Objects in a Hadoop Environment" chapter in the *Informatica Big Data Management 10.2 User Guide*.

Hive Functionality for the Spark Engine

Effective in version 10.2, the following functionality is supported for mappings that run on the Spark engine:

- Reading and writing to Hive resources in Amazon S3 buckets
- Reading and writing to transactional Hive tables
- Reading and writing to Hive table columns that are secured with fine-grained SQL authorization

For information about how to configure mappings for the Spark engine, see the "Mappings in a Hadoop Environment" chapter in the *Informatica Big Data Management 10.2 User Guide*.

Command Line Programs

This section describes new commands in 10.2.

infacmd cluster Commands

cluster is a new infacmd plugin that performs operations on cluster configurations.

The following table describes new infacmd cluster commands:

Command	Description
clearConfigurationProperties	Clears overridden property values in the cluster configuration set.
createConfiguration	Creates a new cluster configuration either from XML files or remote cluster manager.
deleteConfiguration	Deletes a cluster configuration from the domain.
exportConfiguration	Exports a cluster configuration to a compressed file or a combined XML file.
listAssociatedConnections	Lists connections by type that are associated with the specified cluster configuration.
listConfigurationGroupPermissions	Lists the permissions that a group has for a cluster configuration.
listConfigurationSets	Lists configuration sets in the cluster configuration.
listConfigurationProperties	Lists configuration properties in the cluster configuration set.
listConfigurations	Lists cluster configuration names.
listConfigurationUserPermissions	Lists the permissions that a user has for a cluster configuration.
refreshConfiguration	Refreshes a cluster configuration either from XML files or remote cluster manager.
setConfigurationPermissions	Sets permissions on cluster configuration to a user or a group after removing previous permissions.
setConfigurationProperties	Sets overridden property values in the cluster configuration set.

For more information, see the "infacmd cluster Command Reference" chapter in the *Informatica 10.2 Command Reference*.

infacmd dis Options

The following table describes new Data Integration Service options for infacmd UpdateServiceOptions:

Command	Description
ExecutionOptions.MaxHadoopBatchExecutionPoolSize	The maximum number of deployed Hadoop jobs that can run concurrently.
ExecutionOptions.MaxNativeBatchExecutionPoolSize	The maximum number of deployed native jobs that each Data Integration Service process can run concurrently.

Command	Description
ExecutionOptions.MaxOnDemandExecutionPoolSize	The maximum number of on-demand jobs that can run concurrently. Jobs include data previews, profiling jobs, REST and SQL queries, web service requests, and mappings run from the Developer tool.
WorkflowOrchestrationServiceOptions.MaxWorkerThreads	The maximum number of threads that the Data Integration Service can use to run parallel tasks between a pair of inclusive gateways in a workflow. The default value is 10. If the number of tasks between the inclusive gateways is greater than the maximum value, the Data Integration Service runs the tasks in batches that the value specifies.

For more information, see the "infacmd dis Command Reference" chapter in the *Informatica 10.2 Command Reference*.

infacmd ipc Commands

The following table describes a new option for an infacmd ipc command:

Command	Description
genReuseReportFromPC	Contains the following new option: -BlockSize: Optional. The number of mappings that you want to run the infacmd ipc genReuseReportFromPC command against.

For more information, see the "infacmd ipc Command Reference" chapter in the *Informatica 10.2 Command Reference*.

infacmd isp Commands

The following table describes changes to infacmd isp commands:

Command	Description
createConnection	Defines a connection and the connection options. Added, changed, and removed Hadoop connection options. See infacmd isp createConnection.
getDomainSamlConfig	Renamed from getSamlConfig. Returns the value of the cst option set for Secure Assertion Markup Language (SAML) authentication. Specifies the allowed time difference between the Active Directory Federation Services (AD FS) host system clock and the system clock on the master gateway node.

Command	Description
getUserActivityLog	Returns user activity log data, which now includes successful and unsuccessful user login attempts from Informatica clients. The user activity data includes the following properties for each login attempt from an Informatica client: - Application name - Application version - Host name or IP address of the application host If the client sets custom properties on login requests, the data includes the custom properties.
listConnections	Lists connection names by type. You can list by all connection types or filter the results by one connection type. The -ct option is now available for the command. Use the -ct option to filter connection types.
purgeLog	Purges log events and database records for license usage. The -lu option is now obsolete.
SwitchToGatewayNode	The following options are added for configuring SAML authentication: - asca. The alias name specified when importing the identity provider assertion signing certificate into the truststore file used for SAML authentication. - saml. Enabled or disabled SAML authentication in the Informatica domain. - std. The directory containing the custom truststore file required to use SAML authentication on gateway nodes within the domain. - stp. The custom truststore password used for SAML authentication.

For more information, see the "infacmd isp Command Reference" chapter in the *Informatica 10.2 Command Reference*.

infacmd isp createConnection

This section lists new, changed, and removed Hadoop connection options for the property infacmd isp createConnection in 10.2.

Hadoop Connection Options

The following tables describes new Hadoop connection options available in 10.2:

Option	Description
clusterConfigId	The cluster configuration ID associated with the Hadoop cluster.
blazeJobMonitorURL	The host name and port number for the Blaze Job Monitor.
rejDirOnHadoop	Enables hadoopRejDir. Used to specify a location to move reject files when you run mappings.
hadoopRejDir	The remote directory where the Data Integration Service moves reject files when you run mappings. Enable the reject directory using rejDirOnHadoop.

Option	Description
sparkEventLogDir	An optional HDFS file path of the directory that the Spark engine uses to log events.
sparkYarnQueueName	The YARN scheduler queue name used by the Spark engine that specifies available resources on a cluster.

The following table describes Hadoop connection options that are renamed in 10.2:

Current Name	Previous Name	Description
blazeYarnQueueName	cadiAppYarnQueueName	The YARN scheduler queue name used by the Blaze engine that specifies available resources on a cluster. The name is case sensitive.
blazeExecutionParameterList	cadiExecutionParameterList	Custom properties that are unique to the Blaze engine.
blazeMaxPort	cadiMaxPort	The maximum value for the port number range for the Blaze engine.
blazeMinPort	cadiMinPort	The minimum value for the port number range for the Blaze engine.
blazeUserName	cadiUserName	The owner of the Blaze service and Blaze service logs.
blazeStagingDirectory	cadiWorkingDirectory	The HDFS file path of the directory that the Blaze engine uses to store temporary files.
hiveStagingDatabaseName	databaseName	Namespace for Hive staging tables.
impersonationUserName	hiveUserName	Hadoop impersonation user. The user name that the Data Integration Service impersonates to run mappings in the Hadoop environment.
sparkStagingDirectory	SparkHDFSStagingDir	The HDFS file path of the directory that the Spark engine uses to store temporary files for running jobs.

The following table describes Hadoop connection options that are removed from the UI and imported into the cluster configuration:

Option	Description
RMAddress	The service within Hadoop that submits requests for resources or spawns YARN applications. Imported into the cluster configuration as the property `yarn.resourcemanager.address`.
defaultFSURI	The URI to access the default Hadoop Distributed File System. Imported into the cluster configuration as the property `fs.defaultFS` or `fs.default.name`.

The following table describes Hadoop connection options that are deprecated in 10.2 and are no longer available in the UI:

Option	Description
metastoreDatabaseDriver*	Driver class name for the JDBC data store.
metastoreDatabasePassword*	The password for the metastore user name.
metastoreDatabaseURI*	The JDBC connection URI used to access the data store in a local metastore setup.
metastoreDatabaseUserName*	The metastore database user name.
metastoreMode*	Controls whether to connect to a remote metastore or a local metastore.
remoteMetastoreURI*	The metastore URI used to access metadata in a remote metastore setup. This property is imported into the cluster configuration as the property `hive.metastore.uris`.
jobMonitoringURL	The URL for the MapReduce JobHistory server.
** These properties are deprecated in 10.2. When you upgrade to 10.2, the property values you set in a previous release are saved in the repository, but they do not appear in the connection properties.*	

The following properties are dropped. If they appear in connection strings, they will have no effect:

- hadoopClusterInfoExecutionParametersList
- passThroughSecurityEnabled
- hiverserver2Enabled
- hiveInfoExecutionParametersList
- cadiPassword
- sparkMaster
- sparkDeployMode

HBase Connection

The following table describes HBase connection options that are removed from the connection and imported into the cluster configuration:

Property	Description
ZOOKEEPERHOSTS	Name of the machine that hosts the ZooKeeper server.
ZOOKEEPERPORT	Port number of the machine that hosts the ZooKeeper server.
ISKERBEROSENABLED	Enables the Informatica domain to communicate with the HBase master server or region server that uses Kerberos authentication.
hbaseMasterPrincipal	Service Principal Name (SPN) of the HBase master server.
hbaseRegionServerPrincipal	Service Principal Name (SPN) of the HBase region server.

Hive Connection

The following table describes Hive connection options that are removed from the connection and imported into the cluster configuration:

Property	Description
defaultFSURI	The URI to access the default Hadoop Distributed File System.
jobTrackerURI	The service within Hadoop that submits the MapReduce tasks to specific nodes in the cluster.
hiveWarehouseDirectoryOnHDFS	The absolute HDFS file path of the default database for the warehouse that is local to the cluster.
metastoreExecutionMode	Controls whether to connect to a remote metastore or a local metastore.
metastoreDatabaseURI	The JDBC connection URI used to access the data store in a local metastore setup.
metastoreDatabaseDriver	Driver class name for the JDBC data store.
metastoreDatabaseUserName	The metastore database user name.
metastoreDatabasePassword	The password for the metastore user name.
remoteMetastoreURI	The metastore URI used to access metadata in a remote metastore setup. This property is imported into the cluster configuration as the property `hive.metastore.uris`.

HBase Connection Options for MapR-DB

The ISKERBEROSENABLED connection option is obsolete and imported into the cluster configuration.

infacmd mrs Commands

The following table describes new infacmd mrs commands:

Command	Description
manageGroupPermissionOnProject	Manages permissions on multiple projects for a group.
manageUserPermissionOnProject	Manages permissions on multiple projects for a user.
upgradeExportedObjects	Upgrades objects exported to an .xml file from a previous Informatica release to the current metadata format. The command generates an .xml file that contains the upgraded objects.

For more information, see the "infacmd mrs Command Reference" chapter in the *Informatica 10.2 Command Reference*.

infacmd ms Commands

The following table describes new infacmd ms commands:

Command	Description
GetMappingStatus	Gets the current status of a mapping job by job ID.

For more information, see the "infacmd ms Command Reference" chapter in the *Informatica 10.2 Command Reference*.

infacmd wfs Commands

The following table describes new infacmd wfs commands:

Command	Description
completeTask	Completes a Human task instance that you specify.
delegateTask	Assigns ownership of a Human task instance to a user or group.
listTasks	Lists the Human task instances that meet the filter criteria that you specify.
releaseTask	Releases a Human task instance from the current owner, and returns ownership of the task instance to the business administrator that the workflow configuration identifies.
startTask	Changes the status of a Human task instance to IN_PROGRESS.

For more information, see the "infacmd wfs Command Reference" chapter in the *Informatica 10.2 Command Reference*.

infasetup Commands

The following table describes changes to infasetup commands:

Command	Description
DefineDomain	The following options are added for configuring Secure Assertion Markup Language (SAML) authentication: - asca. The alias name specified when importing the identity provider assertion signing certificate into the truststore file used for SAML authentication. - cst. The allowed time difference between the Active Directory Federation Services (AD FS) host system clock and the system clock on the master gateway node. - std. The directory containing the custom truststore file required to use SAML authentication on gateway nodes within the domain. - stp. The custom truststore password used for SAML authentication.
DefineGatewayNode	The following options are added for configuring SAML authentication: - asca. The alias name specified when importing the identity provider assertion signing certificate into the truststore file used for SAML authentication. - saml. Enables or disables SAML authentication in the Informatica domain. - std. The directory containing the custom truststore file required to use SAML authentication on gateway nodes within the domain. - stp. The custom truststore password used for SAML authentication.

Command	Description
UpdateDomainSamlConfig	Renamed from UpdateSamlConfig. The following option is added for configuring SAML authentication: - cst. The allowed time difference between the AD FS host system clock and the system clock on the master gateway node.
UpdateGatewayNode	The following options are added for configuring SAML authentication. - asca. The alias name specified when importing the identity provider assertion signing certificate into the truststore file used for SAML authentication. - saml. Enables or disables SAML authentication in the Informatica domain. - std. The directory containing the custom truststore file required to use SAML authentication on gateway nodes within the domain. - stp. The custom truststore password used for SAML authentication.

For more information, see the "infasetup Command Reference" chapter in the *Informatica 10.2 Command Reference*.

pmrep Commands

The following table describes new pmrep commands:

Command	Description
CreateQuery	Creates a query in the repository.
DeleteQuery	Deletes a query from the repository.

The following table describes updates to pmrep commands:

Command	Description
CreateConnection	Contains the following updated option: -w. Enables you to use a parameter in the password option.
ListObjectDependencies	Contains the following updated option: -o. The object type list includes query and deploymentgroup.
UpdateConnection	Contains the following updated options: -w. Enables you to use a parameter in the password option. -x. Disables the use of password parameters if you use the parameter in password.

For more information, see the "pmrep Command Reference" chapter in the *Informatica 10.2 Command Reference*.

Data Types

This section describes new data type features in 10.2.

Informatica Data Types

This section describes new data types in the Developer tool.

Complex Data Types

Effective in version 10.2, some transformations support complex data types in mappings that run on the Spark engine.

The following table describes the complex data types you can use in transformations:

Complex Data Type	Description
array	Contains an ordered collection of elements. All elements in the array must be of the same data type. The elements can be of primitive or complex data type.
map	Contains an unordered collection of key-value pairs. The key part must be of primitive data type. The value part can be of primitive or complex data type.
struct	Contains a collection of elements of different data types. The elements can be of primitive or complex data types.

For more information, see the "Data Type Reference" appendix in the *Informatica Big Data Management 10.2 User Guide*.

Documentation

This section describes new or updated guides in 10.2.

The Informatica documentation contains the following changes:

Informatica Big Data Management Security Guide

Effective in version 10.2, the *Informatica Big Data Management Security Guide* is renamed to *Informatica Big Data Management Administrator Guide*. It contains the security information and additional administrator tasks for Big Data Management.

For more information see the *Informatica Big Data Management 10.2 Administrator Guide*.

Informatica Big Data Management Installation and Upgrade Guide

Effective in version 10.2, the *Informatica Big Data Management Installation and Upgrade Guide* is renamed to *Informatica Big Data Management Hadoop Integration Guide*. Effective in version 10.2, the Data Integration Service can automatically install the Big Data Management binaries to the Hadoop cluster to integrate the domain with the cluster. The integration tasks in the guide do not include installation of the distribution package.

For more information see the *Informatica Big Data Management 10.2 Hadoop Integration Guide*.

Informatica Catalog Administrator Guide

Effective in version 10.2, the *Informatica Live Data Map Administrator Guide* is renamed to *Informatica Catalog Administrator Guide*.

For more information, see the *Informatica Catalog Administrator Guide 10.2*.

Informatica Administrator Reference for Enterprise Information Catalog

Effective in version 10.2, the *Informatica Administrator Reference for Live Data Map* is renamed to *Informatica Administrator Reference for Enterprise Information Catalog*.

For more information, see the *Informatica Administrator Reference for Enterprise Information Catalog 10.2*.

Informatica Enterprise Information Catalog Custom Metadata Integration Guide

Effective in version 10.2, you can ingest custom metadata into the catalog using Enterprise Information Catalog. You can see the new guide *Informatica Enterprise Information Catalog 10.2 Custom Metadata Integration Guide* for more information.

Informatica Enterprise Information Catalog Installation and Configuration Guide

Effective in version 10.2, the *Informatica Live Data Map Installation and Configuration Guide* is renamed to *Informatica Enterprise Information Catalog Installation and Configuration Guide*.

For more information, see the *Informatica Enterprise Information Catalog 10.2 Installation and Configuration Guide*.

Informatica Enterprise Information Catalog REST API Reference

Effective in version 10.2, you can use REST APIs exposed by Enterprise Information Catalog. You can see the new guide *Informatica Enterprise Information Catalog 10.2 REST API Reference* for more information.

Informatica Enterprise Information Catalog Upgrade Guide

Effective in version 10.2, the *Informatica Live Data Map Upgrading from version <x>* is renamed to *Informatica Enterprise Information Catalog Upgrading from versions 10.1, 10.1.1, 10.1.1 HF1, and 10.1.1 Update 2*.

For more information, see the *Informatica Enterprise Information Catalog Upgrading from versions 10.1, 10.1.1, 10.1.1 HF1, and 10.1.1 Update 2 guide.*.

Enterprise Information Catalog

This section describes new Enterprise Information Catalog features in 10.2.

New Data Sources

Effective in version 10.2, Informatica Enterprise Information Catalog allows you to extract metadata from new data sources.

You can create resources in Informatica Catalog Administrator to extract metadata from the following data sources:

Apache Atlas

Metadata framework for Hadoop.

Azure Microsoft SQL Data Warehouse

Cloud-based relational database to process a large volume of data.

Azure Microsoft SQL Server

Managed cloud database.

Azure WASB File Systems

Windows Azure Storage Blobs interface to load data to Azure blobs.

Erwin

Data modeling tool.

Informatica Axon

Enterprise data governance solution.

For more information about new resources, see the *Informatica Catalog Administrator Guide 10.2*.

Custom Scanner Framework

Effective in version 10.2, you can ingest custom metadata into the catalog.

Custom metadata is metadata that you define. You can define a custom model, create a custom resource type, and create a custom resource to ingest custom metadata from a custom data source. You can use custom metadata integration to extract and ingest metadata from custom data sources for which Enterprise Information Catalog does not provide a model.

For more information about custom metadata integration, see the *Informatica Enterprise Information Catalog 10.2 Custom Metadata Integration Guide*.

REST APIs

Effective in version 10.2, you can use Informatica Enterprise Information Catalog REST APIs to access and configure features related to the objects and models associated with a data source.

The REST APIs allow you to retrieve information related to objects and models associated with a data source. In addition, you can create, update, or delete entities related to models and objects such as attributes, associations, and classes.

For more information about unstructured file sources, see the *Informatica Enterprise Information Catalog 10.2 REST API Reference*.

Composite Data Domains

Effective in version 10.2, you can create composite data domains. A composite data domain is a collection of data domains or other composite data domains that you can link using rules. You can use a composite data domain to search for the required details of an entity across multiple schemas in a data source.

You can view composite data domains for tabular assets in the Asset Details view after you create and enable composite data domain discovery for resources in the Catalog Administrator. You can also search for composite data domains and view details of the composite data domains in the Asset Details view.

For more information about composite data domains, see the "View Assets" chapter in the *Informatica Enterprise Information Catalog 10.2 User Guide* and see the "Catalog Administrator Concepts" and "Managing Composite Data Domains" chapters in the *Informatica Catalog Administrator Guide 10.2*.

Data Domains

This section describes new features related to data domains in Enterprise Information Catalog.

Define Data Domains

Effective in version 10.2, you can configure the following additional options when you create a data domain:

- Use reference tables, rules, and regular expressions to create a data rule or column rule.
- Use minimum conformance percentage or minimum conforming rows for data domain match.

- Use the auto-accept option to accept a data domain automatically in Enterprise Information Catalog when the data domain match exceeds the configured auto-accept percentage.

For more information about data domains in Catalog Administrator, see the "Managing Data Domains" chapter in the *Informatica Catalog Administrator Guide 10.2* .

Configure Data Domains

Effective in version 10.2, you can use predefined values or enter a conformance value for data domain match when you create or edit a resource.

For more information about data domains and resources, see the "Managing Resources" chapter in the *Informatica Catalog Administrator Guide 10.2*.

Data Domain Privileges

Effective in version 10.2, configure the **Domain Management: Admin - View Domain** and **Domaingroup and Domain Management: Admin - Edit Domain and Domaingroup** privileges in Informatica Administrator to view, create, edit, or delete data domains or data domain groups in the Catalog Administrator.

For more information about privileges see the "Privileges and Roles" chapter in the *Informatica Administrator Reference for Enterprise Information Catalog 10.2*.

Data Domain Curation

Effective in version 10.2, Enterprise Information Catalog accepts a data domain automatically if the data domain match percentage exceeds the configured auto-accept percentage in Catalog Administrator.

For more information about data domain curation, see the "View Assets" chapter in the *Informatica Enterprise Information Catalog 10.2 User Guide*.

Export and Import of Custom Attributes

Effective in version 10.2, you can export the custom attributes configured in a resource to a CSV file and import the CSV file back into Enterprise Information Catalog. You can use the exported CSV file to assign custom attribute values to multiple assets at the same time.

For more information about export and import of custom attributes, see the "View Assets" chapter in the *Informatica Enterprise Information Catalog 10.2 User Guide*.

Rich Text as Custom Attribute Value

Effective in version 10.2, you can edit a custom attribute to assign multiple rich text strings as the attribute value.

For more information about assigning custom attribute values to an asset, see the "View Assets" chapter in the *Informatica Enterprise Information Catalog 10.2 User Guide*.

Transformation Logic

Effective in version 10.2, you can view transformation logic for assets in the Lineage and Impact view. The Lineage and Impact view displays transformation logic for assets that contain transformations. The transformation view displays transformation logic for data structures, such as tables and columns. The view also displays various types of transformations, such as filter, joiner, lookup, expression, sorter, union, and aggregate.

For more information about transformation logic, see the "View Lineage and Impact" chapter in the *Informatica Enterprise Information Catalog 10.2 User Guide*.

Unstructured File Types

Effective in version 10.2, you can run the **Data Domain Discovery** profile or **Column Profile and Data Domain Discovery** profile on unstructured file types and extended unstructured formats for all the rows in the data source. The unstructured file types include compressed files, email formats, webpage files, Microsoft Excel, Microsoft PowerPoint, Microsoft Word, and PDF. The extended unstructured formats include mp3, mp4, bmp, and jpg.

For more information about unstructured file types, see the "Managing Resources" chapter in the *Informatica Catalog Administrator Guide 10.2*.

Value Frequency

Configure and View Value Frequency

Effective in version 10.2, you can enable value frequency along with column data similarity in the Catalog Administrator to compute the frequency of values in a data source. You can view the value frequency for view column, table column, CSV field, XML file field, and JSON file data assets in the **Asset Details** view after you run the value frequency on a data source in the Catalog Administrator.

For more information about configuring value frequency, see the "Catalog Administrator Concepts" chapter in the *Informatica Catalog Administrator Guide 10.2* . To view value frequency for a data asset, see the "View Assets" chapter in the *Informatica Enterprise Information Catalog 10.2 User Guide*.

Privileges to View Value Frequency in Enterprise Information Catalog

Effective in version 10.2, you need the following permission and privileges to view the value frequency for a data asset:

- Read permission for the data asset.
- **Data Privileges: View Data** privilege.
- **Data Privileges: View Sensitive Data** privilege.

For more information about permissions and privileges, see the "Permissions Overview" and "Privileges and Roles Overview" chapter in the *Informatica Administrator Reference for Enterprise Information Catalog 10.2* .

Deployment Support for Azure HDInsight

Effective in version 10.2, you can deploy Enterprise Information Catalog on Azure HDInsight Hadoop distribution.

For more information, see the "Create the Application Services" chapter in the *Informatica Enterprise Information Catalog 10.2 Installation and Configuration Guide*.

Informatica Analyst

This section describes new Analyst tool features in 10.2.

Profiles

This section describes new features for profiles and scorecards.

Rule Specification

Effective in version 10.2, you can configure a rule specification in the Analyst tool and use the rule specification in the column profile.

For more information about using rule specifications in the column profiles, see the "Rules in Informatica Analyst" chapter in the *Informatica 10.2 Data Discovery Guide*.

Intelligent Data Lake

This section describes new Intelligent Data Lake features in 10.2.

Validate and Assess Data Using Visualization with Apache Zeppelin

Effective in version 10.2, after you publish data, you can validate your data visually to make sure that the data is appropriate for your analysis from content and quality perspectives. You can then choose to fix the recipe thus supporting an iterative Prepare-Publish-Validate process.

Intelligent Data Lake uses Apache Zeppelin to view the worksheets in the form of a visualization Notebook that contains graphs and charts. For more details about Apache Zeppelin, see Apache Zeppelin documentation. When you visualize data using Zeppelin's capabilities, you can view relationships between different columns and create multiple charts and graphs.

When you open the visualization Notebook for the first time after a data asset is published, Intelligent Data Lake uses CLAIRE engine to create Smart Visualization suggestions in the form of histograms of the numeric columns created by the user.

For more information about the visualization notebook, see the "Validate and Assess Data Using Visualization with Apache Zeppelin" chapter in the *Informatica Intelligent Data Lake 10.2 User Guide*.

Assess Data Using Filters During Data Preview

Effective in version 10.2, you can filter the data during data preview for better assessment of data assets. You can add filters for multiple fields and apply combinations of such filters. Filter conditions depend on the data types. If available, you can view column value frequencies found during profiling for string values.

For more information, see the "Discover Data" chapter in the *Informatica Intelligent Data Lake 10.2 User Guide*.

Enhanced Layout of Recipe Panel

Effective in version 10.2, you can see a dedicated panel for Recipe steps during data preparation. The recipe steps are clearer and concise with color codes to indicate function name, columns involved, and input sources. You can edit the steps or delete them. You can also go back-in-time to a specific step in the recipe and see the state of data. You can refresh the recipe from the source. You can also see a separate Ingredients panel which shows the sources used for this sheet.

For more information, see the "Prepare Data" chapter in the *Informatica Intelligent Data Lake 10.2 User Guide*.

Apply Data Quality Rules

Effective in version 10.2, while preparing data, you can use pre-built rules that are available during interactive data preparation. These rules are created using Informatica Developer or Informatica Analyst tool. If you have a Big Data Quality license, thousands of pre-built rules are available that can be used by Intelligent Data Lake users as well. Using pre-built rules promotes effective collaboration within Business and IT with reusability of rules and knowledge, consistency of usage and extensibility.

For more information, see the "Prepare Data" chapter in the *Informatica Intelligent Data Lake 10.2 User Guide*.

View Business Terms for Data Assets in Data Preview and Worksheet View

Effective in version 10.2, you can view business terms associated with columns of data assets in data preview as well as during data preparation.

For more information, see the "Discover Data" chapter in the *Informatica Intelligent Data Lake 10.2 User Guide*.

Prepare Data for Delimited Files

Effective in version 10.2, as a data analyst, you can cleanse, transform, combine, aggregate, and perform other operations on delimited HDFS files that are already in the lake. You can preview these files before adding them to a project. You can then configure the sampling settings of these assets and perform data preparation operations on them.

For more information, see the "Prepare Data" chapter in the *Informatica Intelligent Data Lake 10.2 User Guide*.

Edit Joins in a Joined Worksheet

Effective in version 10.2, you can edit the joinconditions for an existing joined worksheet such as join keys, join types (such as inner and outer joins).

For more information, see the "Prepare Data" chapter in the *Informatica Intelligent Data Lake User Guide*.

Edit Sampling Settings for Data Preparation

Effective in version 10.2, you can edit the sampling settings while preparing your data asset. You can change the columns selected for sampling, edit the filters selected, and change the sampling criteria.

For more information, see the "Prepare Data" chapter in the *Informatica Intelligent Data Lake 10.2 User Guide*.

Support for Multiple Enterprise Information Catalog Resources in the Data Lake

Effective in version 10.2, you can configure multiple Enterprise Information Catalog resources so that the users can work with all types of assets and all applicable Hive schemas in the lake.

Use Oracle for the Data Preparation Service Repository

Effective in version 10.2, you can now use Oracle 11gR2 and 12c for the Data Preparation Service repository.

Improved Scalability for the Data Preparation Service

Effective in version 10.2, you can ensure horizontal scalability by using grid for the Data Preparation Service with multiple Data Preparation Service nodes. Improved scalability supports high performance, interactive data preparation during increased data volumes and increased number of users.

Informatica Developer

This section describes new Developer tool features in 10.2.

Nonrelational Data Objects

Effective in version 10.2, you can import multiple nonrelational data objects at a time.

For more information, see the "Physical Data Objects" chapter in the *Informatica 10.2 Developer Tool Guide*.

Profiles

This section describes new features for profiles and scorecards.

Rule Specification

Effective in version 10.2, you can use rule specifications when you create a column profile in the Developer tool. To use the rule specification, generate a mapplet from the rule specification and validate the mapplet as a rule.

For more information about using rule specifications in the column profiles, see the "Rules in Informatica Developer" chapter in the *Informatica 10.2 Data Discovery Guide*.

Informatica Installation

This section describes new installation features in 10.2.

Informatica Upgrade Advisor

Effective in version 10.2, you can run the Informatica Upgrade Advisor to validate the services and check for obsolete services, supported databases, and supported operating systems in the domain before you perform an upgrade.

For more information about the upgrade advisor, see the *Informatica Upgrade Guides*.

Intelligent Streaming

This section describes new Intelligent Streaming features in 10.2.

CSV Format

Effective in version 10.2, Streaming mappings can read and write data in CSV format.

For more information about the CSV format, see the "Sources and Targets in a Streaming Mapping" chapter in the *Informatica Intelligent Streaming 10.2 User Guide*.

Data Types

Effective in version 10.2, Streaming mappings can read, process, and write hierarchical data. You can use array, struct, and map complex data types to process the hierarchical data.

For more information, see the "Sources and Targets in a Streaming Mapping" chapter in the *Informatica Intelligent Streaming 10.2 User Guide*.

Connections

Effective in version 10.2, you can use the following new messaging connections in Streaming mappings:

- AmazonKinesis. Access Amazon Kinesis Stream as source or Amazon Kinesis Firehose as target. You can create and manage an AmazonKinesis connection in the Developer tool or through infacmd.
- MapRStreams. Access MapRStreams as targets. You can create and manage a MapRStreams connection in the Developer tool or through infacmd.

For more information, see the "Connections" chapter in the *Informatica Intelligent Streaming 10.2 User Guide*.

Pass-Through Mappings

Effective in version 10.2, you can pass any payload format directly from source to target in Streaming mappings.

You can project columns in binary format to pass a payload from source to target in its original form or to pass a payload format that is not supported.

For more information, see the "Sources and Targets in a Streaming Mapping" chapter in the *Informatica Intelligent Streaming 10.2 User Guide*.

Sources and Targets

Effective in version 10.2, you can create the following new physical data objects:

- AmazonKinesis. Represents data in a Amazon Kinesis Stream or Amazon Kinesis Firehose Delivery Stream.
- MapRStreams. Represents data in a MapR Stream.

For more information, see the "Sources and Targets in a Streaming Mapping" chapter in the *Informatica Intelligent Streaming 10.2 User Guide*.

Transformation Support

Effective in version 10.2, you can use the Rank transformation with restrictions in Streaming mappings.

For more information, see the "Intelligent Streaming Mappings" chapter in the *Informatica Intelligent Streaming 10.2 User Guide*.

Metadata Manager

This section describes new Metadata Manager features in 10.2.

Cloudera Navigator

Effective in version 10.2, you can provide the truststore file information to enable a secure connection to a Cloudera Navigator resource. When you create or edit a Cloudera Navigator resource, enter the path and file name of the truststore file for the Cloudera Navigator SSL instance and the password of the truststore file.

For more information about creating a Cloudera Navigator Resource, see the "Database Management Resources" chapter in the *Informatica Metadata Manager 10.2 Administrator Guide*.

PowerCenter

This section describes new PowerCenter features in 10.2.

Audit Logs

Effective in version 10.2, you can generate audit logs when you import an .xml file into the PowerCenter repository. When you import one or more repository objects, you can generate audit logs. You can enable Security Audit Trail configuration option in the PowerCenter Repository Service properties in the Administrator tool to generate audit logs when you import an .xml file into the PowerCenter repository. The user activity logs captures all the audit messages.

The audit logs contain the following information about the file, such as the file name and size, the number of objects imported, and the time of the import operation.

For more information, see the "pmrep Command Reference" chapter in the *Informatica 10.2 Command Reference*, the *Informatica 10.2 Application Service Guide*, and the *Informatica 10.2 Administrator Guide*.

Bulk Upsert for SAP HANA Targets

Effective in version 10.2, when you upsert data into SAP HANA targets, you can configure the EnableArrayUpsert custom property to upsert data in bulk and improve the session performance. You can configure the EnableArrayUpsert custom property at the session level or at the PowerCenter Integration Service level, and set its value to yes.

For more information, see the "Working with Targets" chapter in the *Informatica 10.2 PowerCenter Designer Guide*.

Object Queries

Effective in version 10.2, you can create and delete object queries with the *pmrep* commands.

For more information, see the "pmrep Command Reference" chapter in the *Informatica 10.2 Command Reference*.

Use Parameter in a Password

Effective in version 10.2, you can create or update a connection with a parameter in password with the *pmrep* commands.

You can also update a connection with or without a parameter in password with the *pmrep* command.

For more information, see the "pmrep Command Reference" chapter in the *Informatica 10.2 Command Reference*.

PowerExchange Adapters

This section describes new PowerExchange adapter features in 10.2.

PowerExchange Adapters for Informatica

This section describes new Informatica adapter features in 10.2.

PowerExchange for Amazon Redshift

Effective in version 10.2, PowerExchange for Amazon Redshift includes the following new features:

- You can read data from or write data to the Amazon S3 buckets in the following regions:
  - Asia Pacific (Mumbai)
  - Asia Pacific (Seoul)
  - Canada (Central)
  - China(Beijing)
  - EU (London)
  - US East (Ohio)
- You can run Amazon Redshift mappings on the Spark engine. When you run the mapping, the Data Integration Service pushes the mapping to a Hadoop cluster and processes the mapping on the Spark engine, which significantly increases the performance.
- You can use AWS Identity and Access Management (IAM) authentication to securely control access to Amazon S3 resources.
- You can connect to Amazon Redshift Clusters available in Virtual Private Cloud (VPC) through VPC endpoints.
- You can use AWS Identity and Access Management (IAM) authentication to run a session on the EMR cluster.

For more information, see the *Informatica PowerExchange for Amazon Redshift 10.2 User Guide*.

PowerExchange for Amazon S3

Effective in version 10.2, PowerExchange for Amazon S3 includes the following new features:

- You can read data from or write data to the Amazon S3 buckets in the following regions:
  - Asia Pacific (Mumbai)
  - Asia Pacific (Seoul)
  - Canada (Central)
  - China (Beijing)
  - EU (London)
  - US East (Ohio)

- You can compress data in the following formats when you read data from or write data to Amazon S3 in the native environment and Spark engine:

Compression format	Read	Write
Bzip2	Yes	Yes
Deflate	No	Yes
Gzip	Yes	Yes
Lzo	Yes	Yes
None	Yes	Yes
Snappy	No	Yes

- You can select the type of source from which you want to read data in the **Source Type** option under the advanced properties for an Amazon S3 data object read operation. You can select **Directory** or **File** source types.
- You can select the type of the data sources in the **Resource Format** option under the Amazon S3 data objects properties. You can read data from the following source formats:
  - Binary
  - Flat
  - Avro
  - Parquet
- You can connect to Amazon S3 buckets available in Virtual Private Cloud (VPC) through VPC endpoints.
- You can run Amazon S3 mappings on the Spark engine. When you run the mapping, the Data Integration Service pushes the mapping to a Hadoop cluster and processes the mapping on the Spark engine.
- You can choose to overwrite the existing files. You can select the **Overwrite File(s) If Exists** option in the Amazon S3 data object write operation properties to overwrite the existing files.
- You can use AWS Identity and Access Management (IAM) authentication to securely control access to Amazon S3 resources.
- You can filter the metadata to optimize the search performance in the **Object Explorer** view.
- You can use AWS Identity and Access Management (IAM) authentication to run a session on the EMR cluster.

For more information, see the *Informatica PowerExchange for Amazon S3 10.2 User Guide*.

PowerExchange for HBase

Effective in version 10.2, PowerExchange for HBase contains the following new features:

- You can use PowerExchange for HBase to read from sources and write to targets stored in the WASB file system on Azure HDInsight.
- You can associate a cluster configuration with an HBase connection. A cluster configuration is an object in the domain that contains configuration information about the Hadoop cluster. The cluster configuration enables the Data Integration Service to push mapping logic to the Hadoop environment.

For more information, see the *Informatica PowerExchange for HBase 10.2 User Guide*.

PowerExchange for HDFS

Effective in version 10.2, you can associate a cluster configuration with an HDFS connection. A cluster configuration is an object in the domain that contains configuration information about the Hadoop cluster. The cluster configuration enables the Data Integration Service to push mapping logic to the Hadoop environment.

For more information, see the *Informatica PowerExchange for HDFS 10.2 User Guide*.

PowerExchange for Hive

Effective in version 10.2, you can associate a cluster configuration with an Hive connection. A cluster configuration is an object in the domain that contains configuration information about the Hadoop cluster. The cluster configuration enables the Data Integration Service to push mapping logic to the Hadoop environment.

For more information, see the *Informatica PowerExchange for Hive 10.2 User Guide*.

PowerExchange for MapR-DB

Effective in version 10.2, PowerExchange for MapR-DB contains the following new features:

- You can run MapR-DB mappings on the Spark engine. When you run the mapping, the Data Integration Service pushes the mapping to a Hadoop cluster and processes the mapping on the Spark engine, which significantly increases the performance.
- You can configure dynamic partitioning for MapR-DB mappings that you run on the Spark engine.
- You can associate a cluster configuration with an HBase connection for MapR-DB. A cluster configuration is an object in the domain that contains configuration information about the Hadoop cluster. The cluster configuration enables the Data Integration Service to push mapping logic to the Hadoop environment.

For more information, see the *Informatica PowerExchange for MapR-DB 10.2 User Guide*.

PowerExchange for Microsoft Azure Blob Storage

Effective in version 10.2, you can read data from or write data to a subdirectory in Microsoft Azure Blob Storage. You can use the **Blob Container Override** and **Blob Name Override** fields to read data from or write data to a subdirectory in Microsoft Azure Blob Storage.

For more information, see the *Informatica PowerExchange for Microsoft Azure Blob Storage 10.2 User Guide*.

PowerExchange for Microsoft Azure SQL Data Warehouse

Effective in version 10.2, you can run Microsoft Azure SQL Data Warehouse mappings in a Hadoop environment on Kerberos enabled clusters.

For more information, see the *Informatica PowerExchange for Microsoft Azure SQL Data Warehouse 10.2 User Guide*.

PowerExchange for Salesforce

Effective in version 10.2, you can use version 39 of Salesforce API to create a Salesforce connection and access Salesforce objects.

For more information, see the *Informatica PowerExchange for Salesforce 10.2 User Guide*.

PowerExchange Adapters for PowerCenter

This section describes new PowerCenter adapter features in version 10.2.

PowerExchange for Amazon Redshift

Effective in version 10.2, PowerExchange for Amazon Redshift includes the following new features:

- You can read data from or write data to the China (Beijing) region.
- When you import objects from **AmazonRSCloudAdapter** in the PowerCenter Designer, the PowerCenter Integration Service lists the table names alphabetically.
- In addition to the existing recovery options in the vacuum table, you can select the **Reindex** option to analyze the distribution of the values in an interleaved sort key column.
- You can configure the multipart upload option to upload a single object as a set of independent parts. TransferManager API uploads the multiple parts of a single object to Amazon S3. After uploading, Amazon S3 assembles the parts and creates the whole object. TransferManager API uses the multipart uploads option to achieve performance and increase throughput when the content size of the data is large and the bandwidth is high.
  You can configure the **Part Size** and **TransferManager Thread Pool Size** options in the target session properties.
- PowerExchange for Amazon Redshift uses the `commons-beanutils.jar` file to address potential security issues when accessing properties. The following is the location of the `commons-beanutils.jar` file:
  `<Informatica installation directory>server/bin/javalib/505100/commons-beanutils-1.9.3.jar`

For more information, see the *Informatica PowerExchange for Amazon Redshift 10.2 User Guide for PowerCenter*.

PowerExchange for Amazon S3

Effective in version 10.2, PowerExchange for Amazon S3 includes the following new features:

- You can read data from or write data to the China (Beijing) region.
- You can read multiple files from Amazon S3 and write data to a target.
- You can write multiple files to Amazon S3 target from a single source. You can configure the **Distribution Column** options in the target session properties.
- When you create a mapping task to write data to Amazon S3 targets, you can configure partitions to improve performance. You can configure the **Merge Partition Files** option in the target session properties.
- You can specify a directory path that is available on the PowerCenter Integration Service in the **Staging File Location** property.
- You can configure the multipart upload option to upload a single object as a set of independent parts. TransferManager API uploads the multiple parts of a single object to Amazon S3. After uploading, Amazon S3 assembles the parts and creates the whole object. TransferManager API uses the multipart uploads option to achieve performance and increase throughput when the content size of the data is large and the bandwidth is high.
  You can configure the **Part Size** and **TransferManager Thread Pool Size** options in the target session properties.

For more information, see the *Informatica PowerExchange for Amazon S3 version 10.2 User Guide for PowerCenter*.

PowerExchange for Microsoft Dynamics CRM

Effective in version 10.2, you can use the following target session properties with PowerExchange for Microsoft Dynamics CRM:

- Add row reject reason. Select to include the reason for rejection of rows to the reject file.

- Alternate Key Name. Indicates whether the column is an alternate key for an entity. Specify the name of the alternate key. You can use alternate key in update and upsert operations.
- You can configure PowerExchange for Microsoft Dynamics CRM to run on AIX platform.

For more information, see the *Informatica PowerExchange for Microsoft Dynamics CRM 10.2 User Guide for PowerCenter*.

PowerExchange for SAP NetWeaver

Effective in version 10.2, PowerExchange for SAP NetWeaver includes the following new features:

- When you run ABAP mappings to read data from SAP tables, you can use the STRING, SSTRING, and RAWSTRING data types. The SSTRING data type is represented as SSTR in PowerCenter.
- When you read or write data through IDocs, you can use the SSTRING data type.
- When you run ABAP mappings to read data from SAP tables, you can configure HTTP streaming.

For more information, see the *Informatica PowerExchange for SAP NetWeaver 10.2 User Guide for PowerCenter*.

Rule Specifications

Effective in version 10.2, you can select a rule specification from the Model repository in Informatica Developer and add the rule specification to a mapping. You can also deploy a rule specification as a web service.

A rule specification is a read-only object in the Developer tool. Add a rule specification to a mapping in the same way that you add a mapplet to a mapping. You can continue to select a mapplet that you generated from a rule specification and add the mapplet to a mapping.

Add a rule specification to a mapping when you want the mapping to apply the logic that the current rule specification represents. Add the corresponding mapplet to a mapping when you want to use or update the mapplet logic independently of the rule specification.

When you add a rule specification to a mapping, you can specify the type of outputs on the rule specification. By default, a rule specification has a single output port that contains the final result of the rule specification analysis for each input data row. You can configure the rule specification to create an output port for every rule set in the rule specification.

For more information, see the "Mapplets" chapter in the *Informatica 10.2 Developer Mapping Guide*.

Security

This section describes new security features in 10.2.

User Activity Logs

Effective in version 10.2, you can view login attempts from Informatica client applications in user activity logs.

The user activity data includes the following properties for each login attempt from an Informatica client:

- Application name
- Application version
- Host name or IP address of the application host

If the client set custom properties on login requests, the data includes the custom properties.

For more information, see the "Users and Groups" chapter in the *Informatica 10.2 Security Guide*.

Transformation Language

This section describes new transformation language features in 10.2.

Informatica Transformation Language

This section describes Informatica Transformation Language new features in 10.2.

Complex Functions

Effective in version 10.2, the transformation language introduces complex functions for complex data types. Use complex functions to process hierarchical data on the Spark engine.

The transformation language includes the following complex functions:

- ARRAY
- CAST
- COLLECT_LIST
- CONCAT_ARRAY
- RESPEC
- SIZE
- STRUCT
- STRUCT_AS

For more information about complex functions, see the "Functions" chapter in the *Informatica 10.2 Developer Transformation Language Reference*.

Complex Operators

Effective in version 10.2, the transformation language introduces complex operators for complex data types. In mappings that run on the Spark engine, use complex operators to access elements of hierarchical data.

The transformation language includes the following complex operators:

- Subscript operator [ ]
- Dot operator .

For more information about complex operators, see the "Operators" chapter in the *Informatica 10.2 Developer Transformation Language Reference*.

Window Functions

Effective in version 10.2, the transformation language introduces window functions. Use window functions to process a small subset of a larger set of data on the Spark engine.

The transformation language includes the following window functions:

- LEAD. Provides access to a row at a given physical offset that comes after the current row.
- LAG. Provides access to a row at a given physical offset that comes before the current row.

For more information, see the "Functions" chapter in the *Informatica 10.2 Transformation Language Reference*.

Transformations

This section describes new transformation features in version 10.2.

Informatica Transformations

This section describes new features in Informatica transformations in 10.2.

Address Validator Transformation

This section describes the new Address Validator transformation features.

The Address Validator transformation contains additional address functionality for the following countries:

Austria

Effective in version 10.2, you can configure the Address Validator transformation to return a postal address code identifier for a mailbox that has two valid street addresses. For example, a building at an intersection of two streets might have an address on both streets. The building might prefer to receive mail at one of the addresses. The other address remains a valid address, but the postal carrier does not use it to deliver mail.

Austria Post assigns a postal address code to both addresses. Austria Post additionally assigns a postal address code identifier to the address that does not receive mail. The postal address code identifier is identical to the postal address code of the preferred address. You can use the postal address code identifier to look up the preferred address with the Address Validator transformation.

To find the postal address code identifier for an address in Austria, select the Postal Address Code Identifier AT output port. Find the port in the AT Supplementary port group.

To find the address that a postal address identifier represents, select the Postal Address Code Identifier AT input port. Find the port in the Discrete port group.

Czech Republic

Effective in version 10.2, you can configure the Address Validator transformation to add RUIAN ID values to a valid Czech Republic address.

You can find the following RUIAN ID values:

- RUIANAM_ID. Uniquely identifies the address delivery point.
  To find the RUIAN ID value that uniquely identifies the address delivery point, select the RUIAN Delivery Point Identifier output port.
- RUIANSO_ID. Identifies the address to building level.
  To find the RUIAN ID value that identifies the address to building level, select the RUIAN Building Identifier output port.
- RUIANTEA_ID. Identifies the building entrance.
  To find the RUIAN ID value that identifies the entrance to building, select the RUIAN Building Entrance Identifier output port.

Find the ports in the CZ Supplementary port group.

Hong Kong

The Address Validator transformation includes the following features for Hong Kong:

Multilanguage support for Hong Kong addresses

Effective in version 10.2, the Address Validator transformation can read and write Hong Kong addresses in Chinese or in English.

Use the Preferred Language property to select the preferred language for the addresses that the transformation returns. The default language is Chinese. To return Hong Kong addresses in English, update the property to ENGLISH.

Use the Preferred Script property to select the preferred character set for the address data. The default character set is Hanzi. To return Hong Kong addresses in Latin characters, update the property to a Latin or ASCII option. When you select a Latin script, address validation transliterates the address data into Pinyin.

Single-line address validation in suggestion list mode

Effective in version 10.2, you can configure the Address Validator transformation to return valid suggestions for a Hong Kong address that you enter on a single line. To return the suggestions, configure the transformation to run in suggestion list mode.

Submit the address in the native Chinese language and in the Hanzi script. The Address Validator transformation reads the address in the Hanzi script and returns the address suggestions in the Hanzi script.

Submit a Hong Kong address in the following format:

```
[Province] [Locality] [Street] [House Number] [Building 1] [Building 2] [Sub-
building]
```

When you submit a partial address, the transformation returns one or more address suggestions for the address that you enter. When you enter a complete or almost complete address, the transformation returns a single suggestion for the address that you enter.

To verify single-line addresses, use the Complete Address port.

Macau

The Address Validator transformation includes the following features for Macau:

Multilanguage support for Macau addresses

Effective in version 10.2, the Address Validator transformation can read and write Macau addresses in Chinese or in Portuguese.

Use the Preferred Language property to select the preferred language for the addresses that the transformation returns. The default language is Chinese. To return Macau addresses in Portuguese, update the property to ALTERNATIVE_2.

Use the Preferred Script property to select the preferred character set for the address data. The default character set is Hanzi. To return Macau addresses in Latin characters, update the property to a Latin or ASCII option.

Note: When you select a Latin script with the default preferred language option, address validation transliterates the Chinese address data into Cantonese or Mandarin. When you select a Latin script with the ALTERNATIVE_2 preferred language option, address validation returns the address in Portuguese.

Single-line address verification for native Macau addresses in suggestion list mode

Effective in version 10.2, you can configure the Address Validator transformation to return valid suggestions for a Macau address that you enter on a single line in suggestion list mode. When you enter a partial address in suggestion list mode, the transformation returns one or more address suggestions for the address that you enter. Submit the address in the Chinese language and in the Hanzi script. The transformation returns address suggestions in the Chinese language and in the Hanzi script. Enter a Macau address in the following format:

```
[Locality] [Street] [House Number] [Building]
```

Use the Preferred Language property to select the preferred language for the addresses. The default preferred language is Chinese. Use the Preferred Script property to select the preferred character set for the address data. The default preferred script is Hanzi. To verify single-line addresses, enter the addresses in the Complete Address port.

Taiwan

Effective in version 10.2, you can configure the Address Validator transformation to return a Taiwan address in the Chinese language or the English language.

Use the Preferred Language property to select the preferred language for the addresses that the transformation returns. The default language is traditional Chinese. To return Taiwan addresses in English, update the property to ENGLISH.

Use the Preferred Script property to select the preferred character set for the address data. The default character set is Hanzi. To return Taiwan addresses in Latin characters, update the property to a Latin or ASCII option.

Note: The Taiwan address structure in the native script lists all address elements in a single line. You can submit the address as a single string in a Formatted Address Line port.

When you format an input address, enter the elements in the address in the following order:

```
Postal Code, Locality, Dependent Locality, Street, Dependent Street, House or Building
Number, Building Name, Sub-Building Name
```

United States

The Address Validator transformation includes the following features for the United States:

Support for the Secure Hash Algorithm-compliant versions of CASS data files

Effective in version 10.2, the Address Validator transformation reads CASS certification data files that comply with the SHA-256 standard.

The current CASS certification files are numbered `USA5C101.MD` through `USA5C126.MD`. To verify United States addresses in certified mode, you must use the current files.

Note: The SHA-256-compliant files are not compatible with older versions of Informatica.

Support for Door Not Accessible addresses in certified mode

Effective in version 10.2, you can configure the Address Validator transformation to identify United States addresses that do not provide a door or entry point for a mail carrier. The mail carrier might be unable to deliver a large item to the address.

The United States Postal Service maintains a list of addresses for which a mailbox is accessible but for which a physical entrance is inaccessible. For example, a residence might locate a mailbox outside a locked gate or on a rural route. The address reference data includes the list of inaccessible addresses that the USPS recognizes. Address validation can return the accessible status of an address when you verify the address in certified mode.

To identify DNA addresses, select the Delivery Point Validation Door not Accessible port. Find the port in the US Specific port group.

Support for No Secure Location address in certified mode

Effective in version 10.2, you can configure the Address Validator transformation to identify United States addresses that do not provide a secure mailbox or reception point for mail. The mail carrier might be unable to deliver a large item to the address.

The United States Postal Service maintains a list of addresses at which the mailbox is not secure. For example, a retail store is not a secure location if the mail carrier can enter the store but cannot find a mailbox or an employee to receive the mail. The address reference data includes the list of non-secure addresses that the USPS recognizes. Address validation can return the non-secure status of an address when you verify the address in certified mode.

To identify DNA addresses, select the Delivery Point Validation No Secure Location port. Find the port in the US Specific port group.

Support for Post Office Box Only Delivery Zones

Effective in version 10.2, you can configure the Address Validator transformation to identify ZIP Codes that contain post office box addresses and no other addresses. When all of the addresses in a ZIP Code are post office box addresses, the ZIP Code represents a Post Office Box Only Delivery Zone.

The Address Validator transformation adds the value Y to an address to indicate that it contains a ZIP Code in a Post Office Box Only Delivery Zone. The value enables the postal carrier to sort mail more easily. For example, the mailboxes in a Post Office Box Only Delivery Zone might reside in a single post office building. The postal carrier can deliver all mail to the Post Office Box Only Delivery Zone in a single trip.

To identify Post Office Box Only Delivery Zones, select the Post Office Box Delivery Zone Indicator port. Find the port in the US Specific port group.

For more information, see the *Informatica 10.2 Developer Transformation Guide* and the *Informatica 10.2 Address Validator Port Reference*.

Data Processor Transformation

This section describes new Data Processor transformation features.

JsonStreamer

Use the JsonStreamer object in a Data Processor transformation to process large JSON files. The transformation splits very large JSON files into complete JSON messages. The transformation can then call other Data Processor transformation components, or a Hierarchical to Relational transformation, to complete the processing.

For more information, see the "Streamers" chapter in the *Informatica Data Transformation 10.2 User Guide*.

RunPCWebService

Use the RunPCWebService action to call a PowerCenter mapplet from within a Data Processor transformation.

For more information, see the "Actions" chapter in the *Informatica Data Transformation 10.2 User Guide*.

PowerCenter Transformations

Evaluate Expression

Effective in version 10.2, you can evaluate expressions that you configure in the Expression Editor of an Expression transformation. When you test an expression, you can enter sample data and then evaluate the expression.

For more information about evaluating an expression, see the "Working with Transformations" chapter and the "Expression Transformation" chapter in the *Informatica PowerCenter 10.2 Transformation Guide*.

Workflows

This section describes new workflow features in version 10.2.

Informatica Workflows

This section describes new features in Informatica workflows in 10.2.

Human Task Distribution Properties

Effective in version 10.2, you can store a list of the users or groups who can work on Human task instances in an external database table. You select the table when you configure the Human task to define task instances based on the values in a column of source data.

The table identifies the users or groups who can work on the task instances and specifies the column values to associate with each user or group. You can update the table independently of the workflow configuration, for example as users join or leave the project. When the workflow runs, the Data Integration Service uses the current information in the table to assign task instances to users or groups.

You can also specify a range of numeric values or date values when you associate users or groups with the values in a source data column. When one or more records contain a value in a range that you specify, the Data Integration Service assigns the task instance to a user or group that you specify.

For more information, see the "Human Task" chapter in the *Informatica 10.2 Developer Workflow Guide*.

Human Task Notification Properties

Effective in version 10.2, you can edit the subject line of an email notification that you configure in a Human task. You can also add a workflow variable to the subject line of the notification.

A Human task can send email notifications when the Human task completes in the workflow and when a task instance that the Human task defines changes status. To configure notifications for a Human task, update the Notifications properties on the Human task in the workflow. To configure notifications for a task

instance, update the Notification properties on the step within the Human task that defines the task instances.

When you configure notifications for a Human task instance, you can select an option to notify the task instance owner in addition to any recipient that you specify. The option applies when a single user owns the task instance. When you select the option to notify the task instance owner, you can optionally leave the Recipients field empty

For more information, see the "Human Task" chapter in the *Informatica 10.2 Developer Workflow Guide*.

Import from PowerCenter

Effective in version 10.2, you can import mappings with multiple pipelines, sessions, workflows, and worklets from PowerCenter into the Model repository. Sessions within a workflow are imported as Mapping tasks in the Model repository. Workflows are imported as workflows within the Model repository. Worklets within a workflow are expanded and objects are imported into the Model repository.

Multiple pipelines within a mapping are imported as separate mappings into the Model repository based on the target load order. If a workflow contains a session that runs a mapping with multiple pipelines, the import process creates a separate Model repository mapping and mapping task for each pipeline in the PowerCenter mapping to preserve the target load order.

For more information about importing from PowerCenter, see the "Import from PowerCenter" chapter in the *Informatica 10.2 Developer Mapping Guide* and the "Workflows" chapter in the *Informatica 10.2 Developer Workflow Guide*.

CHAPTER 4

Changes (10.2)

This chapter includes the following topics:

Support Changes

This section describes the support changes in 10.2.

Big Data Hadoop Distribution Support

Informatica big data products support a variety of Hadoop distributions. In each release, Informatica adds, defers, and drops support for Hadoop distribution versions. Informatica might reinstate support for deferred versions in a future release.

The following table lists the supported Hadoop distribution versions for Informatica 10.2 big data products:

Product	Amazon EMR	Azure HDInsight	Cloudera CDH	Hortonworks HDP	IBM BigInsights	MapR
Big Data Management	5.4, 5.8	3.5, 3.6	5.9, 5.10, 5.11, 5.12, 5.13	2.4, 2.5, 2.6	4.2	5.2 MEP 2.0 5.2 MEP 3.0
Informatica Intelligent Streaming	5.8	NA	5.11, 5.12, 5.13	2.6	NA	5.2 MEP 2.0
Enterprise Information Catalog	NA	3.6	5.8, 5.9, 5.10, 5.11	2.5, 2.6	4.2.x	3.1
Intelligent Data Lake	5.4	3.6	5.11, 5.12	2.6	4.2	5.2 MEP 2.0

To see a list of the latest supported versions, see the Product Availability Matrix on the Informatica Customer Portal: https://network.informatica.com/community/informatica-network/product-availability-matrices.

Big Data Management Hadoop Distributions

The following table lists the supported Hadoop distribution versions and changes in Big Data Management 10.2:

Hadoop Distribution	Supported Distribution Versions	10.2 Changes
Amazon EMR	5.4 5.8	Dropped support for version 5.0. Added support for version 5.8. **Note:** To use Amazon EMR 5.8 with Big Data Management 10.2, you must apply Emergency Bug Fix 10571. See Knowledge Base article KB 525399.
Azure HDInsight	3.5.x 3.6.x	Added support for version 3.6.
Cloudera CDH	5.9.x 5.10.x 5.11.x 5.12.x 5.13.x	Added support for versions 5.12, 5.13 Dropped support for version 5.8.

Hadoop Distribution	Supported Distribution Versions	10.2 Changes
Hortonworks HDP	2.4x 2.5x 2.6x	Dropped support for version 2.3. **Note:** To use Hortonworks 2.4 or 2.5 with Big Data Management 10.2, you must apply Emergency Bug Fix patches. See the following Knowledge Base articles: - Hotwonworks 2.4 support: KB 521845. - Hortonworks 2.5 support: KB 521847.
IBM BigInsights	4.2.x	No change.
MapR	5.2 MEP 2.0.x 5.2 MEP 3.0.x	Added support for versions 5.2 MEP 2.0 and 5.2 MEP 3.0. Dropped support for version 5.2 MEP 1.0.

Informatica big data products support a variety of Hadoop distributions. In each release, Informatica adds, defers, and drops support for Hadoop distribution versions. Informatica might reinstate support for deferred versions in a future release.

To see a list of the latest supported versions, see the Product Availability Matrix on the Informatica network: `https://network.informatica.com/community/informatica-network/product-availability-matrices`.

Enterprise Information Catalog Hadoop Distributions

The following table lists the supported Hadoop distribution versions and changes in Enterprise Information Catalog 10.2:

Hadoop Distribution	Supported Distribution Versions	Changes since 10.1.1 HotFix1
Azure HDInsight	3.6	Added support for Azure HDInsight.
Cloudera CDH	5.8, 5.9, 5.10, 5.11	No changes.
Hortonworks HDP	2.5.x (Kerberos version), 2.6.x (Non Kerberos version)	Added support for 2.6 non-Kerberos version.
IBM BigInsights	4.2	No change.

Intelligent Data Lake Hadoop Distributions

The following table lists the supported Hadoop distribution versions and changes in Intelligent Data Lake 10.2:

Hadoop Distribution	Supported Distribution Versions	Changes since 10.1.1 HotFix1
Amazon EMR	5.4	Added support for version 5.4. Dropped support for version 5.0.
Azure HDInsight	3.6	Added support for version 3.6. Dropped support for version 3.5.

Hadoop Distribution	Supported Distribution Versions	Changes since 10.1.1 HotFix1
Cloudera CDH	5.10 5.11 5.12	Added support for version 5.10 and 5.12. Dropped support for version 5.8. Deferred support for version 5.9.
Hortonworks HDP	2.6	Dropped support for version 2.3. Deferred support for versions 2.4 and 2.5.
IBM BigInsights	4.2	No change.
MapR	5.2 MEP 2.0	Added support for MapR.

Intelligent Streaming Hadoop Distributions

The following table lists the supported Hadoop distribution versions and changes in Intelligent Streaming 10.2:

Distribution	Supported Versions	Changes Since 10.1.1 HotFix1
Amazon EMR	5.4 5.8	Added support for 5..8.
Cloudera CDH	5.10.x 5.11.x 5.12.x 5.13.x	Added support for 5.13. Dropped support for versions 5.8. Deferred support for versions 5.9.
Hortonworks HDP	2.5.x 2.6.x	Dropped support for versions 2.3. Deferred support for versions 2.4.
MapR	5.2 MEP 2.0	Added support for version 5.2 MEP 2.0.

To see a list of the latest supported versions, see the Product Availability Matrix on the Informatica network: `https://network.informatica.com/community/informatica-network/product-availability-matrices`.

Metadata Manager

Custom Metadata Configurator (Deprecated)

Effective in version 10.2, Informatica deprecated the Custom Metadata Configurator in Metadata Manager.

You can use the load template to load metadata from metadata source files into a custom resource. Create a load template for the models that use Custom Metadata Configurator templates.

For more information about using load templates, see the "Custom XConnect Created with a Load Template" in the *Informatica Metadata Manager 10.2 Custom Metadata Integration Guide*.

Application Services

This section describes changes to Application Services in 10.2.

Content Management Service

Effective in version 10.2, you do not need to update the search index on the Model repository before you run the infacmd cms purge command. The infacmd cms purge command updates the search index before it purges unused tables from the reference data warehouse.

Previously, you updated the search index before you ran the command so that the Model repository held an up-to-date list of reference tables. The Content Management Service used the list of objects in the index to select the tables to delete.

For more information, see the "Content Management Service" chapter in the *Informatica 10.2 Application Service Guide*.

Data Integration Service

This section describes changes to the Data Integration Service in 10.2.

Execution Options

Effective in version 10.2, you configure the following execution options on the Properties view for the Data Integration Service:

- Maximum On-Demand Execution Pool Size. Controls the number of on-demand jobs that can run concurrently. Jobs include data previews, profiling jobs, REST and SQL queries, web service requests, and mappings run from the Developer tool.
- Maximum Native Batch Execution Pool Size. Controls the number of deployed native jobs that each Data Integration Service process can run concurrently.
- Maximum Hadoop Batch Execution Pool Size. Controls the number of deployed Hadoop jobs that can run concurrently.

Previously, you configured the **Maximum Execution Pool Size** property to control the maximum number of jobs the Data Integration Service process could run concurrently.

When you upgrade to 10.2, the value of the maximum execution pool size upgrades to the following properties:

- Maximum On-Demand Batch Execution Pool Size. Inherits the value of the Maximum Execution Pool Size property.
- Maximum Native Batch Execution Pool Size. Inherits the value of the Maximum Execution Pool Size property.
- Maximum Hadoop Batch Execution Pool Size. Inherits the value of the Maximum Execution Pool size property if the original value has been changed from 10. If the value is 10, the Hadoop batch pool retains the default size of 100.

For more information, see the "Data Integration Service" chapter in the *Informatica 10.2 Application Service Guide*.

Big Data

This section describes the changes to big data in 10.2.

Hadoop Connection

Effective in version 10.2, the following changes affect Hadoop connection properties.

You can use the following properties to configure your Hadoop connection:

Property	Description
Cluster Configuration	The name of the cluster configuration associated with the Hadoop environment. Appears in General Properties.
Write Reject Files to Hadoop	Select the property to move the reject files to the HDFS location listed in the property Reject File Directory when you run mappings. Appears in Reject Directory Properties.
Reject File Directory	The directory for Hadoop mapping files on HDFS when you run mappings. Appears in Reject Directory Properties
Blaze Job Monitor Address	The host name and port number for the Blaze Job Monitor. Appears in Blaze Configuration.
YARN Queue Name	The YARN scheduler queue name used by the Spark engine that specifies available resources on a cluster. Appears in Blaze Configuration.

Effective in version 10.2, the following properties are renamed:

Current Name	Previous Name	Description
ImpersonationUserName	HiveUserName	Hadoop impersonation user. The user name that the Data Integration Service impersonates to run mappings in the Hadoop environment.
Hive Staging Database Name	Database Name	Namespace for Hive staging tables. Appears in Common Properties. Previously appeared in Hive Properties.
HiveWarehouseDirectory	HiveWarehouseDirectoryOnHDFS	The absolute HDFS file path of the default database for the warehouse that is local to the cluster.
Blaze Staging Directory	Temporary Working Directory on HDFS CadiWorkingDirectory	The HDFS file path of the directory that the Blaze engine uses to store temporary files. Appears in Blaze Configuration.

Current Name	Previous Name	Description
Blaze User Name	Blaze Service User Name CadiUserName	The owner of the Blaze service and Blaze service logs. Appears in Blaze Configuration.
YARN Queue Name	Yarn Queue Name CadiAppYarnQueueName	The YARN scheduler queue name used by the Blaze engine that specifies available resources on a cluster. Appears in Blaze Configuration.
BlazeMaxPort	CadiMaxPort	The maximum value for the port number range for the Blaze engine.
BlazeMinPort	CadiMinPort	The minimum value for the port number range for the Blaze engine.
BlazeExecutionParameterList	CadiExecutionParameterList	An optional list of configuration parameters to apply to the Blaze engine.
SparkYarnQueueName	YarnQueueName	The YARN scheduler queue name used by the Spark engine that specifies available resources on a cluster.
Spark Staging Directory	Spark HDFS Staging Directory	The HDFS file path of the directory that the Spark engine uses to store temporary files for running jobs.

Effective in version 10.2, the following properties are removed from the connection and imported into the cluster configuration:

Property	Description
Resource Manager Address	The service within Hadoop that submits requests for resources or spawns YARN applications. Imported into the cluster configuration as the property `yarn.resourcemanager.address`. Previously appeared in Hadoop Cluster Properties.
Default File System URI	The URI to access the default Hadoop Distributed File System. Imported into the cluster configuration as the property `fs.defaultFS` or `fs.default.name`. Previously appeared in Hadoop Cluster Properties.

Effective in version 10.2, the following properties are deprecated and are removed from the connection:

Property	Description
Type	The connection type. Previously appeared in General Properties.
Metastore Execution Mode*	Controls whether to connect to a remote metastore or a local metastore. Previously appeared in Hive Configuration.
Metastore Database URI*	The JDBC connection URI used to access the data store in a local metastore setup. Previously appeared in Hive Configuration.
Metastore Database Driver*	Driver class name for the JDBC data store. Previously appeared in Hive Configuration.
Metastore Database User Name*	The metastore database user name. Previously appeared in Hive Configuration.
Metastore Database Password*	The password for the metastore user name. Previously appeared in Hive Configuration.
Remote Metastore URI*	The metastore URI used to access metadata in a remote metastore setup. This property is imported into the cluster configuration as the property `hive.metastore.uris`. Previously appeared in Hive Configuration.
Job Monitoring URL	The URL for the MapReduce JobHistory server. Previously appeared in Hive Configuration.
** These properties are deprecated in 10.2. When you upgrade to 10.2, the property values that you set in a previous release are saved in the repository, but they do not appear in the connection properties.*	

HBase Connection Properties

Effective in version 10.2, the following properties are removed from the connection and imported into the cluster configuration:

Property	Description
ZooKeeper Host(s)	Name of the machine that hosts the ZooKeeper server.
ZooKeeper Port	Port number of the machine that hosts the ZooKeeper server.
Enable Kerberos Connection	Enables the Informatica domain to communicate with the HBase master server or region server that uses Kerberos authentication.
HBase Master Principal	Service Principal Name (SPN) of the HBase master server.
HBase Region Server Principal	Service Principal Name (SPN) of the HBase region server.

Hive Connection Properties

Effective in version 10.2, PowerExchange for Hive has the following changes:

- You cannot use a PowerExchange for Hive connection if you want the Hive driver to run mappings in the Hadoop cluster. To use the Hive driver to run mappings in the Hadoop cluster, use a Hadoop connection.
- The following properties are removed from the connection and imported into the cluster configuration:

Property	Description
Default FS URI	The URI to access the default Hadoop Distributed File System.
JobTracker/Yarn Resource Manager URI	The service within Hadoop that submits the MapReduce tasks to specific nodes in the cluster.
Hive Warehouse Directory on HDFS	The absolute HDFS file path of the default database for the warehouse that is local to the cluster.
Metastore Execution Mode	Controls whether to connect to a remote metastore or a local metastore.
Metastore Database URI	The JDBC connection URI used to access the data store in a local metastore setup.
Metastore Database Driver	Driver class name for the JDBC data store.
Metastore Database User Name	The metastore database user name.
Metastore Database Password	The password for the metastore user name.
Remote Metastore URI	The metastore URI used to access metadata in a remote metastore setup. This property is imported into the cluster configuration as the property `hive.metastore.uris`.

HBase Connection Properties for MapR-DB

Effective in version 10.2, the **Enable Kerberos Connection** property is removed from the HBase connection for MapR-DB and imported into the cluster configuration.

Mapping Run-time Properties

This section lists changes to mapping-run time properties.

Execution Environment

Effective in version 10.2, you can configure the Reject File Directory as a new property in the Hadoop Execution Environment.

Name	Value
Reject File Directory	The directory for Hadoop mapping files on HDFS when you run mappings in the Hadoop environment. The Blaze engine can write reject files to the Hadoop environment for flat file, HDFS, and Hive targets. The Spark and Hive engines can write reject files to the Hadoop environment for flat file and HDFS targets. Choose one of the following options: - On the Data Integration Service machine. The Data Integration Service stores the reject files based on the RejectDir system parameter. - On the Hadoop Cluster. The reject files are moved to the reject directory configured in the Hadoop connection. If the directory is not configured, the mapping will fail. - Defer to the Hadoop Connection. The reject files are moved based on whether the reject directory is enabled in the Hadoop connection properties. If the reject directory is enabled, the reject files are moved to the reject directory configured in the Hadoop connection. Otherwise, the Data Integration Service stores the reject files based on the RejectDir system parameter.

Monitoring

Effective in version 10.2, the AllHiveSourceTables row in the Summary Statistics view in the Administrator tool includes records read from the following sources:

- Original Hive sources in the mapping.
- Staging Hive tables defined by the Hive engine.
- Staging data between two linked MapReduce jobs in each query.

If the LDTM session includes one MapReduce job, the AllHiveSourceTables statistic only includes original Hive sources in the mapping.

For more information, see the "Monitoring Mappings in the Hadoop Environment" chapter of the *Big Data Management 10.2 User Guide*.

S3 Access and Secret Key Properties

Effective in version 10.2, the following properties are included in the list of sensitive properties of a cluster configuration:

- fs.s3a.access.key
- fs.s3a.secret.key
- fs.s3n.awsAccessKeyId
- fs.s3n.awsSecretAccessKey
- fs.s3.awsAccessKeyId
- fs.s3.awsSecretAccessKey

Sensitive properties are included but masked when you generate a cluster configuration archive file to deploy on the machine that runs the Developer tool.

Previously, you configured these properties in .xml configuration files on the machines that run the Data Integration Service and the Developer tool.

For more information about sensitive properties, see the *Informatica Big Data Management 10.2 Administrator Guide*.

Sqoop

Effective in version 10.2, if you create a password file to access a database, Sqoop ignores the password file. Sqoop uses the value that you configure in the **Password** field of the JDBC connection.

Previously, you could create a password file to access a database.

For more information, see the "Mapping Objects in the Hadoop Environment" chapter in the *Informatica Big Data Management 10.2 User Guide*.

Command Line Programs

This section describes changes to commands in 10.2.

infacmd ihs Commands

Obsolete Commands

The following table describes obsolete infacmd ihs commands:

Command	Description
BackupData	Backs up HDFS data in the internal Hadoop cluster to a zip file. When you back up the data, the Informatica Cluster Service saves all the data created by Enterprise Information Catalog, such as HBase data, scanner data, and ingestion data.
removesnapshot	Removes existing HDFS snapshots so that you can run the infacmd ihs BackupData command successfully to back up HDFS data.

infacmd ldm Commands

Changed Commands

The following table describes changed infacmd ldm commands:

Command	Change Description
BackupData	Effective in 10.2, the name of the command is changed to BackupContents.
LocalDestination	Effective in 10.2, the **-of** option is added to the BackupContents command.
restoreData	Effective in 10.2, the name of the command is changed to restoreContents.

For more information, see the "infacmd ldm Command Reference" chapter in the *Informatica 10.2 Command Reference*.

Enterprise Information Catalog

This section describes the changes to Informatica Enterprise Information Catalog in 10.2.

Product Name Changes

Effective in version 10.2, Enterprise Information Catalog includes the following name changes:

- The product Informatica Live Data Map is renamed to Informatica Enterprise Information Catalog.
- The Informatica Live Data Map Administrator tool is renamed to Informatica Catalog Administrator.
- The installer is renamed from Live Data Map to Enterprise Information Catalog.

Informatica Analyst

This section describes changes to the Analyst tool in 10.2.

Parameters

This section describes changes to Analyst tool parameters.

System Parameters

Effective in version 10.2, the Analyst tool displays the file path of system parameters in the following format: `$$[Parameter Name]/[Path]`.

Previously, the Analyst tool displayed the local file path of the data object and did not resolve the system parameter.

For more information about viewing data objects, see the *Informatica 10.2 Analyst Tool Guide*.

Intelligent Streaming

This section describes the changes to Informatica Intelligent Streaming in 10.2.

Kafka Data Object Changes

Effective in version 10.2, when you configure the data operation read properties, you can specify the time from which the Kafka source starts reading Kafka messages from a Kafka topic. You can read from or write to a Kafka cluster that is configured for Kerberos authentication.

For more information, see the "Sources and Targets in a Streaming Mapping" chapter in the *Informatica Intelligent Streaming 10.2 User Guide*.

PowerExchange Adapters

This section describes changes to PowerExchange adapters in version 10.2.

PowerExchange Adapters for Informatica

This section describes changes to Informatica adapters in 10.2.

PowerExchange for Amazon S3

Effective in version 10.2, PowerExchange for Amazon S3 has the following changes:

- You can provide the folder path without specifying the bucket name in the advanced properties for read and write operation in the following format: `/<folder_name>`. The Data Integration Service appends this folder path with the folder path that you specify in the connection properties.
  Previously, you specified the bucket name along with the folder path in the advanced properties for read and write operation in the following format: `<bucket_name>/<folder_name>`.
- You can view the bucket name directory following sub directory list in the left panel and selected list of files in the right panel of metadata import browser.
  Previously, PowerExchange for Amazon S3 displayed the list of bucket names in the left panel and folder path along with file names in right panel of metadata import browser.
- PowerExchange for Amazon S3 creates the data object read operation and data object write operation for the Amazon S3 data object automatically.
  Previously, you had to create the data object read operation and data object write operation for the Amazon S3 data object manually.

For more information, see the *Informatica PowerExchange for Amazon S3 10.2 User Guide*

PowerExchange Adapters for PowerCenter

This section describes changes to PowerCenter adapters in version 10.2.

PowerExchange for Amazon Redshift

Effective in version 10.2, you must provide the schema name for the Amazon Redshift table to run mappings successfully.

Previously, mappings would run even if the public schema was selected.

For more information, see the *Informatica PowerExchange for Amazon Redshift 10.2 User Guide for PowerCenter*.

PowerExchange for Email Server

Effective in version 10.2, PowerExchange for Email Server installs with the Informatica services.

Previously, PowerExchange for Email Server had a separate installer.

For more information, see the *Informatica PowerExchange for Email Server 10.2 User Guide for PowerCenter*.

PowerExchange for JD Edwards EnterpriseOne

Effective in version 10.2, PowerExchange for JD Edwards EnterpriseOne installs with the Informatica services.

Previously, PowerExchange for JD Edwards EnterpriseOne had a separate installer.

For more information, see the *Informatica PowerExchange for JD Edwards EnterpriseOne 10.2 User Guide for PowerCenter*.

PowerExchange for JD Edwards World

Effective in version 10.2, PowerExchange for JD Edwards World installs with the Informatica services.

Previously, PowerExchange for JD Edwards World had a separate installer.

For more information, see the *Informatica PowerExchange for JD Edwards World 10.2 User Guide for PowerCenter*.

PowerExchange for LDAP

Effective in version 10.2, PowerExchange for LDAP installs with the Informatica services.

Previously, PowerExchange for LDAP had a separate installer.

For more information, see the *Informatica PowerExchange for LDAP 10.2 User Guide for PowerCenter*.

PowerExchange for Lotus Notes

Effective in version 10.2, PowerExchange for Lotus Notes installs with the Informatica services.

Previously, PowerExchange for Lotus Notes had a separate installer.

For more information, see the *Informatica PowerExchange for Lotus Notes 10.2 User Guide for PowerCenter*.

PowerExchange for Oracle E-Business Suite

Effective in version 10.2, PowerExchange for Oracle E-Business Suite installs with the Informatica services.

Previously, PowerExchange for Oracle E-Business Suite had a separate installer.

For more information, see the *Informatica PowerExchange for Oracle E-Business Suite 10.2 User Guide for PowerCenter*.

PowerExchange for SAP NetWeaver

Effective in version 10.2, Informatica does not package secure transports in a separate folder named `Secure` within the Informatica installer .zip file. Informatica packages both standard and secure transports in the following folders:

- Unicode cofiles: `Informatica installer zip file/saptrans/mySAP/UC/cofiles`
- Unicode data files: `Informatica installer zip file/saptrans/mySAP/UC/data`
- Non-Unicode cofiles: `Informatica installer zip file/saptrans/mySAP/NUC/cofiles`
- Non-Unicode data files: `Informatica installer zip file/saptrans/mySAP/NUC/data`

Previously, Informatica packaged the secure transports in the following folders:

- Unicode cofiles: `Informatica installer zip file/saptrans/mySAP/UC/Secure/cofiles`
- Unicode data files: `Informatica installer zip file/saptrans/mySAP/UC/Secure/data`
- Non-Unicode cofiles: `Informatica installer zip file/saptrans/mySAP/NUC/Secure/cofiles`
- Non-Unicode data files: `Informatica installer zip file/saptrans/mySAP/NUC/Secure/data`

For more information, see the *Informatica PowerExchange for SAP NetWeaver 10.2 User Guide for PowerCenter*.

PowerExchange for Siebel

Effective in version 10.2, PowerExchange for Siebel installs with the Informatica services.

Previously, PowerExchange for Siebel had a separate installer.

For more information, see the *Informatica PowerExchange for Siebel 10.2 User Guide for PowerCenter*.

Security

This section describes changes to security features in 10.2.

SAML Authentication

Effective in version 10.2, you must configure Security Assertion Markup Language (SAML) authentication at the domain level, and on all gateway nodes within the domain.

Previously, you had to configure SAML authentication at the domain level only.

For more information, see the "SAML Authentication for Informatica Web Applications" chapter in the *Informatica 10.2 Security Guide*.

Transformations

This section describes changed transformation behavior in 10.2.

Informatica Transformations

This section describes the changes to the Informatica transformations in 10.2.

Address Validator Transformation

This section describes the changes to the Address Validator transformation.

The Address Validator transformation contains the following updates to address functionality:

All Countries

Effective in version 10.2, the Address Validator transformation uses version 5.11.0 of the Informatica Address Verification software engine. The engine enables the features that Informatica adds to the Address Validator transformation in version 10.2.

Previously, the transformation used version 5.9.0 of the Informatica Address Verification software engine.

Japan

Effective in version 10.2, you can configure a single mapping to return the Choumei Aza code for a current address in Japan. To return the code, select the Current Choumei Aza Code JP port. You can use the code to find the current version of any legacy address that Japan Post recognizes.

Previously, you used the New Choumei Aza Code JP port to return incremental changes to the Choumei Aza code for an address. The transformation did not include the Current Choumei Aza Code JP port. You needed to configure two or more mappings to verify a current Choumei Aza code and the corresponding address.

United Kingdom

Effective in version 10.2, you can configure the Address Validator transformation to return postal, administrative, and traditional county information from the Royal Mail Postcode Address File. The transformation returns the information on the Province ports.

Previously, the transformation returned postal county information when the information was postally relevant.

The following table shows the ports that you can select for each information type:

County Information Type	Address Element
Postal	Province 1
Administrative	Province 2
Traditional	Province 3

Updated Certification Standards in Multiple Countries

Effective in version 10.2, Informatica supports the following certification standards for address verification software:

- Address Matching Approval System (AMAS) from Australia Post. Updated to Cycle 2017.
- SendRight certification from New Zealand Post. Updated to Cycle 2017.
- Software Evaluation and Recognition Program (SERP) from Canada Post. Updated to Cycle 2017.

Informatica continues to support the current versions of the Coding Accuracy Support System (CASS) standards from the United States Postal Service and the Service National de L'Adresse (SNA) standard from La Poste of France.

For more information, see the *Informatica 10.2 Developer Transformation Guide* and the *Informatica 10.2 Address Validator Port Reference*.

For comprehensive information about the updates to the Informatica Address Verification software engine from version 5.9.0 through version 5.11.0, see the *Informatica Address Verification 5.11.0 Release Guide*.

Expression Transformation

Effective in version 10.2, you can configure the Expression transformation to be an active transformation on the Spark engine by using a window function or an aggregate function with windowing properties.

Previously, the Expression transformation could only be a passive transformation.

For more information, see the *Big Data Management 10.2 Administrator Guide*.

Workflows

This section describes changed workflow behavior in version 10.2.

Informatica Workflows

This section describes the changes to Informatica workflow behavior in 10.2.

Workflow Variables in Task Instance Notifications

Effective in version 10.2, the workflow variable *$taskEvent.startOwner* changes name to *$taskEvent.owner*. The usage of the variable does not change in version 10.2.

For more information, see the "Human Task" chapter in the *Informatica 10.2 Developer Workflow Guide.*

CHAPTER 5

Release Tasks (10.2)

This chapter includes the following topic:

PowerExchange Adapters

This section describes release tasks for PowerExchange adapters in version 10.2.

PowerExchange Adapters for PowerCenter

This section describes release tasks for PowerCenter adapters in version 10.2.

PowerExchange for Amazon Redshift

Effective in version 10.2, for existing mappings where public schema is selected, ensure that the schema name is correct and works for the Redshift table. The public schema might not work for all the tables.

For more information, see the *Informatica 10.2 PowerExchange for Amazon Redshift User Guide for PowerCenter*

PowerExchange for Amazon S3

Effective in version 10.2, when you upgrade from 9.5.1 or 9.6.1, the upgrade process does not retain all property values in the connection. After you upgrade, you must reconfigure the following properties:

Property	Description
Access Key	The access key ID used to access the Amazon account resources. Required if you do not use AWS Identity and Access Management (IAM) authentication. **Note:** Ensure that you have valid AWS credentials before you create a connection.
Secret Key	The secret access key used to access the Amazon account resources. This value is associated with the access key and uniquely identifies the account. You must specify this value if you specify the access key ID. Required if you do not use AWS Identity and Access Management (IAM) authentication.
Master Symmetric Key	Optional. Provide a 256-bit AES encryption key in the Base64 format when you enable client-side encryption. You can generate a key using a third-party tool. If you specify a value, ensure that you specify the encryption type as client side encryption in the target session properties.

For more information, see the *Informatica 10.2 PowerExchange for Amazon S3 User Guide for PowerCenter*

PowerExchange for Microsoft Dynamics CRM

When you upgrade from an earlier version, you must copy the `.jar` files in the installation location of 10.2.

- For the client, if you upgrade from 9.x to 10.2, copy the `local_policy.jar`, `US_export_policy.jar`, and cacerts files from the following 9.x installation folder `<Informatica installation directory>\clients\java\jre\lib\security` to the following 10.2 installation folder `<Informatica installation directory>\clients\java\32bit\jre\lib\security`.
  If you upgrade from 10.x to 10.2, copy the `local_policy.jar`, `US_export_policy.jar`, and cacerts files from the following 10.x installation folder `<Informatica installation directory>\clients\java\32bit\jre\lib\security` to the corresponding 10.2 folder.
- For the server, copy the `local_policy.jar`, `US_export_policy.jar`, and cacerts files from the `<Informatica installation directory>java/jre/lib/security` folder of the previous release to the corresponding 10.2 folder.

When you upgrade from an earlier version, you must copy the `msdcrm` folder in the installation location of 10.2.

- For the client, copy the `msdcrm` folder from the `<Informatica installation directory>\clients\PowerCenterClient\client\bin\javalib` folder of the previous release to the corresponding 10.2 folder.
- For the server, copy the `msdcrm` folder from the `<Informatica installation directory>/server/bin/javalib` folder of the previous release to the corresponding 10.2 folder.

PowerExchange for SAP NetWeaver

Effective in version 10.2, Informatica implemented the following changes in PowerExchange for SAP NetWeaver support for PowerCenter:

Dropped Support for the CPI-C Protocol

Effective in version 10.2, Informatica dropped support for the CPI-C protocol.

Use the RFC or HTTP protocol to generate and install ABAP programs while reading data from SAP tables.

If you upgrade ABAP mappings that were generated with the CPI-C protocol, you must complete the following tasks:

1. Regenerate and reinstall the ABAP program by using stream (RFC/HTTP) mode.
2. Create a System user or a communication user with the appropriate authorization profile to enable dialog-free communication between SAP and Informatica.

For more information, see the *Informatica PowerExchange for SAP NetWeaver 10.2 User Guide for PowerCenter*.

Dropped Support for ABAP Table Reader Standard Transports

Effective in version 10.2, Informatica dropped support for the ABAP table reader standard transports. Informatica will not ship the standard transports for ABAP table reader. Informatica will ship only secure transports for ABAP table reader.

If you upgrade from an earlier version, you must delete the standard transports and install the secure transports.

For more information, see the *Informatica PowerExchange for SAP NetWeaver 10.2 Transport Versions Installation Notice*.

Added Support for HTTP Streaming for ABAP Table Reader Mappings

Effective in version 10.2, when you run ABAP mappings to read data from SAP tables, you can configure HTTP streaming.

To use HTTP stream mode for upgraded ABAP mappings, perform the following tasks:

1. Regenerate and reinstall the ABAP program in stream mode.
2. Create an SAP ABAP HTTP streaming connection.
3. Configure the session to use the SAP streaming reader, an SAP ABAP HTTP streaming connection, and an SAP R/3 application connection.

Note: If you configure HTTP streaming, but do not regenerate and reinstall the ABAP program in stream mode, the session fails.

Part II: Version 10.1.1

This part contains the following chapters:

CHAPTER 6

New Features, Changes, and Release Tasks (10.1.1 HotFix 1)

This chapter includes the following topics:

New Products (10.1.1 HotFix 1)

This section describes new products in version 10.1.1 HotFix 1.

PowerExchange for Cloud Applications

Effective in version 10.1.1 HotFix 1, you can use PowerExchange for Cloud Applications to connect to Informatica Cloud from PowerCenter. You can read data from or write data to data sources for which connections are available in Informatica Cloud. It is not required to have the PowerExchange for the respective cloud application in PowerCenter.

For more information, see the *Informatica PowerExchange for Cloud Applications 10.1.1 HotFix 1 User Guide*.

New Features (10.1.1 HotFix 1)

This section describes new features in version 10.1.1 HotFix 1.

Command Line Programs

This section describes new commands in version 10.1.1 HotFix 1.

infacmd dis Commands (10.1.1 HF1)

The following table describes new infacmd dis commands:

Command	Description
disableMappingValidationEnvironment	Disables the mapping validation environment for mappings that are deployed to the Data Integration Service.
enableMappingValidationEnvironment	Enables a mapping validation environment for mappings that are deployed to the Data Integration Service.
setMappingExecutionEnvironment	Specifies the mapping execution environment for mappings that are deployed to the Data Integration Service.

For more information, see the "Infacmd dis Command Reference" chapter in the *Informatica 10.1.1 HotFix1 Command Reference*.

infacmd mrs Commands (10.1.1 HF1)

The following table describes new infacmd mrs commands:

Command	Description
disableMappingValidationEnvironment	Disables the mapping validation environment for mappings that you run from the Developer tool.
enableMappingValidationEnvironment	Enables a mapping validation environment for mappings that you run from the Developer tool.
setMappingExecutionEnvironment	Specifies the mapping execution environment for mappings that you run from the Developer tool.

For more information, see the "Infacmd mrs Command Reference" chapter in the *Informatica 10.1.1 HotFix1 Command Reference*.

infacmd ps Command

The following table describes a new infacmd ps command:

Command	Description
restoreProfilesAndScorecards	Restores profiles and scorecards from a previous version to version 10.1.1 HotFix 1.

For more information, see the "infacmd ps Command Reference" chapter in the Informatica 10.1.1 HotFix 1 Command Reference.

Informatica Analyst

This section describes new Analyst tool features in version 10.1.1 HotFix 1.

Profiles and Scorecards

This section describes new Analyst tool features for profiles and scorecards.

Invalid Rows Worksheet

Effective in version 10.1.1 HotFix1, scorecard export results include invalid source rows after you choose the **Data** > **All** option in the **Export data to a file** dialog box.

For more information about scorecards, see the "Scorecards in Informatica Analyst" chapter in the *Informatica 10.1.1 HotFix1 Data Discovery Guide*.

PowerCenter

This section describes new PowerCenter features in version 10.1.1 HotFix 1.

Pushdown Optimization for Greenplum

Effective in version 10.1.1 HotFix 1, when the connection type is ODBC, the PowerCenter Integration Service can push TRUNC(DATE), CONCAT(), and TO_CHAR(DATE) functions to Greenplum using source-side and full pushdown optimization.

For more information, see the *Informatica PowerCenter 10.1.1 HotFix 1 Advanced Workflow Guide*.

Pushdown Optimization for Microsoft Azure SQL Data Warehouse

Effective in version 10.1.1 HotFix 1, when the connection type is ODBC, you can configure source-side or full pushdown optimization to push the transformation logic to Microsoft Azure SQL Data Warehouse.

For more information, see the *Informatica PowerCenter 10.1.1 HotFix 1 Advanced Workflow Guide*.

PowerExchange Adapters

This section describes new PowerExchange adapter features in version 10.1.1 HotFix 1.

PowerExchange Adapters for PowerCenter®

This section describes new PowerCenter adapter features in version 10.1.1 HotFix 1.

PowerExchange for Amazon Redshift

This section describes new PowerExchange for Amazon Redshift features in version 10.1.1 HotFix 1:

- You can read data from or write data to the following regions:
  - Asia Pacific (Mumbai)
  - Canada (Central)
  - US East (Ohio)
- PowerExchange for Amazon Redshift supports the asterisk pushdown operator (*) that can be pushed to the Amazon Redshift database by using source-side, target-side, or full pushdown optimization.
- For client-side and server-side encryption, you can configure the customer master key ID generated by AWS Key Management Service (AWS KMS) in the connection.

For more information, see the *Informatica 10.1.1 HotFix 1 PowerExchange for Amazon Redshift User Guide for PowerCenter*.

PowerExchange for Amazon S3

This section describes new PowerExchange for Amazon S3 features in version 10.1.1 HotFix 1:

- You can read data from or write data to the following regions:
  - Asia Pacific (Mumbai)
  - Canada (Central)
  - US East (Ohio)
- For client-side and server-side encryption, you can configure the customer master key ID generated by AWS Key Management Service (AWS KMS) in the connection.
- When you write data to the Amazon S3 buckets, you can compress the data in GZIP format.
- You can override the Amazon S3 folder path when you run a mapping.

For more information, see the *Informatica PowerExchange for Amazon S3 10.1.1 HotFix 1 User Guide for PowerCenter*.

PowerExchange for Microsoft Azure Blob Storage

Effective in version 10.1.1 HotFix 1, you can use append blob type target session property to write data to Microsoft Azure Blob Storage.

For more information, see the *Informatica PowerExchange for Microsoft Azure Blob Storage 10.1.1 HotFix 1 User Guide*.

PowerExchange for Microsoft Azure SQL Data Warehouse

Effective in version 10.1.1 HotFix 1, you can use the following target session properties with PowerExchange for Microsoft Azure SQL Data Warehouse:

- Update as Update. The PowerCenter Integration Service updates all rows as updates.
- Update else Insert. The PowerCenter Integration Service updates existing rows and inserts other rows as if marked for insert.
- Delete. The PowerCenter Integration Service deletes the specified records from Microsoft Azure SQL Data Warehouse.

For more information, see the *Informatica PowerExchange for Microsoft Azure SQL Data Warehouse 10.1.1 HotFix 1 User Guide for PowerCenter*.

PowerExchange for Microsoft Dynamics CRM

Effective in version 10.1.1 HotFix 1, you can use the following target session properties with PowerExchange for Microsoft Dynamics CRM:

- Add row reject reason. Select to include the reason for rejection of rows to the reject file.
- Alternate Key Name. Indicates whether the column is an alternate key for an entity. Specify the name of the alternate key. You can use alternate key in update and upsert operations.

For more information, see the *Informatica PowerExchange for Microsoft Dynamics CRM 10.1.1 HotFix 1 User Guide for PowerCenter*.

PowerExchange for SAP NetWeaver

Effective in version 10.1.1 HotFix 1, PowerExchange for SAP NetWeaver supports the SSTRING data type when you read data from SAP tables through ABAP. The SSTRING data type is represented as SSTR in PowerCenter.

For more information, see the *Informatica PowerExchange for SAP NetWeaver 10.1.1 HotFix 1 User Guide*.

Changes (10.1.1 HotFix 1)

This section describes changes in version 10.1.1 HotFix 1.

Support Changes

Effective in version 10.1.1 HF1, the following changes apply to Informatica support for third-party platforms and systems:

Big Data Management Hadoop Distributions

The following table lists the supported Hadoop distribution versions and changes in 10.1.1 HotFix 1:

Distribution	Supported Versions	10.1.1 HotFix 1 Changes
Amazon EMR	5.4	To enable support for Amazon EMR 5.4, apply EBF-9585 to Big Data Management 10.1.1 Hot Fix 1. Big Data Management version 10.1.1 Update 2 supports Amazon EMR 5.0.
Azure HDInsight	3.5	Added support for version 3.5.
Cloudera CDH	5.8, 5.9, 5.10, 5.11	Added support for versions 5.10, 5.11.
Hortonworks HDP	2.3, 2.4, 2.5, 2.6	Added support for version 2.6.
IBM BigInsights	4.2	No change.
MapR	5.2.0 MEP binary v. 1.0	No change.

To see a list of the latest supported versions, see the Product Availability Matrix on the Informatica Customer Portal: https://network.informatica.com/community/informatica-network/product-availability-matrices.

CHAPTER 7

New Features, Changes, and Release Tasks (10.1.1 Update 2)

This chapter includes the following topics:

New Products (10.1.1 Update 2)

This section describes new products in version 10.1.1 Update 2.

PowerExchange for MapR-DB

Effective in version 10.1.1 Update 2, you can use PowerExchange for MapR-DB to read data from and write data to MapR-DB binary tables.

PowerExchange for MapR-DB uses the HBase API to connect to MapR-DB. To connect to a MapR-DB table, you must create an HBase connection in which you must specify the database type as MapR-DB. You must create an HBase data object read or write operation, and add it to a mapping to read or write data.

You can validate and run mappings in the native environment or on the Blaze engine in the Hadoop environment.

For more information, see the *Informatica PowerExchange for MapR-DB 10.1.1 Update 2 User Guide*.

New Features (10.1.1 Update 2)

This section describes new features in version 10.1.1 Update 2.

Big Data Management

This section describes new big data features in version 10.1.1 Update 2.

Truncate Hive table partitions on mappings that use the Blaze run-time engine

Effective in version 10.1.1 Update 2, you can truncate Hive table partitions on mappings that use the Blaze run-time engine.

For more information about truncating partitions in a Hive target, see the *Informatica 10.1.1 Update 2 Big Data Management User Guide*.

Filters for partitioned columns on the Blaze engine

Effective in version 10.1.1 Update 2, the Blaze engine can push filters on partitioned columns down to the Hive source to increase performance.

When a mapping contains a Filter transformation on a partitioned column of a Hive source, the Blaze engine reads only the partitions with data that satisfies the filter condition. To enable the Blaze engine to read specific partitions, the Filter transformation must be the next transformation after the source in the mapping.

For more information, see the *Informatica 10.1.1 Update 2 Big Data Management User Guide*.

OraOop support on the Spark engine

Effective in version 10.1.1 Update 2, you can configure OraOop to run Sqoop mappings on the Spark engine. When you read data from or write data to Oracle, you can configure the direct argument to enable Sqoop to use OraOop.

OraOop is a specialized Sqoop plug-in for Oracle that uses native protocols to connect to the Oracle database. When you configure OraOop, the performance improves.

For more information, see the *Informatica 10.1.1 Update 2 Big Data Management User Guide*.

Sqoop support for native Teradata mappings on Cloudera clusters

Effective in version 10.1.1 Update 2, if you use a Teradata PT connection to run a mapping on a Cloudera cluster and on the Blaze engine, the Data Integration Service invokes the Cloudera Connector Powered by Teradata at run time. The Data Integration Service then runs the mapping through Sqoop.

For more information, see the *Informatica 10.1.1 Update 2 PowerExchange for Teradata Parallel Transporter API User Guide*.

Scheduler support on Blaze and Spark engines

Effective in version 10.1.1 Update 2, the following schedulers are valid for Hadoop distributions on both Blaze and Spark engines:

- Fair Scheduler. Assigns resources to jobs such that all jobs receive, on average, an equal share of resources over time.
- Capacity Scheduler. Designed to run Hadoop applications as a shared, multi-tenant cluster. You can configure Capacity Scheduler with or without node labeling. Node label is a way to group nodes with similar characteristics.

For more information, see the Mappings in the Hadoop Environment chapter of the *Informatica 10.1.1 Update 2 Big Data Management User Guide*.

Support for YARN queues on Blaze and Spark engines

Effective in version 10.1.1 Update 2, you can direct Blaze and Spark jobs to a specific YARN scheduler queue. Queues allow multiple tenants to share the cluster. As you submit applications to YARN, the scheduler assigns them to a queue. You configure the YARN queue in the Hadoop connection properties.

For more information, see the Mappings in the Hadoop Environment chapter of the *Informatica 10.1.1 Update 2 Big Data Management User Guide*.

Hadoop security features on IBM BigInsights 4.2

Effective in version 10.1.1 Update 2, you can use the following Hadoop security features on the IBM BigInsights 4.2 Hadoop distribution:

- Apache Knox
- Apache Ranger
- HDFS Transparent Encryption

For more information, see the *Informatica 10.1.1 Update 2 Big Data Management Security Guide*.

SSL/TLS security modes

Effective in version 10.1.1 Update 2, you can use the SSL and TLS security modes on the Cloudera and HortonWorks Hadoop distributions, including the following security methods and plugins:

- Kerberos authentication
- Apache Ranger
- Apache Sentry
- Name node high availability
- Resource Manager high availability

For more information, see the *Informatica 10.1.1 Update 2 Big Data Management Installation and Configuration Guide*.

Hive sources and targets on Amazon S3

Effective in version 10.1.1 Update 2, Big Data Management supports reading and writing to Hive on Amazon S3 buckets for clusters configured with the following Hadoop distributions:

- Amazon EMR
- Cloudera
- HortonWorks
- MapR
- BigInsights

For more information, see the *Informatica 10.1.1 Update 2 Big Data Management User Guide*.

Enterprise Information Catalog

This section describes new features in Enterprise Information Catalog version 10.1.1 Update 2.

File System resource

Effective in version 10.1.1 Update 2, you can create a **File System** resource to import metadata from files in Windows and Linux file systems.

For more information, see the *Informatica 10.1.1 Update 2 Live Data Map Administrator Guide*.

Apache Ranger-enabled clusters

Effective in version 10.1.1 Update 2, you can deploy Enterprise Information Catalog on Apache Ranger-enabled clusters. Apache Ranger provides a security framework to manage the security of the clusters.

Enhanced SSH support for deploying Informatica Cluster Service

Effective in version 10.1.1 Update 2, you can deploy Informatica Cluster Service on hosts where Centrify is enabled. Centrify integrates with an existing Active Directory infrastructure to manage user authentication on remote Linux hosts.

Intelligent Data Lake

This section describes new Intelligent Data Lake features in version 10.1.1 Update 2.

Hadoop ecosystem

Effective in version 10.1.1 Update 2, you can use following Hadoop distributions as a Hadoop data lake:

- Cloudera CDH 5.9
- Hortonworks HDP 2.3, 2.4, and 2.5
- Azure HDInsight 3.5
- Amazon EMR 5.0
- IBM BigInsights 4.2

Using MariaDB for the Data Preparation Service

Effective in version 10.1.1 Update 2, you can use MariaDB 10.0.28 for the Data Preparation Service repository.

Viewing column-level lineage

Effective in version 10.1.1 Update 2, data analysts can view lineage of individual columns in a table corresponding to activities such as data asset copy, import, export, publication, and upload.

SSL/TLS support

Effective in version 10.1.1 Update 2, you can integrate Intelligent Data Lake with Cloudera 5.9 clusters that are SSL/TLS enabled.

PowerExchange Adapters for Informatica

This section describes new Informatica adapter features in version 10.1.1 Update 2.

PowerExchange for Amazon Redshift

Effective in version 10.1.1 Update 2, you can select multiple schemas for Amazon Redshift objects.

For more information, see the *Informatica 10.1.1 Update 2 PowerExchange for Amazon Redshift User Guide*.

Changes (10.1.1 Update 2)

This section describes changes in version 10.1.1 Update 2.

Support Changes

This section describes the support changes in version 10.1.1 Update 2.

Distribution support changes for Big Data Management

The following table lists the supported Hadoop distribution versions and changes in 10.1.1 Update 2:

Distribution	Supported Versions	10.1.1 Update 2 Changes
Amazon EMR	5.0.0	No change.
Azure HDInsight	3.5 *	Added support for version 3.5 Dropped support for version 3.4.
Cloudera CDH	5.8, 5.9, 5.10 *	Added support for version 5.10.
Hortonworks HDP	2.3, 2.4, 2.5	Added support for versions 2.3 and 2.4.
IBM BigInsights	4.2	No change.
MapR	5.2	Reinstated support. Added support for version 5.2. Dropped support for version 5.1.
**Azure HDInsight 3.5 and Cloudera CDH 5.10 are available for technical preview. Technical preview functionality is supported but is not production-ready. Informatica recommends that you use in non-production environments only.*		

For a complete list of Hadoop support, see the Product Availability Matrix on Informatica Network: https://network.informatica.com/community/informatica-network/product-availability-matrices

Dropped support for Teradata Connector for Hadoop (TDCH) and Teradata PT objects on the Blaze engine

Effective in version 10.1.1 Update 2, Informatica dropped support for Teradata Connector for Hadoop (TDCH) on the Blaze engine. The configuration for Sqoop connectivity in 10.1.1 Update 2 depends on the Hadoop distribution:

IBM BigInsights and MapR

You can configure Sqoop connectivity through the JDBC connection. For information about configuring Sqoop connectivity through JDBC connections, see the *Informatica 10.1.1 Update 2 Big Data Management User Guide*.

Cloudera CDH

You can configure Sqoop connectivity through the Teradata PT connection and the Cloudera Connector Powered by Teradata.

1. Download the Cloudera Connector Powered by Teradata .jar files and copy them to the node where the Data Integration Service runs. For more information, see the *Informatica 10.1.1 Update 2 PowerExchange for Teradata Parallel Transporter API User Guide*.
2. Move the configuration parameters that you defined in the `InfaTDCHConfig.txt` file to the **Additional Sqoop Arguments** field in the Teradata PT connection. See the Cloudera Connector Powered by Teradata documentation for a list of arguments that you can specify.

Hortonworks HDP

You can configure Sqoop connectivity through the Teradata PT connection and the Hortonworks Connector for Teradata.

1. Download the Hortonworks Connector for Teradata .jar files and copy them to the node where the Data Integration Service runs. For more information, see the *Informatica 10.1.1 Update 2 PowerExchange for Teradata Parallel Transporter API User Guide*.
2. Move the configuration parameters that you defined in the `InfaTDCHConfig.txt` file to the **Additional Sqoop Arguments** field in the Teradata PT connection. See the Hortonworks Connector for Teradata documentation for a list of arguments that you can specify.

Note: You can continue to use TDCH on the Hive engine through Teradata PT connections.

Deprecated support of Sqoop connectivity through Teradata PT data objects and Teradata PT connections

Effective in version 10.1.1 Update 2, Informatica deprecated Sqoop connectivity through Teradata PT data objects and Teradata PT connections for Cloudera CDH and Hortonworks. Support will be dropped in a future release.

To read data from or write data to Teradata by using TDCH and Sqoop, Informatica recommends that you configure Sqoop connectivity through JDBC connections and relational data objects.

Big Data Management

This section describes the changes to big data in version 10.1.1 Update 2.

Sqoop

Effective in version 10.1.1 Update 2, you can no longer override the user name and password in a Sqoop mapping by using the --username and --password arguments. Sqoop uses the values that you configure in the **User Name** and **Password** fields of the JDBC connection.

For more information, see the *Informatica 10.1.1 Update 2 Big Data Management User Guide*.

Enterprise Information Catalog

This section describes the changes to the Enterprise Information Catalog in version 10.1.1 Update 2.

Asset path

Effective in version 10.1.1 Update 2, you can view the path to the asset in the Asset Details view along with other general information about the asset.

For more information, see the *Informatica 10.1.1 Update 2 Enterprise Information Catalog User Guide*.

Business terms in the Profile Results section

Effective in version 10.1.1 Update 2, the profile results section for tabular assets also includes business terms. Previously, the profile results section included column names, data types, and data domains.

For more information, see the *Informatica 10.1.1 Update 2 Enterprise Information Catalog User Guide*.

URLs as attribute values

Effective in version 10.1.1 Update 2, if you had configured a custom attribute to allow you to enter URLs as the attribute value, you can assign multiple URLs as attribute values to a technical asset.

For more information, see the *Informatica 10.1.1 Update 2 Enterprise Information Catalog User Guide*.

Detection of CSV file headers

Effective in version 10.1.1 Update 2, you can configure the following resources to automatically detect headers for CSV files from which you extract metadata:

- Amazon S3
- HDFS
- File System

For more information, see the *Informatica 10.1.1 Update 2 Live Data Map Administrator Guide*.

Amazon Redshift resource

Effective in version 10.1.1 Update 2, you can import multiple schemas for an Amazon Redshift resource.

For more information, see the *Informatica 10.1.1 Update 2 Live Data Map Administrator Guide*.

Profiling for Hive resource on Data Integration Service

Effective in version 10.1.1 Update 2, you can run Hive resources on Data Integration Service for profiling.

For more information, see the *Informatica 10.1.1 Update 2 Live Data Map Administrator Guide*.

PowerExchange Adapters for Informatica

This section describes changes to Informatica adapters in version 10.1.1 Update 2.

PowerExchange for Amazon Redshift

Effective in version 10.1.1 Update 2, you can select multiple schemas for Amazon Redshift objects. To select multiple schemas, leave the **Schema** field blank in the connection properties. In earlier releases, selecting schema was mandatory and you could select only one schema.

If you upgrade to version 10.1.1 Update 2, the PowerExchange for Redshift mappings created in earlier versions must have the relevant schema name in the connection property. Else, mappings fail when you run them on version 10.1.1 Update 2.

For more information, see the *Informatica 10.1.1 Update 2 PowerExchange for Amazon Redshift User Guide*.

CHAPTER 8

New Features, Changes, and Release Tasks (10.1.1 Update 1)

This chapter includes the following topics:

New Features (10.1.1 Update 1)

This section describes new features in version 10.1.1 Update 1.

Big Data Management

This section describes new big data features in version 10.1.1 Update 1.

Sqoop Support for Native Teradata Mappings

Effective in version 10.1.1 Update 1, if you use a Teradata PT connection to run a mapping on a Hortonworks cluster and on the Blaze engine, the Data Integration Service invokes the Hortonworks Connector for Teradata at run time. The Data Integration Service then runs the mapping through Sqoop.

For more information, see the *Informatica 10.1.1 Update 1 PowerExchange for Teradata Parallel Transporter API User Guide*.

SQL Override Support for Native Teradata Mappings

Effective in version 10.1.1 Update 1, if you use a Teradata PT connection to run a mapping on a Hortonworks cluster and on the Blaze engine, you can configure an SQL override query. You can also parameterize the SQL override query.

For more information, see the *Informatica 10.1.1 Update 1 PowerExchange for Teradata Parallel Transporter API User Guide*.

Changes (10.1.1 Update 1)

This section describes changes in version 10.1.1 Update 1.

PowerExchange Adapters for Informatica

This section describes PowerExchange adapter changes in version 10.1.1 Update 1.

PowerExchange for Amazon S3

Effective in version 10.1.1 Update 1, PowerExchange for Amazon S3 has the following advanced properties for an Amazon S3 data object read and write operation:

- Folder Path
- Download S3 File in Multiple Parts
- Staging Directory

Previously, the advanced properties for an Amazon S3 data object read and write operation were:

- S3 Folder Path
- Enable Download S3 Files in Multiple Parts
- Local Temp Folder Path

For more information, see the *Informatica 10.1.1 Update 1 PowerExchange for Amazon S3 User Guide*.

Release Tasks (10.1.1 Update 1)

This section describes the release tasks for version 10.1.1 Update 1.

PowerExchange Adapters for Informatica

This section describes PowerExchange adapter release tasks for version 10.1.1 Update 1.

PowerExchange for Teradata Parallel Transporter API

Effective in version 10.1.1 Update 1, if you use a Teradata PT connection to run a mapping on a Hortonworks cluster and on the Blaze engine, the Data Integration Service invokes the Hortonworks Connector for Teradata at run time. The Data Integration Service then runs the mapping through Sqoop.

If you had configured Teradata Connector for Hadoop (TDCH) to run Teradata mappings on the Blaze engine and installed 10.1.1 Update 1, the Data Integration Service ignores the TDCH configuration. You must perform the following upgrade tasks to run Teradata mappings on the Blaze engine:

1. Install 10.1.1 Update 1.
2. Download the Hortonworks Connector for Teradata JAR files.
3. Move the configuration parameters that you defined in the `InfaTDCHConfig.txt` file to the **Additional Sqoop Arguments** field in the Teradata PT connection. See the Hortonworks for Teradata Connector documentation for a list of arguments that you can specify.

Note: If you had configured TDCH to run Teradata mappings on the Blaze engine and on a distribution other than Hortonworks, do not install 10.1.1 Update 1. You can continue to use version 10.1.1 to run mappings with TDCH on the Blaze engine and on a distribution other than Hortonworks.

For more information, see the *Informatica 10.1.1 Update 1 PowerExchange for Teradata Parallel Transporter API User Guide*.

CHAPTER 9

New Products (10.1.1)

This chapter includes the following topics:

Intelligent Streaming

With the advent of big data technologies, organizations are looking to derive maximum benefit from the velocity of data, capturing it as it becomes available, processing it, and responding to events in real time. By adding real-time streaming capabilities, organizations can leverage the lower latency to create a complete, up-to-date view of customers, deliver real-time operational intelligence to customers, improve fraud detection, reduce security risk, improve physical asset management, improve total customer experience, and generally improve their decision-making processes by orders of magnitude.

In 10.1.1, Informatica introduces Intelligent Streaming, a new product to help IT derive maximum value from real-time queues by streaming data, processing it, and extracting meaningful business value in near real time. Customers can process diverse data types and from non-traditional sources, such as website log file data, sensor data, message bus data, and machine data, in flight and with high degrees of accuracy.

Intelligent Streaming is built as a capability extension of Informatica's Intelligent Data Platform and provides the following benefits for IT:

- Create and run streaming (continuous-processing) mappings.
- Collect events from real-time queues such as Apache Kafka and JMS.
- Transform the data, create business rules for the transformed data, detect real-time patterns, and drive automated responses or alerts.
- Provide management and monitoring capabilities of streams at runtime.
- Provide at-least-once delivery guarantees.
- Granulate lifecycle controls based on number of rows processed or time of execution.
- Reuse and maintain event processing logic, including batch mappings (after some modifications).

Intelligent Streaming has the following features:

Capture and Transport Stream Data

You can stream the following types of data from sources such as Kafka or JMS, in JSON, XML, or Avro formats:

- Application and infrastructure log data

- Change data capture (CDC) from relational databases
- Clickstreams from web servers
- Social media event streams
- Time-series data from IoT devices
- Message bus data
- Programmable logic controller (PLC) data
- Point of sale data from devices

In addition, Informatica customers can leverage Informatica's Vibe Data Stream (licensed separately) to collect and ingest data in real time, for example, data from sensors, and machine logs, to a Kafka queue. Intelligent Streaming can then process this data.

Refine, Enrich, Analyze, and Process Stream Data

Use the underlying processing platform to run the following complex data transformations in real time without coding or scripting:

- Window Transformation for Streaming use cases with the option of sliding and tumbling windows.
- Filter, Expression, Union, Router, Aggregate, Joiner, Lookup, Java, and Sorter transformations can now be used with Streaming mappings and are executed on Spark Streaming.
- Lookup transformations can be used with Flat file, HDFS, Sqoop, and Hive.

Publish Data

You can stream data to different types of targets, such as Kafka, HDFS, NoSQL databases, and enterprise messaging systems.

Intelligent Streaming is built on the Informatica Big Data Platform platform and extends the platform to provide streaming capabilities. Intelligent Streaming uses Spark Streaming to process streamed data. It uses YARN to manage the resources on a Spark cluster more efficiently and uses third-parties distributions to connect to and push job processing to a Hadoop environment.

Use Informatica Developer (the Developer tool) to create streaming mappings. Use the Hadoop run-time environment and the Spark engine to run the mapping. You can configure high availability to run the streaming mappings on the Hadoop cluster.

For more information about Intelligent Streaming, see the *Informatica Intelligent Streaming User Guide*.

PowerExchange Adapters

PowerExchange Adapters for Informatica

This section describes new Informatica adapters in version 10.1.1.

PowerExchange for Amazon S3

Effective in version 10.1.1, you can create an Amazon S3 connection to specify the location of Amazon S3 sources and targets you want to include in a data object. You can use the Amazon S3 connection in data object read and write operations. You can validate and run mappings in the native environment or on the Blaze engine in the Hadoop environment.

For more information, see the *Informatica PowerExchange for Amazon S3 10.1.1 User Guide*.

CHAPTER 10

New Features (10.1.1)

This chapter includes the following topics:

Application Services

This section describes new application service features in version 10.1.1.

Analyst Service

Effective in version 10.1.1, you can configure an Analyst Service to store all audit data for exception management tasks in a single database. The database stores a record of the work that users perform on Human task instances in the Analyst tool that the Analyst Service specifies.

Set the database connection and the schema for the audit tables on the Human task properties of the Analyst Service in the Administrator tool. After you specify a connection and schema, use the **Actions** menu options in the Administrator tool to create the audit database contents. Or, use the infacmd as commands to set the database and schema and to create the audit database contents. To set the database and the schema, run infacmd as updateServiceOptions. To create the database contents, run infacmd as createExceptionAuditTables

If you do not specify a connection and schema, the Analyst Service creates audit tables for each task instance in the database that stores the task instance data.

For more information, see the *Informatica 10.1.1 Application Service Guide* and the *Informatica 10.1.1 Command Reference*.

Big Data

This section describes new big data features in version 10.1.1.

Blaze Engine

Effective in version 10.1.1, the Blaze engine has the following new features:

Hive Sources and Targets on the Blaze Engine

Effective in version 10.1.1, Hive sources and targets have the following additional support on the Blaze engine:

- Hive decimal data type values with precision 38
- Quoted identifiers in Hive table names, column names, and schema names
- Partitioned Hive tables as targets
- Bucketed Hive tables as source and targets
- SQL overrides for Hive sources
- Table locking for Hive sources and targets
- Create or replace target tables for Hive targets
- Truncate target table for Hive targets and Hive partitioned tables

For more information, see the "Mapping Objects in the Hadoop Environment" chapter in the *Informatica Big Data Management® 10.1.1 User Guide*.

Transformation Support on the Blaze Engine

Effective in version 10.1.1, transformations have the following additional support on the Blaze engine:

- Lookup transformation. You can use SQL overrides and filter queries with Hive lookup sources.
- Sorter transformation. Global sorts are supported when the Sorter transformation is connected to a flat file target. To maintain global sort order, you must enable the Maintain Row Order property in the flat file target. If the Sorter transformation is midstream in the mapping, then rows are sorted locally.
- Update Strategy transformation. The Update Strategy transformation is supported with some restrictions.

For more information, see the "Mapping Objects in the Hadoop Environment" chapter in the *Informatica Big Data Management 10.1.1 User Guide*.

Blaze Engine Monitoring

Effective in Version 10.1.1, more detailed statistics about mapping jobs are available in the Blaze Summary Report. In the Blaze Job Monitor, a green summary report button appears beside the names of successful grid tasks which opens the Blaze Summary Report.

The Blaze Summary Report contains the following information about a mapping job:

- Time taken by individual segments. A pie chart of segments within the grid task.

- Mapping properties. A table containing basic information about the mapping job.
- Tasklet execution time. A time series graph of all tasklets within the selected segment.
- Selected tasklet information. Source and target row counts and cache information for each individual tasklet.

Note: The Blaze Summary Report is in beta. It contains most of the major features, but is not yet complete.

Blaze Engine Logs

Effective in version 10.1.1, the following error logging enhancements are available on the Blaze engine:

- Execution statistics are available in the LDTM log when the log tracing level is set to verbose initialization or verbose data. The log includes the following mapping execution details:
  - Start time, end time, and state of each task
  - Blaze Job Monitor URL
  - Number of total, succeeded, and failed/cancelled tasklets
  - Number of processed and rejected rows for sources and targets
  - Data errors, if any, for transformations in each executed segment
- The LDTM log includes the following transformation statistics:
  - Number of output rows for sources and targets
  - Number of error rows for sources and targets
- The session log also displays a list of all segments within the grid task with corresponding links to the Blaze Job Monitor. Click on a link to see the execution details of that segment.

For more information, see the "Monitoring Mappings in a Hadoop Environment" chapter in the *Informatica Big Data Management 10.1.1 User Guide*.

Installation and Configuration

This section describes new features related to big data installation and configuration.

Address Reference Data Installation

Effective in version 10.1.1, Informatica Big Data Management installs with a shell script that you can use to install address reference data files. The script installs the reference data files on the compute nodes that you specify.

When you run an address validation mapping in a Hadoop environment, the reference data files must reside on each compute node on which the mapping runs. Use the script to install the reference data files on multiple nodes in a single operation.

The shell script name is `copyRefDataToComputeNodes.sh`.

Find the script in the following directory in the Informatica Big Data Management installation:

```
[Informatica installation directory]/tools/dq/av
```

When you run the script, you can enter the following information:

- The current location of the reference data files.
- The directory to which the script installs the files.
- The location of the file that contains the compute node names.
- The user name of the user who runs the script.

If you do not enter the information, the script uses a series of default values to identify the file locations and the user name.

For more information, see the *Informatica Big Data Management 10.1.1 Installation and Configuration Guide*.

Hadoop Configuration Manager in Silent Mode

Effective in version 10.1.1, you can use the Hadoop Configuration Manager in silent mode to configure Big Data Mangement.

For more information about configuring Big Data Management in silent mode, see the *Informatica Big Data Management 10.1.1 Installation and Configuration Guide*.

Installation in an Ambari Stack

Effective in version 10.1.1, you can use the Ambari configuration manager to install Big Data Management as a service in an Ambari stack.

For more information about installing Big Data Management in an Ambari stack, see the *Informatica 10.1.1 Big Data Management Installation and Configuration Guide*.

Script to Populate HDFS in HDInsight Clusters

Effective in version 10.1.1, you can use a script to populate the HDFS file system on an Azure HDInsight cluster when you configure the cluster for Big Data Management.

For more information about using the script to populate the HDFS file system, see the *Informatica Big Data Management 10.1.1 Installation and Configuration Guide*.

Spark Engine

Effective in version 10.1.1, the Spark engine has the following new features:

Binary Data Types

Effective in version 10.1.1, the Spark engine supports binary data type for the following functions:

- DEC_BASE64
- ENC_BASE64
- MD5
- UUID4
- UUID_UNPARSE
- CRC32
- COMPRESS
- DECOMPRESS (ignores precision)
- AES Encrypt
- AES Decrypt

Note: The Spark engine does not support binary data type for the join and lookup conditions.

For more information, see the "Function Reference" chapter in the *Informatica Big Data Management 10.1.1 User Guide*.

Transformation Support on the Spark Engine

Effective in version 10.1.1, transformations have the following additional support on the Spark engine:

- The Java transformation is supported with some restrictions.
- The Lookup transformation can access a Hive lookup source.

For more information, see the "Mapping Objects in the Hadoop Environment" chapter in the *Informatica Big Data Management 10.1.1 User Guide*.

Run-time Statistics for Spark Engine Job Runs

Effective in version 10.1.1, you can view summary and detailed statistics for mapping jobs run on the Spark engine.

You can view the following Spark summary statistics in the **Summary Statistics** view:

- Source. The name of the mapping source file.
- Target. The name of the target file.
- Rows. The number of rows read for source and target.

The **Detailed Statistics** view displays a graph of the row counts for Spark engine job runs.

For more information, see the "Mapping Objects in the Hadoop Environment" chapter in the *Informatica Big Data Management 10.1.1 User Guide*.

Security

This section describes new big data security features in version 10.1.1.

Fine-Grained SQL Authorization Support for Hive Sources

Effective in version 10.1.1, you can configure a Hive connection to observe fine-grained SQL authorization when a Hive source table uses this level of authorization. Enable the **Observe Fine Grained SQL Authorization** option in the Hive connection to observe row and column-level restrictions that are configured for Hive tables and views.

For more information, see the Authorization section in the "Introduction to Big Data Management Security" chapter of the *Informatica 10.1.1 Big Data Management Security Guide.*

Spark Engine Security Support

Effective in version 10.1.1, the Spark engine supports the following additional security systems:

- Apache Sentry on Cloudera CDH clusters
- Apache Ranger on Hortonworks HDP clusters
- HDFS Transparent Encryption on Hadoop distributions that the Spark engine supports
- Operating system profiles on Hadoop distributions that the Spark engine supports

For more information, see the "Introduction to Big Data Management Security" chapter in the *Informatica Big Data Management 10.1.1 Security Guide*.

Sqoop

Effective in version 10.1.1, you can use the following new features when you configure Sqoop:

- You can run Sqoop mappings on the Blaze engine.
- You can run Sqoop mappings on the Spark engine to read data from or write data to Oracle databases.
- When you run Sqoop mappings on the Blaze and Spark engines, you can configure partitioning. You can also run the mappings on a Hadoop cluster that uses Kerberos authentication.
- When you run Sqoop mappings on the Blaze engine to read data from or write data to Teradata, you can use the following specialized connectors:
  - Cloudera Connector Powered by Teradata
  - Hortonworks Connector for Teradata

  These specialized connectors use native protocols to connect to the Teradata database.

For more information, see the *Informatica 10.1.1 Big Data Management User Guide*.

Business Glossary

This section describes new Business Glossary features in version 10.1.1.

Export Rich Text as Plain Text

Effective in version 10.1.1, you can export rich text glossary content as plain text. The export option is available in the glossary export wizard and in the command line program.

For more information, see the "Glossary Administration " chapter in the *Informatica 10.1.1 Business Glossary Guide*.

Include Rich Text Content for Conflicting Assets

Effective in version 10.1.1, you can choose to import properties that are formatted as rich text or are of long string data type, from the import file, when the Analyst tool detects conflicting assets.

The import option is available in the glossary import wizard and in the command line program.

For more information, see the "Glossary Administration" chapter in the *Informatica 10.1.1 Business Glossary Guide*.

Command Line Programs

This section describes new commands in version 10.1.1.

infacmd as Commands

The following table describes new infacmd as commands:

Command	Description
CreateExceptionAuditTables	Creates the audit tables for the Human task instances that the Analyst Service specifies.
DeleteExceptionAuditTables	Deletes the audit tables for the Human task instances that the Analyst Service specifies.

The following table describes new options for infacmd as commands:

Command	Description
UpdateServiceOptions	- HumanTaskDataIntegrationService.exceptionDbName Identifies the database to store the audit trail tables for exception management tasks. - HumanTaskDataIntegrationService.exceptionSchemaName Identifies the schema to store the audit trail tables for exception management tasks.

For more information, see the "Infacmd as Command Reference" chapter in the *Informatica 10.1.1 Command Reference*.

infacmd dis command

The following table describes new infacmd dis command:

Command	Description
replaceMappingHadoopRuntimeConnections	Replaces the Hadoop connection of all mappings in deployed applications with another Hadoop connection. The Data Integration Service uses the Hadoop connection to connect to the Hadoop cluster to run mappings in the Hadoop environment.

For more information, see the "infacmd dis Command Reference" chapter in the *Informatica 10.1.1 Command Reference*.

infacmd mrs command

The following table describes new infacmd mrs command:

Command	Description
replaceMappingHadoopRuntimeConnections	Replaces the Hadoop connection of all mappings in the repository with another Hadoop connection. The Data Integration Service uses the Hadoop connection to connect to the Hadoop cluster to run mappings in the Hadoop environment.

For more information, see the "infacmd mrs Command Reference" chapter in the *Informatica 10.1.1 Command Reference*.

pmrep Commands

The following table describes an updated option for a pmrep command:

Command	Description
Validate	Contains the following updated option: -n (object_name). Required. Name of the object to validate. Do not use this option if you use the -i argument. When you validate a non-reusable session, include the workflow name. Enter the workflow name and the session name in the following format: <workflow name>.<session instance name> When you validate a non-reusable session in a non-reusable worklet, enter the workflow name, worklet name, and session name in the following format: <workflow name>.<worklet name>.<session instance name>

For more information, see the "pmrep Command Reference" chapter in the *Informatica 10.1.1 Command Reference*.

Enterprise Information Catalog

This section describes new features in Enterprise Information Catalog version 10.1.1.

Business Glossary Integration

Effective in version 10.1.1, Analyst tool business glossaries are fully integrated with Enterprise Information Catalog.

You can perform the following tasks with business glossary assets:

View business glossary assets in the catalog.

You can search for and view the full details for a business term, category, or policy in Enterprise Information Catalog. When you view the details for a business term, Enterprise Information Catalog also displays the glossary assets, technical assets, and other assets, such as Metadata Manager objects, that the term is related to.

When you view a business glossary asset in the catalog, you can open the asset in the Analyst tool business glossary for further analysis.

Associate an asset with a business term.

You can associate a business term with a technical asset to make an asset easier to understand and identify in the catalog. For example, you associate business term "Movie Details" with a relational table named "mv_dt." Enterprise Information Catalog displays the term "Movie Details" next to the asset name in the search results, in the Asset Details view, and optionally, in the lineage and impact diagram.

When you associate a term with an asset, Enterprise Information Catalog provides intelligent recommendations for the association based on data domain discovery.

For more information about business glossary assets, see the "View Assets" chapter in the *Informatica 10.1.1 Enterprise Information Catalog User Guide*.

Column Similarity Profiling

Effective in version 10.1.1, you can configure and perform column similarity profiling. Column similarity profiling implies preparing metadata extracted from data sources for discovering similar columns in your enterprise data. You can then attach data domains to similar columns for faster and efficient searches for similar data in Enterprise Information Catalog.

Enterprise Information Catalog supports column similarity profiling for the following resource scanners:

- Amazon Redshift
- Amazon S3
- Salesforce
- HDFS
- Hive
- IBM DB2
- IBM DB2 for z/OS
- IBM Netezza
- JDBC
- Microsoft SQL Server
- Oracle
- Sybase
- Teradata
- SAP

Data Domains and Data Domain Groups

Effective in version 10.1.1, you can create data domains and data domain groups in Enterprise Information Catalog. You can group logical data domains in a data domain group.

A data domain is a predefined or user-defined Model repository object based on the semantics of column data or a column name. Examples include Social Security number, phone number, and credit card number.

You can create data domains based on data rules or column name rules defined in the Informatica Analyst Tool or the Informatica Developer Tool. Alternatively, you can create data domains based on existing columns in the catalog. You can define proximity rules to configure inference for new data domains from existing data domains configured in the catalog.

Lineage and Impact Analysis

Effective in version 10.1.1, lineage and impact diagrams have expanded functionality. The Lineage and Impact view also contains a tabular impact summary that lists the assets that impact and are impacted by the asset that you are studying.

The Lineage and Impact view has the following enhancements:

Diagram enhancements

The lineage and impact diagram has the following enhancements:

- By default, the lineage and impact diagram displays the origins, the asset that you are studying, and the destinations for the data. You can use the slider controls to reveal intermediate assets one at-a-time by distance from the seed asset or to fully expand the diagram. You can also expand all assets within a particular data flow path.
- You can display the child assets of the asset that you are studying, all the way down to the column or field level. When you drill-down on an asset, the diagram displays the child assets that you select and the assets to which the child assets are linked.
- You can display the business terms that are associated with the technical assets in the diagram.
- You can print the diagram and export it to a scalable vector graphics (.svg) file.

Impact analysis

When you open the Lineage and Impact view for an asset, you can switch from the diagram view to the tabular asset summary. The tabular asset summary lists all of the assets that impact and are impacted by the asset that you are studying. You can export the asset summary to a Microsoft Excel file to create reports or further analyze the data.

For more information about lineage and impact analysis, see the "View Lineage and Impact" chapter in the *Informatica 10.1.1 Enterprise Information Catalog User Guide*.

Permissions for Users and User Groups

Effective in version 10.1.1, you can configure permissions for users and user groups on resources configured in Enterprise Information Catalog. You can specify permissions to view the resource metadata in Enterprise Information Catalog or view and enrich the resource metadata in Enterprise Information Catalog. You can also deny permissions to view or enrich resource metadata in Enterprise Information Catalog for specific users and user groups.

New Resource Types

Effective in version 10.1.1, you can create resources for the following data source types:

Oracle Business Intelligence

Extract metadata from the Business intelligence tool from Oracle that includes analysis and reporting capabilities.

Informatica Master Data Management

Extract metadata about critical information within an organization from Informatica Master Data Management.

Microsoft SQL Server Integration Service

Extract metadata about data integration and workflow applications from Microsoft SQL Server Integration Service.

SAP

Extract metadata from SAP application platform that integrates multiple business applications and solutions.

Hive on Amazon Elastic MapReduce

Extract metadata from files in Amazon Elastic MapReduce using a Hive resource.

Hive on Azure HDInsight

Extract metadata from files in Azure HDInsight using a Hive resource.

Synonym Definition Files

Effective in version 10.1.1, you can upload synonym definition files to Enterprise Information Catalog. Synonym definition files include synonyms defined for table names, column names, data domains and other assets in the catalog. You can search for the assets in the Enterprise Information Catalog using the defined synonyms.

Universal Connectivity Framework

Effective in version 10.1.1, Enterprise Information Catalog introduces the Universal Connectivity Framework. Using the framework, you can build custom resources to extract metadata from a range of data sources supported by MITI.

Informatica Analyst

This section describes new Analyst tool features in version 10.1.1.

Profiles

This section describes new Analyst tool features for profiles and scorecards.

Drilldown on Scorecards

Effective in version 10.1.1, when you click a data series or data point in the scorecard dashboard, the scorecards that map to the data series or data point appears in the assets list pane.

For more information about scorecards, see the "Scorecards in Informatica Analyst" chapter in the *Informatica 10.1.1 Data Discovery Guide*.

Informatica Installation

This section describes new installation features in version 10.1.1.

Informatica Upgrade Advisor

Effective in version 10.1.1, you can run the Informatica Upgrade Advisor to check for conflicts and deprecated services in the domain before you perform an upgrade.

For more information about the upgrade advisor, see the *Informatica Upgrade Guides*.

Intelligent Data Lake

This section describes new Intelligent Data Lake features in version 10.1.1.

Data Preview for Tables in External Sources

Effective in version 10.1.1, you can preview sample data for external (outside Hadoop data lake) tables if these sources are cataloged. The administrator needs to configure JDBC connections with Sqoop and provide the analysts with requisite permissions. The analyst can connect to the data source using these connections to view the data from assets that are not in the data lake.

For more information, see the "Discover Data" chapter in the *10.1.1 Intelligent Data Lake User Guide*.

Importing Data From Tables in External Sources

Effective in version 10.1.1, you can import data from tables in external sources (outside Hadoop data lake), such as Oracle and Teradata, into the data lake if these sources are already cataloged. The administrator needs to configure JDBC connections with Sqoop to the external sources and provide access to the analyst. The analyst can use these connections to preview the data asset and import into the lake based on their needs.

For more information, see the "Discover Data" chapter in the *10.1.1 Intelligent Data Lake User Guide*.

Exporting Data to External Targets

Effective in version 10.1.1, you can export a data asset or a publication to external targets (outside Hadoop data lake), such as Oracle and Teradata. The administrator needs to configure the JDBC connections with Sqoop to the external sources and provide access to the analyst. The analyst can use these connections to export the data asset to the external database.

For more information, see the "Discover Data" chapter in the *10.1.1 Intelligent Data Lake User Guide*.

Configuring Sampling Criteria for Data Preparation

Effective in version 10.1.1, you can specify sampling criteria that best suits your needs for data preparation for a given data asset. You can choose to include only a few columns during preparation and filter the data, choose number of rows to sample, and select Random or First N rows as sample.

For more information, see the "Prepare Data" chapter in the *10.1.1 Intelligent Data Lake User Guide*.

Performing a Lookup on Worksheets

Effective in version 10.1.1, you can perform a lookup. Use the lookup function to lookup a key column in another sheet and fetch values in corresponding other columns in that looked up sheet.

For more information, see the "Prepare Data" chapter in the *10.1.1 Intelligent Data Lake User Guide*.

Downloading as a TDE File

Effective in version 10.1.1, you can download data in data lake assets as a TDE file. You can directly open the downloaded file in Tableau. You can search for any data asset and download it as a CSV file or TDE file.

For more information, see the "Discover Data" chapter in the *10.1.1 Intelligent Data Lake User Guide*.

Sentry and Ranger Support

Effective in version 10.1.1, Intelligent Data Lake supports Sentry and Ranger on Cloudera and Hortonworks. Ranger and Sentry offer a centralized security framework to manage granular level access control on Cloudera and Hortonworks. You can create authorization rules or policies to control the access of data. Sentry and Ranger support SQL-based authorization for data lake assets.

Mappings

This section describes new mapping features in version 10.1.1.

Informatica Mappings

This section describes new Informatica mappings features in version 10.1.1.

Export Parameters to a Parameter File

You can export a mapping parameter file or a workflow parameter file from the Developer tool. You can export a parameter file that contains mapping parameters or workflow parameters that you define in the Developer tool. The Developer tool creates a parameter file in .xml format. Export parameters from the mapping **Parameters** tab or from the workflow **Parameters** tab. Use the parameter file when you run deployed mappings or workflows.

For more information, see the "Mapping Parameters" chapter in the *Informatica Developer 10.1.1 Mapping Guide* or the "Workflow Parameters" chapter in the *Informatica Developer 10.1.1 Workflow Guide*.

Metadata Manager

This section describes new Metadata Manager features in version 10.1.1.

Dataset Extraction for Cloudera Navigator Resources

Effective in version 10.1.1, Metadata Manager can extract HDFS datasets from Cloudera Navigator. Metadata Manager displays the datasets in the metadata catalog within the HDFS Datasets logical group.

For more information about Cloudera Navigator resources, see the "Database Management Resources" chapter in the *Informatica 10.1.1 Metadata Manager Administrator Guide*.

Mapping Extraction for Informatica Platform Resources

Effective in version 10.1.1, Informatica Platform resources can extract metadata for mappings in deployed workflows.

Informatica Platform resources that are based on version 10.1.1 applications can extract metadata for mappings in deployed workflows in addition to mappings that are deployed directly to the application.

When Metadata Manager extracts a mapping in a deployed workflow, it adds the workflow name and Mapping task name to the mapping name as a prefix. Metadata Manager displays the mapping in the metadata catalog within the Mappings logical group.

For more information about Informatica Platform resources, see the "Data Integration Resources" chapter in the *Informatica 10.1.1 Metadata Manager Administrator Guide*.

PowerExchange Adapters

This section describes new PowerExchange adapter features in version 10.1.1

PowerExchange® Adapters for Informatica

This section describes new Informatica adapter features in version 10.1.1.

PowerExchange for Amazon Redshift

Effective in version 10.1.1, you can enable PowerExchange for Amazon Redshift to run a mapping on the Blaze engine. When you run the mapping, the Data Integration Service pushes the mapping to a Hadoop cluster and processes the mapping on the Blaze engine, which significantly increases the performance.

For more information, see the *Informatica PowerExchange for Amazon Redshift 10.1.1 User Guide*.

PowerExchange for Cassandra

Effective in version 10.1.1, PowerExchange for Cassandra supports the following features:

- You can use the following advanced ODBC driver configurations with PowerExchange for Cassandra:
  - Load balancing policy. Determines how the queries are distributed to nodes in a Cassandra cluster based on the specified DC Aware or Round-Robin policy.
  - Filtering. Limits the connections of the drivers to a predefined set of hosts.
- You can enable the following arguments in the ODBC driver to optimize the performance:
  - Token Aware. Improves the query latency and reduces load on the Cassandra node.
  - Latency Aware. Ignores the slow performing Cassandra nodes while sending queries.
  - Null Value Insertion. Enables you to specify null values in an INSERT statement.
  - Case Sensitive. Enables you to specify schema, table, and column names in a case-sensitive fashion.
- You can process Cassandra sources and targets that contain the date, smallint, and tinyint data types

For more information, see the *Informatica PowerExchange for Cassandra 10.1.1 User Guide*.

PowerExchange for HBase

Effective in version 10.1.1, you can enable PowerExchange for HBase to run a mapping on a Blaze or Spark engine. When you run the mapping, the Data Integration Service pushes the mapping to a Hadoop cluster and processes the mapping on the selected engine, which significantly increases the performance.

For more information, see the *Informatica PowerExchange for HBase 10.1.1 User Guide*.

PowerExchange for Hive

Effective in version 10.1.1, you can configure the Lookup transformation on Hive data objects in mappings in the native environment.

For more information, see the *Informatica PowerExchange for Hive 10.1.1 User Guide*.

PowerExchange Adapters for PowerCenter®

This section describes new PowerCenter adapter features in version 10.1.1.

PowerExchange for Amazon Redshift

Effective in version 10.1.1, you can perform the following tasks with PowerExchange for Amazon Redshift:

- You can configure partitioning for Amazon Redshift sources and targets. You can configure the partition information so that the PowerCenter Integration Service determines the number of partitions to create at run time.
- You can include a Pipeline Lookup transformation in a mapping.
- The PowerCenter Integration Service can push expression, aggregator, operator, union, sorter, and filter functions to Amazon Redshift sources and targets when the connection type is ODBC and the ODBC Subtype is selected as Redshift.
- You can configure advanced filter properties in a mapping.
- You can configure pre-SQL and post-SQL queries for source and target objects in a mapping.
- You can configure a Source transformation to select distinct rows from the Amazon Redshift table and sort data.
- You can parameterize source and target table names to override the table name in a mapping.
- You can define an SQL query for source and target objects in a mapping to override the default query. You can enter an SQL statement supported by the Amazon Redshift database.

For more information, see the *Informatica 10.1.1 PowerExchange for Amazon Redshift User Guide for PowerCenter*.

PowerExchange for Cassandra

Effective in version 10.1.1, PowerExchange for Cassandra supports the following features:

- You can use the following advanced ODBC driver configurations with PowerExchange for Cassandra:
  - Load balancing policy. Determines how the queries are distributed to nodes in a Cassandra cluster based on the specified DC Aware or Round-Robin policy.
  - Filtering. Limits the connections of the drivers to a predefined set of hosts.
- You can enable the following arguments in the ODBC driver to optimize the performance:
  - Token Aware. Improves the query latency and reduces load on the Cassandra node.
  - Latency Aware. Ignores the slow performing Cassandra nodes while sending queries.
  - Null Value Insertion. Enables you to specify null values in an INSERT statement.
  - Case Sensitive. Enables you to specify schema, table, and column names in a case-sensitive fashion.
- You can process Cassandra sources and targets that contain the date, smallint, and tinyint data types.

For more information, see the *Informatica PowerExchange for Cassandra 10.1.1 User Guide for PowerCenter*.

PowerExchange for Vertica

Effective in version 10.1.1, PowerExchange for Vertica supports compressing data in GZIP format. When you use bulk mode to write large volumes of data to a Vertica target, you can configure the session to create a staging file. On UNIX operating systems, when you enable file staging, you can also compress the data in a GZIP format. By compressing the data, you can reduce the size of data that is transferred over the network and improve session performance.

To compress data, you must re-register the PowerExchange for Vertica plug-in with the PowerCenter repository.

For more information, see the *Informatica PowerExchange for Vertica 10.1.1 User Guide for PowerCenter*.

Security

This section describes new security features in version 10.1.1.

Custom Kerberos Libraries

Effective in version 10.1.1, you can configure custom or native database clients and Informatica processes within an Informatica domain to use custom Kerberos libraries instead of the default Kerberos libraries that Informatica uses.

For more information, see the "Kerberos Authentication Setup" chapter in the *Informatica 10.1.1 Security Guide*.

Scheduler Service Support in Kerberos-Enabled Domains

Effective in version 10.1.1, you can use the Scheduler Service to run mappings, workflows, profiles and scorecards in a domain that uses Kerberos authentication.

Single Sign-on for Informatica Web Applications

Effective in version 10.1.1, you can configure single sign-on (SSO) using Security Assertion Markup Language (SAML) to log into the Administrator tool, the Analyst tool and the Monitoring tool.

Security Assertion Markup Language is an XML-based data format for exchanging authentication and authorization information between a service provider and an identity provider. In an Informatica domain, the Informatica web application is the service provider. Microsoft Active Directory Federation Services (AD FS) 2.0 is the identity provider, which authenticates web application users with your organization's LDAP or Active Directory identity store.

For more information, see the "Single Sign-on for Informatica Web Applications" chapter in the *Informatica 10.1.1 Security Guide*.

Transformations

This section describes new transformation features in version 10.1.1.

Informatica Transformations

This section describes new features in Informatica transformations in version 10.1.1.

Address Validator Transformation

This section describes the new Address Validator transformation features.

The Address Validator transformation contains additional address functionality for the following countries:

All Countries

Effective in version 10.1.1, you can add the Count Number port to an output address. The Count Number port value indicates the position of each address in a set of suggestions that the transformation returns in interactive mode or suggestion list mode.

For example, the Count Number port returns the number 1 for the first address in the set. The port returns the number 2 for the second address in the set. The number increments by 1 for each address that address validation returns.

Find the Count Number port in the Status Info port group.

China

Multi-language address parsing and verification

Effective in version 10.1.1, you can configure the Address Validator transformation to return the street descriptor and street directional information in a valid China address in a transliterated Latin script (Pinyin) or in English. The transformation returns the other elements in the address in the Hanzi script.

To specify the output language, set the Preferred Language advanced property on the transformation.

Single-line verification of China addresses in suggestion list mode

Effective in version 10.1.1, you can configure the Address Validator transformation to return valid suggestions for a China address that you enter on a single line in fast completion mode. To enter an address on a single line, select a Complete Address port from the Multiline port group. Enter the address in the Hanzi script.

When you enter a partial address, the transformation returns one or more address suggestions for the address that you enter. When you enter a complete valid address, the transformation returns the valid version of the address from the reference database.

Ireland

Multi-language address parsing and verification

Effective in version 10.1.1, you can configure the Address Validator transformation to read and write the street, locality, and county information for an Ireland address in the Irish language.

An Post, the Irish postal service, maintains the Irish-language information in addition to the English-language addresses. You can include Irish-language street, locality, and county information in an input address and retrieve the valid English-language version of the address. You can enter an English-language address and retrieve an address that includes the street, locality, and county information in the Irish language. Address validation returns all other information in English.

To specify the output language, set the Preferred Language advanced property on the transformation.

Rooftop geocoordinates in Ireland addresses

Effective in version 10.1.1, you can configure the Address Validator transformation to return rooftop geocoordinates for an address in Ireland.

To return the geocoordinates, add the Geocoding Complete port to the output address. Find the Geocoding Complete port in the Geocoding port group. To specify Rooftop geocoordinates, set the Geocode Data Type advanced property on the transformation.

Support for preferred descriptors in Ireland addresses

Effective in version 10.1.1, you can configure the Address Validator transformation to return the short or long forms of the following elements in the English language:

- Street descriptors

- Directional values

To specify a preference for the elements, set the Global Preferred Descriptor advanced property on the transformation,

Note: The Address Validator transformation writes all street information to the street name field in an Irish-language address.

Italy

Effective in version 10.1.1, you can configure the Address Validator transformation to add the ISTAT code to a valid Italy address. The ISTAT code contains characters that identify the province, municipality, and region to which the address belongs. The Italian National Institute of Statistics (ISTAT) maintains the ISTAT codes.

To add the ISTAT code to an address, select the ISTAT Code port. Find the ISTAT Code port in the IT Supplementary port group.

Japan

Geocoding enrichment for Japan addresses

Effective in version 10.1.1, you can configure the Address Validator transformation to return standard geocoordinates for addresses in Japan.

The transformation can return geocoordinates at multiple levels of accuracy. When a valid address contains information to the Ban level, the transformation returns house number-level geocoordinates. When a valid address contains information to the Chome level, the transformation returns street-level geocoordinates. If an address does not contain Ban or Chome information, Address Verification returns locality-level geocoordinates.

To return the geocoordinates, add the Geocoding Complete port to the output address. Find the Geocoding Complete port in the Geocoding port group.

Single-line verification of Japan addresses in suggestion list mode

Effective in version 10.1.1, you can configure the Address Validator transformation to return valid suggestions for a Japan address that you enter on a single line in suggestion list mode. You can retrieve suggestions for an address that you enter in the Kanji script or the Kana script. To enter an address on a single line, select a Complete Address port from the Multiline port group.

When you enter a partial address, the transformation returns one or more address suggestions for the address that you enter. When you enter a complete valid address, the transformation returns the valid version of the address from the reference database.

South Korea

Support for Revised Romanization transliteration in South Korea addresses

Effective in version 10.1.1, the Address Validator transformation can use the Revised Romanization system to transliterate an address between Hangul and Latin character sets. To specify a character set for output addresses from South Korea, use the Preferred Script advanced property.

Updates to post code verification in South Korea addresses

Effective in version 10.1.1, the Address Validator transformation adds a five-digit post code to a fully valid input address that does not include a post code. The five-digit post code represents the current post code format in use in South Korea. The transformation can add the five-digit post code to a fully valid lot-based address and a fully valid street-based address.

To verify addresses in the older, lot-based format, use the Matching Extended Archive advanced property.

Spain

Effective in version 10.1.1, you can configure the Address Validator transformation to add the INE code to a valid Spain address. The INE code contains characters that identify the province, municipality, and street in the address. The National Institute of Statistics (INE) in Spain maintains the INE codes.

To add an INE code to an address, select one or more of the following ports:

- INE Municipality Code
- INE Province Code
- INE Street Code

Find the INE Code ports in the ES Supplementary port group.

United States

Support for CASS Cycle O requirements

Effective in version 10.1.1, the Address Validator transformation adds features that support the proposed requirements of the Coding Accuracy Support System (CASS) Cycle O standard.

To prepare for the Cycle O standard, the transformation includes the following features:

- Private mailbox and commercial mail receiving agency identification

  The United States Postal Service updates the CASS requirements for private mailbox (PMB) addresses and commercial mail receiving agency (CMRA) addresses in Cycle O. To meet the Cycle O standard, the Address Validator transformation adds PMB as a prefix before a private mailbox number in a CMRA address. If a pound sign (#) precedes a private mailbox number in the address, the transformation converts the pound sign to PMB. To comply with the Cycle O standard, the transformation does not use the PMB number to verify Delivery Point Validation (DPV) data for an address.

- DPV PBSA Indicator port for post office box street address (PBSA) identification

  The United States Postal Service can recognize post office box addresses in a street address format. To identify PBSA addresses in an address set, use the DPV PBSA Indicator port. Find the DPV PBSA Indicator port in the US Specific port group.

  For example, the following address identifies post office box number 3094 at a post office on South Center Street:

  ```
  131 S Center St Unit 3094
  Collierville TN 38027-0419
  ```

- DPV ZIP Code Validation port for Form 3553 completion

  The DPV ZIP Code Validation port indicates whether an address is valid for inclusion in the total address count on CASS Form 3553. If an address passes delivery point validation but does not include a deliverable ZIP+4 Code, you cannot include the address in the total address count. Find the DPV ZIP Code Validation port in the US Specific port group.

Improved parsing of non-standard first-line data in United States addresses

Effective in version 10.1.1, the Address Validation transformation parses non-standard mailbox data into sub-building elements. The non-standard data might identify a college campus mailbox or a courtroom at a courthouse.

Support for global preferred descriptors in United States addresses

Effective in version 10.1.1, you can return the short or long forms of the following elements in a United States address:

- Street descriptors

- Directional values
- Sub-building descriptors

To specify the format of the elements that the transformation returns, set the Global Preferred Descriptor advanced property on the transformation.

For more information, see the *Informatica 10.1.1 Developer Transformation Guide* and the *Informatica 10.1.1 Address Validator Port Reference*.

Write Transformation

Effective in version 10.1.1, when you create a Write transformation from an existing transformation in a mapping, you can specify the type of link for the input ports of the Write transformation.

You can link ports by name. Also, in a dynamic mapping, you can link ports by name, create a dynamic port based on a mapping flow, or link ports at run time based on a link policy.

For more information, see the "Write Transformation" chapter in the *Informatica 10.1.1 Developer Transformation Guide*.

Web Services

This section describes new web services features in version 10.1.1.

Informatica Web Services

This section describes new Informatica web service features in version 10.1.1.

REST Web Services

You can create an Informatica REST web service that returns data to a web service client in JSON or XML format.

An Informatica REST web service is a web service that receives an HTTP request to perform a GET operation. A GET operation retrieves data. The REST request is a simple URI string from an internet browser. The client limits the web service output data by adding filter parameters to the URI.

Define a REST web service resource in the Developer tool. A REST web service resource contains the definition of the REST web service response message and the mapping that returns the response. When you create an Informatica REST web service, you can define the resource from a data object or you can manually define the resource.

Workflows

This section describes new workflow features in version 10.1.1.

Informatica Workflows

This section describes new features in Informatica workflows in version 10.1.1.

Terminate Event

Effective in version 10.1.1, you can add a Terminate event to a workflow. A Terminate event defines a point before the End event at which the workflow can end. A workflow can contain one or more Terminate events.

A workflow terminates if you connect a task or a gateway to a Terminate event and the task output satisfies a condition on the sequence flow. The Terminate event aborts the workflow before any further task in the workflow can run.

Add a Terminate event to a workflow if the workflow data can reach a point at which there is no need to run additional tasks. For example, you might add a Terminate event to end a workflow that contains a Mapping task and a Human task. Connect the Mapping task to an Exclusive gateway, and then connect the gateway to a Human task and to a Terminate event. If the Mapping task generates exception record data for the Human task, the workflow follows the sequence flow to the Human task. If the Mapping task does not generate exception record data, the workflow follows the sequence flow to the Terminate event.

For more information, see the *Informatica 10.1.1 Developer Workflow Guide*.

User Permissions on Human Tasks

Effective in version 10.1.1, you can set user permissions on Human task data. The permissions specify the data that users can view and the types of action that users can perform in Human task instances in the Analyst tool. You can set the permissions within a step in a Human task when you design a workflow. The permissions apply to all users who can view or edit a task instance that the step defines.

By default, Analyst tool users can view all data and perform any action in the task instances that they work on.

You can set viewing permissions and editing permissions. The viewing permissions define the data that the Analyst tool displays for the task instances that the step defines. The editing permissions define the actions that users can take to update the task instance data. Viewing permissions take precedence over editing permissions. If you grant editing permissions on a column and you do not grant viewing permissions on the column, Analyst tool users cannot edit the column data.

For more information, see the *Informatica 10.1.1 Developer Workflow Guide*.

Workflow Variables in Human Task Instance Notifications

Effective in version 10.1.1, you can use workflow variables to write information about a Human task instance to an email notification. The variables record information about the task instance when a user completes, escalates, or reassigns a task instance.

To display the list of variables, open the Human task and select the step that defines the Human task instances. On the **Notifications** view, select the message body of the email notification and press the $+CTRL+SPACE keys.

The notification can display the following variables:

$taskEvent.eventTime

The time that the workflow engine performs the user instruction to escalate, reassign, or complete the task instance.

$taskEvent.startOwner

The owner of the task instance at the time that the workflow engine escalates or completes the task. Or, the owner of the task instance after the engine reassigns the task instance.

$taskEvent.status

The task instance status after the engine performs the user instruction to escalate, reassign, or complete the task instance. The status names are READY and IN_PROGRESS.

$taskEvent.taskEventType

The type of instruction that the engine performs. The variable values are escalate, reassign, and complete.

$taskEvent.taskId

The task instance identifier that the Analyst tool displays.

For more information, see the *Informatica 10.1.1 Developer Workflow Guide*.

CHAPTER 11

Changes (10.1.1)

This chapter includes the following topics:

Support Changes

This section describes support changes in version 10.1.1 HotFix 2.

Big Data Management Hive Engine

Effective in version 10.1.1, Informatica dropped support for HiveServer2 which the Hive engine uses to run mappings.

Previously, the Hive engine supported the Hive driver and HiveServer2 to run mappings in the Hadoop environment. HiveServer2 and the Hive driver convert HiveQL queries to MapReduce or Tez jobs that are processed on the Hadoop cluster.

If you install Big Data Management 10.1.1 or upgrade to version 10.1.1, the Hive engine uses the Hive driver when you run the mappings. The Hive engine no longer supports HiveServer2 to run mappings in the Hadoop environment. Hive sources and targets that use the HiveServer2 service on the Hadoop cluster are still supported.

To run mappings in the Hadoop environment, Informatica recommends that you select all run-time engines. The Data Integration Service uses a proprietary rule-based methodology to determine the best engine to run the mapping.

For information about configuring the run-time engines for your Hadoop distribution, see the *Informatica Big Data Management 10.1.1 Installation and Configuration Guide*. For information about mapping objects that the run-time engines support, see the *Informatica Big Data Management 10.1.1 User Guide*.

Support Changes - Big Data Management Hadoop Distributions

The following table lists the supported Hadoop distribution versions and changes in Big Data Management 10.1.1:

At release date, version 10.1.1 supports the following Hadoop distributions:

- Azure HDInsight v. 3.4
- Cloudera CDH v. 5.8
- IBM BigInsights v. 4.2
- Hortonworks HDP v. 2.5
- Amazon EMR v. 5.0

To see a list of the latest supported versions, see the Product Availability Matrix on the Informatica Customer Portal: `https://network.informatica.com/community/informatica-network/product-availability-matrices`.

MapR Support

Effective in version 10.1.1, Informatica deferred support for Big Data Management on a MapR cluster. To run mappings on a MapR cluster, use Big Data Management 10.1. Informatica plans to reinstate support in a future release.

Some references to MapR remain in documentation in the form of examples. Apply the structure of these examples to your Hadoop distribution.

Amazon EMR Support

Effective in version 10.1.1, you can install Big Data Management in the Amazon EMR environment. You can choose from the following installation methods:

- Download and install from an RPM package. When you install Big Data Management in an Amazon EMR environment, you install Big Data Management elements on a local machine to run the Model Repository Service, Data Integration Service, and other services.
- Install an Informatica instance in the Amazon cloud environment. When you create an implementation of Big Data Management in the Amazon cloud, you bring online virtual machines where you install and run Big Data Management.

For more information about installing and configuring Big Data Management on Amazon EMR, see the *Informatica Big Data Management 10.1.1 Installation and Configuration Guide.*

Big Data Management Spark Support

Effective in version 10.1.1, you can configure the Spark engine on all supported Hadoop distributions. You can configure Big Data Management to use one of the following Spark versions based on the Hadoop distribution that you use:

- Cloudera Spark 1.6 and Apache Spark 2.0.1 for Cloudera cdh5u8 distribution.
- Apache Spark 2.0.1 for all Hadoop distributions.

For more information, see the *Informatica Big Data Management 10.1.1 Installation and Configuration Guide.*

Data Analyzer

Effective in version 10.1.1, Informatica dropped support for Data Analyzer. Informatica recommends that you use a third-party reporting tool to run PowerCenter and Metadata Manager reports. You can use the recommended SQL queries for building all the reports shipped with earlier versions of PowerCenter.

Operating System

Effective in version 10.1.1, Informatica added support for the following operating systems:

Solaris 11

Windows 10 for Informatica Clients

PowerExchange for SAP NetWeaver

Effective in version 10.1.1, Informatica implemented the following changes in PowerExchange for SAP NetWeaver support:

Support Change	Level of Support	Comments
Analytic Business Components	Dropped support	Effective in version 10.1.1, Informatica dropped support for the Analytic Business Components (ABC) functionality. You cannot use objects in the ABC repository to read and transform SAP data. Informatica will not ship the ABC transport files.
SAP R/3 version 4.7	Dropped support	Effective in version 10.1.1, Informatica dropped support for SAP R/3 4.7 systems. Upgrade to SAP ECC version 5.0 or later.

Reporting and Dashboards Service

Effective in version 10.1.1, Informatica dropped support for the Reporting and Dashboards Service. Informatica recommends that you use a third-party reporting tool to run PowerCenter and Metadata Manager reports. You can use the recommended SQL queries for building all the reports shipped with earlier versions of PowerCenter.

Reporting Service

Effective in version 10.1.1, Informatica dropped support for the Reporting Service. Informatica recommends that you use a third-party reporting tool to run PowerCenter and Metadata Manager reports. You can use the recommended SQL queries for building all the reports shipped with earlier versions of PowerCenter.

Big Data

This section describes the changes to big data in version 10.1.1.

Functions Supported in the Hadoop Environment

Effective in 10.1.1, the following support changes affect functions in the Hadoop environment:

Function	Description	Changes
AES_DECRYPT	Returns decrypted data to string format.	Supported on the Spark engine. Previously supported only on the Blaze and Hive engines.
AES_ENCRYPT	Returns data in encrypted format.	Supported on the Spark engine. Previously supported only on the Blaze and Hive engines.
COMPRESS	Compresses data using the zlib 1.2.1 compression algorithm.	Supported on the Spark engine. Previously supported only on the Blaze and Hive engines.
CRC32	Returns a 32-bit Cyclic Redundancy Check (CRC32) value.	Supported on the Spark engine. Previously supported only on the Blaze and Hive engines.
DECOMPRESS	Decompresses data using the zlib 1.2.1 compression algorithm.	Supported with restrictions on the Spark engine. Previously supported only on the Blaze and Hive engines.
DEC_BASE64	Decodes a base 64 encoded value and returns a string with the binary data representation of the data.	Supported on the Spark engine. Previously supported only on the Blaze and Hive engines.
ENC_BASE64	Encodes data by converting binary data to string data using Multipurpose Internet Mail Extensions (MIME) encoding.	Supported on the Spark engine. Previously supported only on the Blaze and Hive engines.
MD5	Calculates the checksum of the input value. The function uses Message-Digest algorithm 5 (MD5).	Supported on the Spark engine. Previously supported only on the Blaze and Hive engines.
UUID4	Returns a randomly generated 16-byte binary value that complies with variant 4 of the UUID specification described in RFC 4122.	Supported on the Spark engine without restrictions. Previously supported on the Blaze engine without restrictions and on the Spark and Hive engines with restrictions.
UUID_UNPARSE	Converts a 16-byte binary value to a 36-character string representation as specified in RFC 4122.	Supported on the Spark engine without restrictions. Previously supported on the Blaze engine without restrictions and on the Spark and Hive engines with restrictions.

Hadoop Configuration Manager

Effective in version 10.1.1, the Big Data Management Configuration Utility has the following changes:

- The utility is renamed to the Hadoop Configuration Manager.

- The Hadoop Configuration Manager supports configuring Big Data Management on Azure HDInsight clusters in addition to other Hadoop clusters.

For more information about the Hadoop Configuration Manager, see the *Informatica Big Data Management 10.1.1 Installation and Configuration Guide*.

Business Glossary

This section describes the changes to Business Glossary in version 10.1.1

Export File Restriction

Effective in version 10.1.1, the Business Glossary export in the Analyst tool and command line has the following changed behavior:

Truncation of characters in a Microsoft Excel export file cell

When you export Glossary assets that contain more than 32,767 characters in one Microsoft Excel cell, the Analyst tool automatically truncates the characters in the cell to a value lesser than 32,763.

Microsoft Excel supports only up to 32,767 characters in a cell. Previously, when you exported a glossary, Microsoft Excel truncated long text properties that contained more than 32,767 characters in a cell, causing loss of data without any warning.

For more information about Export and Import, see the "Glossary Administration" chapter in the *Informatica 10.1.1 Business Glossary Guide*.

Data Integration Service

This section describes changes to the Data Integration Service in version 10.1.1.

Execution Options in the Data Integration Properties

Effective in version 10.1.1, you no longer need to restart the Data Integration Service when you edit the following Data Integration Services properties:

- Cache Directory
- Home Directory
- Maximum Parallelism
- Rejected Files Directory
- Source Directory
- State Store
- Target Directory
- Temporary Directories

Previously, you had to restart the Data Integration Service when you edited these properties.

Data Types

This section describes changes to data types in version 10.1.1.

Informatica Data Types

This section describes changes to transformation data types in the Developer tool.

Double Data Type

Effective in version 10.1.1, you can edit the precision and scale for double data types. The scale must be less than or equal to the precision.

Previously, the precision was set to 15 and the scale was set to 0.

For more information, see the "Data Type Reference" appendix in the *Informatica 10.1.1 Developer Tool Guide*.

Informatica Analyst

This section describes changes to the Analyst tool in version 10.1.1.

Profiles

This section describes new Analyst tool features for profiles.

Run-time Environment

Effective in version 10.1.1, after you choose the Hive option as the run-time environment, select a Hadoop connection to run the profiles.

Previously, after you choose the Hive option as the run-time environment, you selected a Hive connection to run the profiles.

For more information about run-time environment, see the "Column Profiles in Informatica Analyst" chapter in the *Informatica 10.1.1 Data Discovery Guide*.

Informatica Developer

This section describes changes to the Developer tool in version 10.1.1.

Profiles

This section describes new Developer tool features for profiles.

Run-time Environment

Effective in version 10.1.1, after you choose the Hive option as the run-time environment, select a Hadoop connection to run the profiles.

Previously, after you choose the Hive option as the run-time environment, you selected a Hive connection to run the profiles.

For more information about run-time environment, see the "Data Object Profiles" chapter in the *Informatica 10.1.1 Data Discovery Guide*.

Mappings

This section describes changes to mappings in version 10.1.1.

Informatica Mappings

This section describes the changes to the Informatica mappings in version 10.1.1.

Reorder Generated Ports in a Dynamic Port

Effective in version 10.1.1, you can change the order of generated ports based on the following options:

- The order of ports in the group or dynamic port of the upstream transformation.
- The order of input rules for the dynamic port.
- The order of ports in the nearest transformation with static ports.

Default is to reorder based on the ports in the upstream transformation.

Previously, you could reorder generated ports based on the order of input rules for the dynamic port.

For more information, see the "Dynamic Mappings" chapter in the *Informatica 10.1.1 Developer Mapping Guide*.

Enterprise information Catalog

This section describes changes to Enterprise Information Catalog in version 10.1.1.

HDFS Scanner Enhancement

Effective in version 10.1.1, you can extract metadata from flat file types using the HDFS resource scanner.

Relationships View

Effective in version 10.1.1, you can view business terms, related glossary assets, related technical assets, and similar columns for the selected asset.

Previously, you could view asset relationships such as columns, data domains, tables, and views.

For more information about relationships view, see the "View Relationships" chapter in the *Informatica 10.1.1 Enterprise Information Catalog User Guide*.

Metadata Manager

This section describes changes to Metadata Manager in version 10.1.1.

Cloudera Navigator Resources

Effective in version 10.1.1, Cloudera Navigator resources have the following behavior changes:

Incremental loading changes

Incremental loading for Cloudera Navigator resources is disabled by default. Previously, incremental loading was enabled by default.

When incremental loading is enabled, Metadata Manager performs a full metadata load when the Cloudera administrator invokes a purge operation in Cloudera Navigator after the last successful metadata load.

Additionally, there are new guidelines that explain when you might want to disable incremental loading.

Search query changes

You can use the search query to exclude entity types besides HDFS entities from the metadata load. For example, you can use the search query to exclude YARN or Oozie job executions.

Data lineage changes

To reduce complexity of the data lineage diagram, Metadata Manager has the following changes:

- Metadata Manager no longer displays data lineage for Hive query template parts. You can run data lineage analysis on Hive query templates instead.
- For partitioned Hive tables, Metadata Manager displays data lineage links between each column in the table and the parent directory that contains the related HDFS entities. Previously, Metadata Manager displayed a data lineage link between each column and each related HDFS entity.

For more information about Cloudera Navigator resources, see the "Database Management Resources" chapter in the *Informatica 10.1.1 Metadata Manager Administrator Guide*.

Netezza Resources

Effective in version 10.1.1, Metadata Manager supports multiple schemas for Netezza resources.

Netezza resources have the following behavior changes:

- When you create or edit a Netezza resource, you select the schemas from which to extract metadata. You can select one or multiple schemas.
- Metadata Manager organizes Netezza objects in the metadata catalog by schema. The database does not appear in the metadata catalog.
- When you configure connection assignments to Netezza, you select the schema to which you want to assign the connection.

Because of these changes, Netezza resources behave like other types of relational resources.

Previously, when you created or edited a Netezza resource, you could not select the schemas from which to extract metadata. If you created a resource from a Netezza database that included multiple schemas, Metadata Manager ignored the schema information. Metadata Manager organized Netezza objects in the metadata catalog by database. When you configured connection assignments to Netezza, you selected the database to which to assign the connection.

For more information about Netezza resources, see the "Database Management Resources" chapter in the *Informatica 10.1.1 Metadata Manager Administrator Guide*.

PowerExchange Adapters

This section describes changes to PowerExchange adapters in version 10.1.1.

PowerExchange Adapters for Informatica

This section describes changes to Informatica adapters in version 10.1.1.

PowerExchange for Hive

Effective in version 10.1.1, PowerExchange for Hive has the following connection modes for Hive Connection:

- Access Hive as a source or target
- Use Hive to run mappings in Hadoop cluster

Previously, the connection modes were:

- Access HiveServer2 to run mappings
- Access Hive CLI to run mappings

For more information, see the *Informatica 10.1.1 PowerExchange for Hive User Guide*.

PowerExchange for Tableau

Effective in version 10.1.1, PowerExchange for Tableau has the following changes:

- PowerExchange for Tableau installs with Informatica 10.1.1.
  Previously, PowerExchange for Tableau had a separate installer.
- When you configure a target operation to publish a Tableau Data Extract (TDE) file, you can use the append operation in the advanced properties to add data to an existing TDE file in Tableau Server and Tableau Online.
  Previously, you could configure the append operation to publish the TDE file only to Tableau Desktop.

For more information, see the *Informatica 10.1.1 PowerExchange for Tableau User Guide*.

PowerExchange Adapters for PowerCenter

This section describes changes to PowerCenter adapters in version 10.1.1.

PowerExchange for Essbase

Effective in version 10.1.1, PowerExchange for Essbase installs with PowerCenter.

Previously, PowerExchange for Essbase had a separate installer.

For more information, see the *Informatica 10.1.1 PowerExchange for Essbase User Guide for PowerCenter*.

PowerExchange for Greenplum

Effective in version 10.1.1, PowerExchange for Greenplum installs with PowerCenter.

Previously, PowerExchange for Greenplum had a separate installer.

For more information, see the *Informatica 10.1.1 PowerExchange for Greenplum User Guide for PowerCenter*.

PowerExchange for Microsoft Dynamics CRM

Effective in version 10.1.1, PowerExchange for Microsoft Dynamics CRM installs with PowerCenter.

Previously, PowerExchange for Microsoft Dynamics CRM had a separate installer.

For more information, see the *Informatica 10.1.1 PowerExchange for Microsoft Dynamics CRM User Guide for PowerCenter*.

PowerExchange for Tableau

Effective in version 10.1.1, PowerExchange for Tableau has the following changes:

- PowerExchange for Tableau installs with PowerCenter.
  Previously, PowerExchange for Tableau had a separate installer.
- When you configure a target operation to publish a Tableau Data Extract (TDE) file, you can configure the append operation in the session properties to add data to an existing TDE file in Tableau Server and Tableau Online.
  Previously, you could configure the append operation to publish the TDE file only to Tableau Desktop.

For more information, see the *Informatica 10.1.1 PowerExchange for Tableau User Guide for PowerCenter*.

Transformations

This section describes changed transformation behavior in version 10.1.1.

InformaticaTransformations

This section describes the changes to the Informatica transformations in version 10.1.1.

Address Validator Transformation

Effective in version 10.1.1, the Address Validator transformation uses version 5.9.0 of the Informatica Address Verification software engine. The engine enables the features that Informatica adds to the Address Validator transformation in version 10.1.1.

Previously, the transformation used version 5.8.1 of the engine.

For more information, see the *Informatica 10.1.1 Developer Transformation Guide* and the *Informatica 10.1.1 Address Validator Port Reference*.

Workflows

This section describes changed workflow behavior in version 10.1.1.

Informatica Workflows

This section describes the changes to Informatica workflow behavior in version 10.1.1.

Nested Inclusive Gateways

Effective in version 10.1.1, you can add one or more pairs of gateways to a sequence flow between two Inclusive gateways or two Exclusive gateways.

Previously, you invalidated the workflow if you added a pair of gateways to a sequence flow between two Inclusive gateways.

For more information, see the *Informatica 10.1.1 Developer Workflow Guide*.

Documentation

This section describes documentation changes in version 10.1.1.

Metadata Manager Documentation

Effective in version 10.1.1, the *Informatica Metadata Manager Repository Reports Reference* is obsolete because Informatica dropped support for the Reporting and Dashboards Service and for JasperReports Server.

PowerExchange for SAP NetWeaver Documentation

Effective in version 10.1.1, the following guides are obsolete because Informatica dropped support for the Analytic Business Components functionality:

- *Informatica PowerExchange for SAP NetWeaver Analytic Business Components Guide*
- *Informatica PowerExchange for SAP NetWeaver Analytic Business Components Transport Version Installation Notice*

CHAPTER 12

Release Tasks (10.1.1)

This chapter includes the following topic:

Metadata Manager

This section describes release tasks for Metadata Manager in version 10.1.1.

Business Intelligence Resources

Effective in version 10.1.1, the **Worker Threads** configuration property for some Business Intelligence resources is replaced with the **Multiple Threads** configuration property. If you set the Worker Threads property in the previous version of Metadata Manager, set the Multiple Threads property to the same value after you upgrade.

Update the value of the Multiple Threads property for the following resources:

- Business Objects
- Cognos
- Oracle Business Intelligence Enterprise Edition
- Tableau

The Multiple Threads configuration property controls the number of worker threads that the Metadata Manager Agent uses to extract metadata asynchronously. If you do not update the Multiple Threads property after upgrade, the Metadata Manager Agent calculates the number of worker threads. The Metadata Manager Agent allocates between one and six threads based on the JVM architecture and the number of available CPU cores on the machine that runs the Metadata Manager Agent.

For more information about the Multiple Threads configuration property, see the "Business Intelligence Resources" chapter in the *Informatica 10.1.1 Metadata Manager Administrator Guide*.

Cloudera Navigator Resources

Effective in version 10.1, you must configure the Java heap size for the Cloudera Navigator server and the maximum heap size for the Metadata Manager Service. If you do not correctly configure the heap sizes, the metadata load can fail.

Set the Java heap size for the Cloudera Navigator Server to at least 2 GB. If the heap size is not sufficient, the resource load fails with a connection refused error.

Set the maximum heap size for the Metadata Manager Service to at least 4 GB. If you perform simultaneous resource loads, increase the maximum heap size by at least 1 GB for each resource load. For example, to load two Cloudera Navigator resources simultaneously, increase the maximum heap size by 2 GB. Therefore, you would set the **Max Heap Size** property for the Metadata Manager Service to at least 6144 MB (6 GB). If the maximum heap size is not sufficient, the load fails with an out of memory error.

For more information about Cloudera Navigator resources, see the "Database Management Resources" chapter in the *Informatica 10.1.1 Metadata Manager Administrator Guide*.

Tableau Resources

Effective in version 10.1.1, the Tableau model has minor changes. Therefore, you must purge and reload Tableau resources after you upgrade.

For more information about Tableau resources, see the "Business Intelligence Resources" chapter in the *Informatica 10.1.1 Metadata Manager Administrator Guide*.

Part III: Version 10.1

This part contains the following chapters:

CHAPTER 13

New Products (10.1)

This chapter includes the following topics:

Intelligent Data Lake

With the advent of big data technologies, many organizations are adopting a new information storage model called data lake to solve data management challenges. The data lake model is being adopted for diverse use cases, such as business intelligence, analytics, regulatory compliance, and fraud detection.

A data lake is a shared repository of raw and enterprise data from a variety of sources. It is often built over a distributed Hadoop cluster, which provides an economical and scalable persistence and compute layer. Hadoop makes it possible to store large volumes of structured and unstructured data from various enterprise systems within and outside the organization. Data in the lake can include raw and refined data, master data and transactional data, log files, and machine data.

Organizations are also looking to provide ways for different kinds of users to access and work with all of the data in the enterprise, within the Hadoop data lake as well data outside the data lake. They want data analysts and data scientists to be able to use the data lake for ad-hoc self-service analytics to drive business innovation, without exposing the complexity of underlying technologies or the need for coding skills. IT and data governance staff want to monitor data related user activities in the enterprise. Without strong data management and governance foundation enabled by intelligence, data lakes can turn into data swamps.

In version 10.1, Informatica introduces Intelligent Data Lake, a new product to help customers derive more value from their Hadoop-based data lake and make data available to all users in the organization.

Intelligent Data Lake is a collaborative self-service big data discovery and preparation solution for data analysts and data scientists. It enables analysts to rapidly discover and turn raw data into insight and allows IT to ensure quality, visibility, and governance. With Intelligent Data Lake, analysts to spend more time on analysis and less time on finding and preparing data.

Intelligent Data Lake provides the following benefits:

- Data analysts can quickly and easily find and explore trusted data assets within the data lake and outside the data lake using semantic search and smart recommendations.
- Data analysts can transform, cleanse, and enrich data in the data lake using an Excel-like spreadsheet interface in a self-service manner without the need for coding skills.
- Data analysts can publish data and share knowledge with the rest of the community and analyze the data using their choice of BI or analytic tools.

- IT and governance staff can monitor user activity related to data usage in the lake.
- IT can track data lineage to verify that data is coming from the right sources and going to the right targets.
- IT can enforce appropriate security and governance on the data lake
- IT can operationalize the work done by data analysts into a data delivery process that can be repeated and scheduled.

Intelligent Data Lake has the following features:

Search

- Find the data in the lake as well as in the other enterprise systems using smart search and inference-based results.
- Filter assets based on dynamic facets using system attributes and custom defined classifications.

Explore

- Get an overview of assets, including custom attributes, profiling statistics for data quality, data domains for business content, and usage information.
- Add business context information by crowd-sourcing metadata enrichment and tagging.
- Preview sample data to get a sense of the data asset based on user credentials.
- Get lineage of assets to understand where data is coming from and where it is going and to build trust in the data.
- Know how the data asset is related to other assets in the enterprise based on associations with other tables or views, users, reports and data domains.
- Progressively discover additional assets with lineage and relationship views.

Acquire

- Upload personal delimited files to the lake using a wizard-based interface.
  Hive tables are automatically created for the uploads in the most optimal format.
- Create, append to, or overwrite assets for uploaded data.

Collaborate

- Organize work by adding data assets to projects.
- Add collaborators to projects with different roles, such as co-owner, editor, or viewer, and with different privileges.

Recommendations

- Improve productivity by using recommendations based on the behavior and shared knowledge of other users.
- Get recommendations for alternate assets that can be used in a project.
- Get recommendations for additional assets that can be used a project.
- Recommendations change based on what is in the project.

Prepare

- Use excel-like environment to interactively specify transformation using sample data.
- See sheet-level and column-level overviews, including value distributions and numeric and date distributions.
- Add transformations in the form of recipe steps and see the results immediately on the sheets.

- Perform column-level data cleansing and data transformation using string, math, date, logical operations.
- Perform sheet-level operations to combine, merge, aggregate, or filter data.
- Refresh the sample in the worksheet if the data in the underlying tables change.
- Derive sheets from existing sheets and get alerts when parent sheets change.
- All transformation steps are stored in the recipe which can be played back interactively.

Publish

- Use the power of the underlying Hadoop system to run large-scale data transformation without coding or scripting.
- Run data preparation steps on actual large data sets in the lake to create new data assets.
- Publish the data in the lake as a Hive table in the desired database.
- Create, append, or overwrite assets for published data.

Data Asset Operations

- Export data from the lake to a CSV file.
- Copy data into another database or table.
- Delete the data asset if allowed by user credentials.

My Activities

- Keep track of upload activities and their status.
- Keep track of publications and their status.
- View log files in case of errors and share with IT administrators if needed.

IT Monitoring

- Keep track of user, data asset and project activities by building reports on top of the audit database.
- Find information such as the top active users, the top datasets by size, prior updates, most reused assets, and the most active projects.

IT Operationalization

- Operationalize the ad-hoc work done by analysts.
- User Informatica Developer to customize and optimize the Informatica Big Data Management mappings translated from the recipes that analysts create.
- Deploy, schedule, and monitor the Informatica Big Data Management mappings to ensure that data assets are delivered at the right time to the right destinations.
- Make sure that the entitlements for access to various databases and tables in the data lake are according to security policies.

PowerExchange Adapters

PowerExchange Adapters for Informatica

This section describes new Informatica adapters in version 10.1.

PowerExchange for Amazon Redshift

Effective in version 10.1, you can use PowerExchange for Amazon Redshift to read data from and write data to Amazon Redshift. You can import Amazon Redshift business entities as read and write data objects to create and run mappings to extract data from or load data to an Amazon Redshift entity.

For more information, see the *Informatica PowerExchange for Amazon Redshift 10.1 User Guide*.

PowerExchange for Microsoft Azure Blob Storage

Effective in version 10.1, you can use PowerExchange for Microsoft Azure Blob Storage to read data from and write data to Microsoft Azure Blob Storage. You can create a Microsoft Azure Blob Storage connection to read or write Microsoft Azure Blob Storage data into a Microsoft Azure Blob Storage data object. You can validate and run mappings in native and Hadoop environments.

For more information, see the *Informatica PowerExchange for Microsoft Azure Blob Storage 10.1 User Guide*.

PowerExchange for Microsoft Azure SQL Data Warehouse

Effective in version 10.1, you can use PowerExchange for Microsoft Azure SQL Data Warehouse to read data from and write data to Microsoft Azure SQL Data Warehouse. You can validate and run mappings in native and Hadoop environments.

For more information, see the *Informatica PowerExchange for Microsoft Azure SQL Data Warehouse 10.1 User Guide*.

CHAPTER 14

New Features (10.1)

This chapter includes the following topics:

Application Services

This section describes new application services features in version 10.1.

System Services

This section describes new system service features in version 10.1.

Scheduler Service for Profiles and Scorecards

Effective in version 10.1, you can use the Scheduler Service to schedule profile runs and scorecard runs to run at a specific time or intervals.

For more information about schedules, see the "Schedules" chapter in the *Informatica 10.1 Administrator Guide*.

Set the Time Zone for a Schedule

Effective in version 10.1, when you choose a date and time to run a schedule, you also choose the time zone. When you set the time zone, you ensure that the job runs at the time you expect it to run, no matter where the Data Integration Service is running.

For more information about schedules, see the "Schedules" chapter in the *Informatica 10.1 Administrator Guide*.

Big Data

This section describes new big data features in version 10.1.

Hadoop Ecosystem

Support in Big Data Management 10.1

Effective in version 10.1, Informatica supports the following updated versions of Hadoop distrbutions:

- Azure HDInsight 3.3
- Cloudera CDH 5.5
- MapR 5.1

For the full list of Hadoop distributions that Big Data Management 10.1 supports, see the *Informatica Big Data Management 10.1 Installation and Configuration Guide*.

Hadoop Security Systems

Effective in version 10.1, Informatica supports the following security systems on the Hadoop ecosystem:

- Apache Knox
- Apache Ranger
- Apache Sentry
- HDFS Transparent Encryption

Limitations apply to some combinations of security system and Hadoop distribution platform. For more information on Informatica support for these technologies, see the *Informatica Big Data Management 10.1 Security Guide*.

Spark Runtime Engine

Effective in version 10.1, you can push mappings to the Apache Spark engine in the Hadoop environment.

Spark is an Apache project with a run-time engine that can run mappings on the Hadoop cluster. Configure the Hadoop connection properties specific to the Spark engine. After you create the mapping, you can validate it and view the execution plan in the same way as the Blaze and Hive engines.

When you push mapping logic to the Spark engine, the Data Integration Service generates a Scala program and packages it into an application. It sends the application to the Spark executor that submits it to the Resource Manager on the Hadoop cluster. The Resource Manager identifies resources to run the application. You can monitor the job in the Administrator tool.

For more information about using Spark to run mappings, see the *Informatica Big Data Management 10.1 User Guide*.

Sqoop Connectivity for Relational Sources and Targets

Effective in version 10.1, you can use Sqoop to process data between relational databases and HDFS through MapReduce programs. You can use Sqoop to import and export data. When you use Sqoop, you do not need to install the relational database client and software on any node in the Hadoop cluster.

To use Sqoop, you must configure Sqoop properties in a JDBC connection and run the mapping in the Hadoop environment. You can configure Sqoop connectivity for relational data objects, customized data objects, and logical data objects that are based on a JDBC-compliant database. For example, you can configure Sqoop connectivity for the following databases:

- Aurora
- IBM DB2
- IBM DB2 for z/OS
- Greenplum
- Microsoft SQL Server
- Netezza
- Oracle
- Teradata

You can also run a profile on data objects that use Sqoop in the Hive run-time environment.

For more information, see the *Informatica 10.1 Big Data Management User Guide*.

Transformation Support on the Blaze Engine

Effective in version 10.1, the following transformations are supported on the Blaze engine:

- Address Validator
- Case Converter
- Comparison
- Consolidation
- Data Processor
- Decision
- Key Generator
- Labeler

- Match
- Merge
- Normalizer
- Parser
- Sequence Generator
- Standardizer
- Weighted Average

The Address Validator, Consolidation, Data Processor, Match, and Sequence Generator transformations are supported with restrictions.

Effective in version 10.1, the following transformations have additional support on the Blaze engine:

- Aggregator. Supports pass-through ports.
- Lookup. Supports unconnected Lookup transformation.

For more information, see the "Mapping Objects in a Hadoop Environment" chapter in the *Informatica Big Data Management 10.1 User Guide*.

Business Glossary

This section describes new Business Glossary features in version 10.1.

Inherit Glossary Content Managers to All Assets

Effective in version 10.1, the Analyst tool assigns the data steward and owner that you assign to a glossary to all the assets in the glossary.

For more information, see the "Glossary Content Management" chapter in the *Informatica 10.1 Business Glossary Guide*.

Bi-directional Custom Relationships

Effective in version 10.1, you can create bi-directional custom relationships. You can view the direction of related assets in the relationship view diagram. In a bi-directional custom relationship, you provide the name for the relationships in both directions.

For more information, see the "Finding Glossary Content" chapter in the *Informatica 10.1 Business Glossary Guide*.

Custom Colors in the Relationship View Diagram

Effective in version 10.1, you can define the color of the line that connects related assets in the relationship view diagram.

For more information, see the "Glossary Administration" chapter in the *Informatica 10.1 Business Glossary Guide*.

Connectivity

This section describes new connectivity features in version 10.1.

Schema Names in IBM DB2 Connections

Effective in version 10.1, when you use an IBM DB2 connection to import a table in the Developer tool or the Analyst tool, you can specify one or more schema names from which you want to import the table. Use the ischemaname attribute in the metadata connection string URL to specify the schema names. Use the pipe (|) character to separate multiple schema names.

For example, enter the following syntax in the metadata connection string URL:

```
jdbc:informatica:db2:<host name>:<port>;DatabaseName=<database
name>;ischemaname=<schema_name1>|<schema_name2>|<schema_name3>
```

This feature is also available in 9.6.1 HotFix 4. It is not available in 10.0.

For more information, see the *Informatica 10.1 Developer Tool Guide* and *Informatica 10.1 Analyst Tool Guide*.

Command Line Programs

This section describes new commands in version 10.1.

infacmd bg Commands

The following table describes new infacmd bg commands:

Command	Description
listGlossary	Lists the business glossaries in the Analyst tool.
exportGlossary	Exports the business glossaries available in the Analyst tool.
importGlossary	Imports business glossaries from .xlsx or .zip files that were exported from the Analyst tool.

infacmd dis Commands

The following table describes the new infacmd dis commands:

Command	Description
ListApplicationPermissions	Lists the permissions that a user or group has for an application.
ListApplicationObjectPermissions	Lists the permissions that a user or group has for an application object such as mapping or workflow.
SetApplicationPermissions	Assigns permissions on an application to a user or a group.
SetApplicationObjectPermissions	Assigns permissions on an application object such as mapping or workflow to a user or a group.

For more information, see the "infacmd dis Command Reference" chapter in the *Informatica 10.1 Command Reference*.

infacmd ihs Commands

The following table describes new infacmd ihs commands:

Command	Description
BackupData	Backs up HDFS data in the internal Hadoop cluster to a .zip file.
UpgradeClusterService	Upgrades the Informatica Cluster Service configuration.
removeSnapshot	Removes existing HDFS snapshots so that you can run the infacmd ihs BackupData command successfully to back up HDFS data.

For more information, see the "infacmd ihs Command Reference" chapter in the *Informatica 10.1 Command Reference*.

infacmd isp Commands

The following table describes the new infacmd isp commands:

Command	Description
AssignDefaultOSProfile	Assigns a default operating system profile to a user or group.
ListDefaultOSProfiles	Lists the default operating system profiles for a user or group.
ListDomainCiphers	Displays one or more of the following cipher suite lists used by the Informatica domain or a gateway node: **Black list** User-specified list of cipher suites that the Informatica domain blocks. **Default list** List of cipher suites that Informatica supports by default. **Effective list** The list of cipher suites that the Informatica domain uses after you configure it with the infasetup updateDomainCiphers command. The effective list supports cipher suites in the default list and white list but blocks cipher suites in the black list. **White list** User-specified list of cipher suites that the Informatica domain can use in addition to the default list. You can specify which lists that you want to display.
UnassignDefaultOSProfile	Removes the default operating system profile that is assigned to a user or group.

The following table describes updated options for infacmd isp commands:

Command	Description
CreateOSProfile	The following options are added: - -DISProcessVariables - -DISEnvironmentVariables - -HadoopImpersonationUser - -HadoopImpersonationProperties - -UseLoggedInUserAsProxy - -ProductExtensionName - -ProductOptions Use these options to configure the operating system profile properties for the Data Integration Service.
UpdateOSProfile	The following options are added: - -DISProcessVariables - -DISEnvironmentVariables - -HadoopImpersonationUser - -HadoopImpersonationProperties - -UseLoggedInUserAsProxy - -ProductExtensionName - -ProductOptions Use these options to configure the operating system profile properties for the Data Integration Service.

For more information, see the "infacmd isp Command Reference" chapter in the *Informatica 10.1 Command Reference*.

infacmd ldm Commands

The following table describes new infacmd ldm commands:

Command	Description
backupData	Takes a snapshot of the HDFS directory and creates a .zip file of the snapshot in the local machine.
restoreData	Retrieves the HDFS data backup .zip file from the local system and restores data in the HDFS directory.
removeSnapshot	Removes the snapshot from the HDFS directory.
upgrade	Upgrades the Catalog Service.

For more information, see the "infacmd ldm Command Reference" chapter in the *Informatica 10.1 Command Reference*.

infacmd ms Commands

The following table describes new options for infacmd ms commands:

Command	Description
RunMapping	The command contains the following new option: - -osp. The operating system profile name if the Data Integration Service is enabled to use operating system profiles.

For more information, see the "infacmd ms Command Reference" chapter in the *Informatica 10.1 Command Reference*.

infacmd ps Commands

The following table describes new options for infacmd ps commands:

Command	Description
- Execute - executeProfile	The commands contain the following new option: - -ospn. The operating system profile name if the Data Integration Service is enabled to use operating system profiles.

For more information, see the "infacmd ps Command Reference" chapter in the *Informatica 10.1 Command Reference*.

infacmd sch Commands

The following table describes updated options for infacmd sch commands:

Command	Description
CreateSchedule	The following argument is added to the -RunnableObjects option: - -osProfileName. The operating system profile name if the Data Integration Service is enabled to use operating system profiles.
UpdateSchedule	The following argument is added to the -AddRunnableObjects option: - -osProfileName. The operating system profile name if the Data Integration Service is enabled to use operating system profiles.

For more information, see the "infacmd sch Command Reference" chapter in the *Informatica 10.1 Command Reference*.

infasetup Commands

The following table describes new infasetup commands:

Command	Description
ListDomainCiphers	Displays one or more of the following cipher suite lists used by the Informatica domain or a gateway node uses: **Black list** User-specified list of cipher suites that the Informatica domain blocks. **Default list** List of cipher suites that Informatica supports by default. **Effective list** The list of cipher suites that the Informatica domain uses after you configure it with the infasetup updateDomainCiphers command. The effective list supports cipher suites in the default list and white list but blocks cipher suites in the black list. **White list** User-specified list of cipher suites that the Informatica domain can use. You can specify which lists that you want to display.
updateDomainCiphers	Updates the cipher suites that the Informatica domain can use with a new effective list.

The following table describes updated options for infasetup commands:

Command	Description
- DefineDomain - DefineGatewayNode - DefineWorkerNode - UpdateGatewayNode - UpdateWorkerNode	The commands contain the following new options: - cipherWhiteList |-cwl - cipherWhiteListFile |-cwlf - cipherBlackList |-cbl - cipherBlackListFile |-cblf Use these options to configure cipher suites for an Informatica domain that uses secure communication within the domain or secure connections to web application services.

For more information, see the "infasetup Command Reference" chapter in the *Informatica 10.1 Command Reference*.

pmrep Commands

The following table describes a new pmrep command:

Command	Description
AssignIntegrationService	Assigns the PowerCenter Integration Service to the specified workflow.

The following table describes the updated option for a pmrep command:

Command	Description
CreateConnection	The command contains the following updated option: - -s. The connection type list includes FTP.

For more information, see the "pmrep Command Reference" chapter in the *Informatica 10.1 Command Reference*.

Documentation

This section describes new or updated guides with the Informatica documentation in version 10.1.

The Informatica documentation contains the following new guides:

Metadata Manager Command Reference

Effective in version 10.1, the *Metadata Manager Command Reference* contains information about all of the Metadata Manager command line programs. The *Metadata Manager Command Reference* is included in the online help for Metadata Manager. Previously, information about the Metadata Manager command line programs was included in the *Metadata Manager Administrator Guide*.

For more information, see the *Informatica 10.1 Metadata Manager Command Reference*.

Informatica Administrator Reference for Live Data Map®

Effective in Live Data Map version 2.0, the *Informatica Administrator Reference for Live Data Map* contains basic reference information on Informatica Administrator tasks that you need to perform in Live Data Map. The *Informatica Administrator Reference for Live Data Map* is included in the online help for Informatica Administrator.

For more information, see the *Informatica 2.0 Administrator Reference for Live Data Map*.

Exception Management

This section describes new exception management features in version 10.1.

Search and replace data values by data type

Effective in version 10.1, you can configure the options in an exception task to search and replace data values based on the data type. You can configure the options to search and replace data in any column that contains date, string, or numeric data.

When you specify a data type, the Analyst tool searches for the value that you enter in any column that uses the data type. You can find and replace any value that a string data column contains. You can perform case-sensitive searches on string data. You can search for a partial match or a complete match between the search value and the contents of a field in a string data column.

This feature is also available in 9.6.1 HotFix 4. It is not available in 10.0.

For more information, see the Exception Records chapter in the *Informatica 10.1 Exception Management Guide*.

Informatica Administrator

This section describes new Administrator tool features in version 10.1.

Domain View

Effective in 10.1, you can view historical statistics for CPU usage and memory usage in the domain.

You can view the CPU and memory statistics for usage for the last 60 minutes. You can toggle between the current statistics and the last 60 minutes. In the **Domain** view choose **Actions** > **Current** or **Actions** > **Last Hour Trend** in the **CPU Usage** panel or the **Memory Usage** panel.

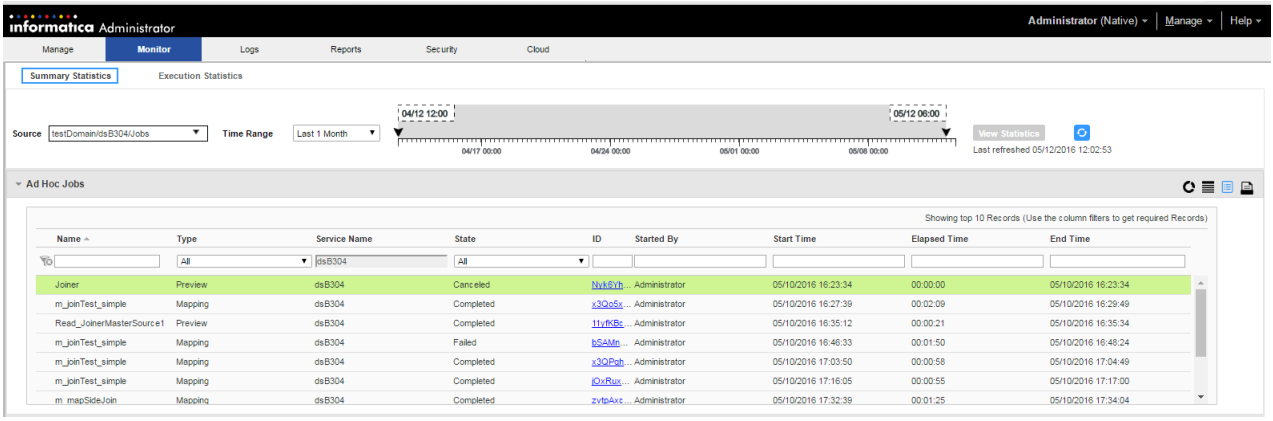
Monitoring

Effective in version 10.1, the Monitor tab in the Administrator tool has the following features:

Details view on the Summary Statistics view

The **Summary Statistics** view has a **Details** view. You can view information about jobs, export the list to a .csv file, and link to a job in the **Execution Statistics** view. To access the Details view, click **View Details**.

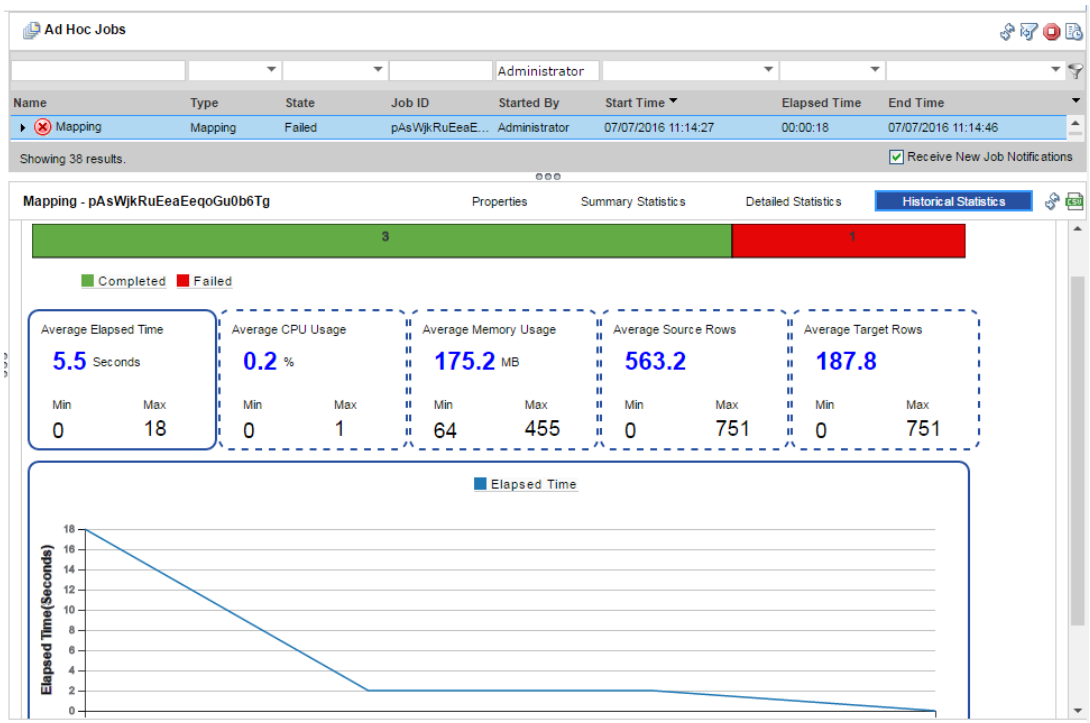
The following image shows the **Details** view:



Historical Statistics view.

When you select an Ad Hoc or a deployed mapping job in the **Contents** panel of the **Monitor** tab, the **Details** panel contains the **Historical Statistics** view. The **Historical Statistics** view shows averaged data from multiple runs for a specific job. For example, you can view the minimum, maximum, and average duration of the mapping job. You can view the average amount of CPU that the job consumes when it runs.

The following image shows the **Historical Statistics** view:



Informatica Analyst

This section describes new Analyst tool features in version 10.1.

Profiles

This section describes new Analyst tool features for profiles and scorecards.

Conformance Criteria

Effective in version 10.1, you can select a minimum number of conforming rows as conformance criteria for data domain discovery.

For more information about conformance criteria, see the "Data Domain Discovery in Informatica Analyst" chapter in the *Informatica 10.1 Data Discovery Guide*.

Exclude Nulls for Data Domain Discovery

Effective in version 10.1, you can exclude null values from the data set when you perform data domain discovery on a data source. When you select the minimum percentage of rows with the exclude null values option, the conformance percentage is the ratio of number of matching rows divided the total number of rows excluding the null values in the column.

For more information about exclude null values from data domain discovery option, see the "Data Domain Discovery in Informatica Analyst" chapter in the *Informatica 10.1 Data Discovery Guide*.

Run-time Environment

Effective in version 10.1, you can choose the Hadoop option as the run-time environment when you create or edit a column profile, data domain discovery profile, enterprise discovery profile, or scorecard. When you choose the Hadoop option, the Data Integration Service pushes the profile logic to the Blaze engine on the Hadoop cluster to run profiles.

For more information about run-time environment, see the "Data Object Profiles" chapter in the *Informatica 10.1 Data Discovery Guide*.

Scorecard Dashboard

Effective in version 10.1, you can view the following scorecard details in the scorecard dashboard:

- Total number of scorecards in the projects
- Scorecard run trend for the past six months
- Total number of data objects and the number of data objects that have scorecards
- Cumulative metrics trend for the past six months

For more information about scorecard dashboard, see the "Scorecards in Informatica Analyst" chapter in the *Informatica 10.1 Data Discovery Guide*.

Informatica Developer

This section describes new Informatica Developer features in version 10.1.

Generate Source File Name

Effective in 10.1, you can use the file name column option to return the source file name. You can configure the mapping to write the source file name to each source row.

For more information, see the *Informatica 10.1 Developer Tool Guide*.

Import from PowerCenter

Effective in version 10.1, you can import mappings that contain Netezza and Teradata objects from PowerCenter into the Developer tool and run the mappings in a native or Hadoop run-time environment.

For more information, see the *Informatica 10.1 Developer Mapping Guide*.

Copy Text Between Excel and the Developer Tool

Effective in version 10.1, you can copy text from Excel to the Developer tool or from the Developer tool to Excel. Copy text from Excel to the Developer tool to provide metadata for transformations. For example, you have designed a mapping in Excel that includes all transformations, their port names, data types, and transformation logic. In the Developer tool, you can copy the fields from Excel into the ports of empty transformations. Similarly, you can copy transformation ports from the Developer tool into Excel.

Logical Data Object Read and Write Mapping Editing

Effective in Informatica 10.1, you can use the logical data object editor to edit and change metadata in logical data object Read and Write mappings. For more information, see the "Logical View of Data" chapter in the *Informatica 10.1 Developer Tool Guide*.

DDL Query

Effective in version 10.1, when you choose to create or replace the target at run time, you can define a DDL query based on which the Data Integration Service must create or replace the target table at run time. You can define a DDL query for relational and Hive targets.

You can enter placeholders in the DDL query. The Data Integration Service substitutes the placeholders with the actual values at run time. For example, if a table contains 50 columns, instead of entering all the column names in the DDL query, you can enter a placeholder.

You can enter the following placeholders in the DDL query:

- INFA_TABLE_NAME
- INFA_COLUMN_LIST
- INFA_PORT_SELECTOR

You can also enter parameters in the DDL query.

For more information, see the *Informatica 10.1 Developer Mapping Guide*.

Profiles

This section describes new Developer tool features for profiles and scorecards.

Columns Profiles with Avro and Parquet Data Sources

Effective in version 10.1, you can create a column profile on an Avro or Parquet data source in HDFS.

For more information about column profiles on Avro and Parquet data sources, see the "Column Profiles on Semi-structured Data Sources" chapter in the *Informatica 10.1 Data Discovery Guide*.

Conformance Criteria

Effective in version 10.1, you can select a minimum number of conforming rows as conformance criteria for data domain discovery.

For more information about conformance criteria, see the "Data Domain Discovery in Informatica Developer" chapter in the *Informatica 10.1 Data Discovery Guide*.

Exclude Nulls for Data Domain Discovery

Effective in version 10.1, you can exclude null values from the data set when you perform data domain discovery on a data source. When you select the minimum percentage of rows with the exclude null values option, the conformance percentage is the ratio of number of matching rows divided by the total number of rows excluding the null values in the column.

For more information about exclude null values from data domain discovery option, see the "Data Domain Discovery in Informatica Developer" chapter in the *Informatica 10.1 Data Discovery Guide*.

Run-time Environment

Effective in version 10.1, you can choose the Hadoop option as the run-time environment when you create or edit a column profile, data domain discovery profile, enterprise discovery profile, or scorecard. When you

choose the Hadoop option, the Data Integration Service pushes the profile logic to the Blaze engine on the Hadoop cluster to run profiles.

For more information about run-time environment, see the "Data Object Profiles" chapter in the *Informatica 10.1 Data Discovery Guide*.

Informatica Development Platform

This section describes new features and enhancements to the Informatica Development Platform.

Informatica Connector Toolkit

Effective in version 10.1, you can use the following features in the Informatica Connector Toolkit:

Pre-defined type system

When you create a connector that uses REST APIs to connect to the data source, you can use pre-defined data types. You can use the following Informatica Platform data types:

- string
- integer
- bigInteger
- decimal
- double
- binary
- date

Procedure pattern

When you create a connector for Informatica Cloud, you can define native metadata objects for procedures in data sources. You can use the following options to define the native metadata object for a procedure:

Manually create the native metadata object

When you define the native metadata objects manually, you can specify the following details:

Metadata Component	Description
Procedure extension	Additional metadata information that you can specify for a procedure.
Parameter extension	Additional metadata information that you can specify for parameters.
Call capability attributes	Additional metadata information that you can specify to create a read or write call to a procedure.

Use swagger specifications

When you use swagger specifications to define the native metadata object, you can either use an existing swagger specification or you can generate a swagger specification by sampling the REST end point.

Edit common metadata

You can specify common metadata information for Informatica Cloud connectors, such as schema name and foreign key name.

Export the connector files for Informatica Cloud

After you design and implement the connector components, you can export the connector files for Informatica Cloud by specifying the plug-in ID and plug-in version.

Export the connector files for PowerCenter

After you design and implement the connector components, you can export the connector files for PowerCenter by specifying the PowerCenter version.

Live Data Map

This section describes new Live Data Map features in version 10.1.

Email Notifications

Effective in version 10.1, you can configure and receive email notifications on the Catalog Service status to closely monitor and troubleshoot the application service issues. You use the Email Service and the associated Model Repository Service to send email notifications.

For more information, see the *Informatica 10.1 Administrator Reference for Live Data Map*.

Keyword Search

Effective in version 10.1, you can use the following keywords to restrict the search results to specific types of assets:

- Table
- Column
- File
- Report

For example, if you want to search for all the tables with the term "customer" in them, type in "tables with customer" in the Search box. Enterprise Information Catalog lists all the tables that include the search term "customer" in the table name.

For more information, see the *Informatica 10.1 Enterprise Information Catalog User Guide*.

Profiling

Effective in version 10.1, Live Data Map can run profiles in the Hadoop environment. When you choose the Hadoop connection, the Data Integration Service pushes the profile logic to the Blaze engine on the Hadoop cluster to run profiles.

For more information, see the *Informatica 10.1 Live Data Map Administrator Guide*.

Scanners

Effective in version 10.1, you can extract metadata from the following sources:

- Amazon Redshift
- Amazon S3

- Custom Lineage
- HDFS
- Hive
- Informatica Cloud
- MicroStrategy

For more information, see the *Informatica 10.1 Live Data Map Administrator Guide*.

Mappings

This section describes new mapping features in version 10.1.

Informatica Mappings

This section describes new features for Informatica mappings in version 10.1.

Generate a Mapplet from Connected Transformations

Effective in version 10.1, you can generate a mapplet from a group of connected transformations in a mapping. Use the mapplet as a template to add to multiple mappings that connect to different sources and targets.

Generate a Mapping or Logical Data Object from an SQL Query

Effective in version 10.1, you can generate a mapping or a logical data object from an SQL query in the Developer tool.

To generate a mapping or logical data object from an SQL query, click **File** > **New** > **Mapping from SQL Query**. Enter a SQL query or select the location of the text file with an SQL query that you want to convert to a mapping. You can also generate a logical data object from an SQL query that contains only SELECT statements.

For more information about generating a mapping or a logical data object from an SQL query, see the *Informatica 10.1 Developer Mapping Guide*.

Metadata Manager

This section describes new Metadata Manager features in version 10.1.

Universal Resources

Effective in version 10.1, you can create universal resources to extract metadata from some metadata sources for which Metadata Manager does not package a model. For example, you can create a universal resource to extract metadata from an Apache Hadoop Hive Server, QlikView, or Talend metadata source.

To extract metadata from these sources, you first create an XConnect that represents the metadata source type. The XConnect includes the model for the metadata source. You then create one or more resources that

are based on the model. The universal resources that you create behave like packaged resources in Metadata Manager.

For more information about universal resources, see the "Universal Resources" chapter in the *Informatica 10.1 Metadata Manager Administrator Guide*.

Incremental Loading for Oracle and Teradata Resources

Effective in version 10.1, you can enable incremental loading for Oracle resources and for Teradata resources. An incremental load causes Metadata Manager to load recent changes to the metadata instead of loading complete metadata. Incremental loading reduces the amount of time it takes to load the resource.

To enable incremental loading for an Oracle resource or for a Teradata resource, enable **Incremental load** option in the resource configuration properties. This option is disabled by default.

For more information about incremental loading for Oracle and Teradata resources, see the "Database Management Resources" chapter in the *Informatica 10.1 Metadata Manager Administrator Guide*.

Hiding Resources in the Summary View

Effective in version 10.1, you can prevent a resource and its child objects from being displayed in the summary view of data lineage diagrams. To hide a resource, enable the **Hide in Summary Lineage** option on the **Properties** page of the resource configuration properties. This option is available for all resource types. It is disabled by default.

You can hide objects such as staging databases from data lineage diagrams. If you want to view the hidden objects, you can switch from the summary view to the detail view through the task bar.

For more information about the summary view of data lineage diagrams, see the "Working with Data Lineage" chapter in the *Informatica 10.1 Metadata Manager User Guide*.

Creating an SQL Server Integration Services Resource from Multiple Package Files

Effective in version 10.1, you can create a Microsoft SQL Server Integration Services resource that extracts metadata from packages in separate package (.dtsx) files. The package files must be in the same directory.

To create a resource that extracts metadata from packages in different package files, specify the directory that contains the package files in the **Directory** resource configuration property.

For more information about creating and configuring Microsoft SQL Server Integration Services resources, see the "Database Management Resources" chapter in the *Informatica 10.1.1 Metadata Manager Administrator Guide*.

Metadata Manager Command Line Programs

Effective in version 10.1, Metadata Manager has a new command line program. The mmXConPluginUtil command line program generates the image mapping information or the plug-in for a universal XConnect.

The following table describes the mmXConPluginUtil commands:

Command Name	Description
generateImageMapping	Generates the image mapping information for a universal XConnect.
generatePlugin	Generates the plug-in for a universal XConnect.

For more information about the mmXConPluginUtil command line program, see the "mmXConPluginUtil" chapter in the *Informatica 10.1 Metadata Manager Command Reference*.

Application Properties

Effective in version 10.1 you can configure new application properties in the Metadata Manager imm.properties file. This feature is also available in 9.6.1 HotFix 4. It is not available in 10.0.

The following table describes new Metadata Manager application properties in imm.properties:

Property	Description
xconnect.custom.failLoadOnErrorCount	Maximum number of errors that the Metadata Manager Service can encounter before the custom resource load fails.
xconnect.io.print.batch.errors	Number of errors that the Metadata Manager Service writes to the in memory cache and to the mm.log file in one batch when you load a custom resource.

For more information about the imm.properties file, see the "Metadata Manager Properties Files" appendix in the *Informatica 10.1 Metadata Manager Administrator Guide*.

Migrate Business Glossary Audit Trail History and Links to Technical Metadata

Effective in version 10.1, you can migrate audit trail history and links to technical metadata when you export business glossaries. You can import the audit trail history and links in the Analyst tool.

This feature is also available in 9.6.1 HotFix 4. It is not available in 10.0.

For more information, see the *Informatica 10.1 Upgrading from Version 9.5.1 Guide*.

PowerCenter

This section describes new PowerCenter features in version 10.1.

Create a Source Definition from a Target Definition

Effective in version 10.1, you can create a source definition from a target definition. You can drag the target definitions into the Source Analyzer to create source definitions.

For more information, see the *Informatica 10.1 PowerCenter Designer Guide*.

Create an FTP Connection Type from the Command Line

Effective in version 10.1, you can create an FTP connection with the *pmrep CreateConnection* command.

For more information, see the "pmrep Command Reference" chapter in the *Informatica 10.1 Command Reference*.

Pushdown Optimization for Greenplum

Effective in version 10.1, the PowerCenter Integration Service can push transformation logic to Greenplum sources and targets when the connection type is ODBC.

For more information, see the *Informatica PowerCenter 10.1 Advanced Workflow Guide*.

PowerExchange Adapters

This section describes new PowerExchange adapter features in version 10.1.

PowerExchange Adapters for Informatica

This section describes new Informatica adapter features in version 10.1.

PowerExchange for HDFS

Effective in version 10.1, you can use PowerExchange for HDFS to read Avro and Parquet data files from and write Avro and Parquet data files to HDFS and local file system without using a Data Processor transformation.

For more information, see the *Informatica PowerExchange for HDFS 10.1 User Guide*.

PowerExchange for Hive

Effective in version 10.1, you can use char and varchar data types in mappings. You can also select different Hive databases when you create a data object and a mapping.

For more information, see the *Informatica PowerExchange for Hive 10.1 User Guide*.

PowerExchange for Teradata Parallel Transporter API

Effective in version 10.1, you can enable Teradata Connector for Hadoop (TDCH) to run a Teradata mapping on a Blaze engine. When you run the mapping, the Data Integration Service pushes the mapping to a Hadoop cluster and processes the mapping on a Blaze engine, which significantly increases the performance.

For more information, see the *Informatica PowerExchange for Teradata Parallel Transporter API 10.1 User Guide*.

PowerExchange Adapters for PowerCenter

This section describes new PowerCenter adapter features in version 10.1.

PowerExchange for Greenplum

Effective in version 10.1, you can configure Kerberos authentication for native Greenplum connections.

This feature is also available in 9.6.1 HotFix 4. It is not available in 10.0.

For more information, see the "Greenplum Sessions and Workflows" chapter in the *Informatica 10.1 PowerExchange for Greenplum User Guide for PowerCenter*.

Security

This section describes new security features in version 10.1.

Custom Cipher Suites

Effective in version 10.1, you can customize the cipher suites that the Informatica domain uses for secure communication within the domain and secure connections to web application services. You can create a whitelist and blacklist to enable or block specific ciphersuites. This feature is also available in 9.6.1 HotFix 4. It is not available in 10.0.

The Informatica domain uses an effective list of cipher suites that uses the cipher suites in the default and whitelists but blocks cipher suites in the blacklist.

For more information, see the "Domain Security" chapter in the *Informatica 10.1 Security Guide*.

Operating System Profiles

Effective in version 10.1, if the Data Integration Service runs on UNIX or Linux, you can create operating system profiles and configure the Data Integration Service to use operating system profiles. Use operating system profiles to increase security and to isolate the run-time user environment in Informatica products such as Big Data Management, Data Quality, and Intelligent Data Lake.

The Data Integration Service uses operating system profiles to run mappings, profiles, scorecards, and workflows. The operating system profile contains the operating system user name, service process variables, Hadoop impersonation properties, the Analyst Service properties, environment variables, and permissions. The Data Integration Service runs the mapping, profile, scorecard, or workflow with the system permissions of the operating system user and the properties defined in the operating system profile.

For more information about operating system profiles, see the "Users and Groups" chapter in the *Informatica 10.1 Security Guide*.

Application and Application Object Permissions

Effective in version 10.1, you can assign permissions to control the level of access that a user or group has on applications and application objects such as mappings and workflows.

For more information about application and application object permissions, see the "Permissions" chapter in the *Informatica 10.1 Security Guide*.

Transformations

This section describes new transformation features in version 10.1.

Informatica Transformations

This section describes new features in Informatica transformation in version 10.1.

Address Validator Transformation

This section describes the new Address Validator transformation features.

The Address Validator transformation contains additional address functionality for the following countries:

Ireland

Effective in version 10.1, you can return the eircode for an address in Ireland. An eircode is a seven-character code that uniquely identifies an Ireland address. The eircode system covers all residences, public buildings, and business premises and includes apartment addresses and addresses in rural townlands.

To return the eircode for an address, select a Postcode port or a Postcode Complete port.

France

Effective in version 10.1, address validation uses the Hexaligne 3 repository of the National Address Management Service to certify a France address to the SNA standard.

The Hexaligne 3 data set contains additional information on delivery point addresses, including sub-building details such as building names and residence names.

Germany

Effective in version 10.1, you can retrieve the three-digit street code part of the *Frachtleitcode* or Freight Code as an enrichment to a valid Germany addresses. The street code identifies the street within the address.

To retrieve the street code as an enrichment to verified Germany addresses, select the Street Code DE port. Find the port in the DE Supplementary port group.

Informatica adds the Street Code DE port in version 10.1.

South Korea

Effective in version 10.1, you can verify older, lot-based addresses and addresses with older, six-digit post codes in South Korea. You can verify and update addresses that use the current format, the older format, and a combination of the current and older formats. A current South Korea address has a street-based format and includes a five-digit post code. A non-current address has a lot-based format and includes a six-digit post code.

To verify a South Korea address in an older format and to change the information to another format, use the Address Identifier KR ports. You update the address information in two stages. First, run the address validation mapping in batch or interactive mode and select the Address Identifier KR output port. Then, run the address validation mapping in address code lookup mode and select the Address Identifier KR input port. Find the Address Identifier KR input port in the Discrete port group. Find the Address Identifier KR output port in the KR Supplementary port group.

To verify that the Address Validator transformation can read and write the address data, add the Supplementary KR Status port to the transformation.

Informatica adds the Address Identifier KR ports, the Supplementary KR Status port, and the KR Supplementary port group in version 10.1.

Effective in version 10.1, you can retrieve South Korea address data in the Hangul script and in a Latin script.

United Kingdom

Effective in version 10.1, you can retrieve delivery point type data and organization key data for a United Kingdom address. The delivery point type is a single-character code that indicates whether the address points to a residence, a small organization, or a large organization. The organization key is an eight-digit code that the Royal Mail assigns to small organizations.

To add the delivery point type to a United Kingdom address, use the Delivery Point Type GB port. To add the organization key to a United Kingdom address, use the Organization Key GB port. Find the ports in the UK Supplementary port group. To verify that the Address Validator transformation can read and write the data, add the Supplementary UK Status port to the transformation.

Informatica adds the Delivery Point Type GB port and the Organization Key GB port in version 10.1.

These features are also available in 9.6.1 HotFix 4. They are not available in 10.0.

For more information, see the *Informatica 10.1 Address Validator Port Reference*.

Data Processor Transformation

This section describes new Data Processor transformation features.

REST API

An application can call the Data Transformation REST API to run a Data Transformation service.

For more information, see the *Informatica 10.1 Data Transformation REST API User Guide*.

XmlToDocument_45 Document Processor

The **XmlToDocument_45** document processor converts XML data to document formats, such as PDF or Excel. This component uses the **Business Intelligence and Reporting Tool** (BIRT) version 4.5 Eclipse add-on. Document processors for older versions of BIRT are also available.

For more information, see the *Informatica10.1 Data Transformation User Guide*.

Relational to Hierarchical Transformation

This section describes the Relational to Hierarchical transformation that you create in the Developer tool.

The Relational to Hierarchical transformation is an optimized transformation introduced in version 10.1 that converts relational input to hierarchical output.

For more information, see the *Informatica 10.1 Developer Transformation Guide*.

Workflows

This section describes new workflow features in version 10.1.

PowerCenter Workflows

This section describes new features in PowerCenter workflows in version 10.1.

Assign Workflows to the PowerCenter Integration Service

Effective in version 10.1, you can assign a workflow to the PowerCenter Integration Service with the *pmrep AssignIntegrationService* command.

For more information, see the "pmrep Command Reference" chapter in the *Informatica 10.1 Command Reference*.

CHAPTER 15

Changes (10.1)

This chapter includes the following topics:

Support Changes

Effective in version 10.1, Informatica announces the following support changes:

Informatica Installation

Effective in version 10.1, Informatica implemented the following change in operating system:

Support Change	Level of Support	Comments
SUSE 11	Added support	Effective in version 10.1, Informatica added support for SUSE Linux Enterprise Server 11.

Reporting Service (Deprecated)

Effective in version 10.1, Informatica deprecated the Reporting Service. Informatica will drop support for the Reporting Service in a future release. The Reporting Service custom roles are deprecated.

If you upgrade to version 10.1, you can continue to use the Reporting Service. You can continue to use Data Analyzer. Informatica recommends that you begin using a third-party reporting tool before Informatica drops

support. You can use the recommended SQL queries for building all the reports shipped with earlier versions of PowerCenter.

If you install version 10.1, you cannot create a Reporting Service. You cannot use Data Analyzer. You must use a third-party reporting tool to run PowerCenter and Metadata Manager reports.

For information about the PowerCenter Reports, see the *Informatica PowerCenter Using PowerCenter Reports Guide*. For information about the PowerCenter repository views, see the *Informatica PowerCenter Repository Guide*. For information about the Metadata Manager repository views, see the *Informatica Metadata Manager View Reference*.

Reporting and Dashboard Service (Deprecated)

Effective in version 10.1, Informatica deprecated the Reporting and Dashboards Service. Informatica will drop support for the Reporting and Dashboards Service in a future release.

If you upgrade to version 10.1, you can continue to use the Reporting and Dashboards Service. Informatica recommends that you begin using a third-party reporting tool before Informatica drops support. You can use the recommended SQL queries for building all the reports shipped with earlier versions of PowerCenter.

If you install version 10.1, you cannot create a Reporting and Dashboards Service. You must use a third-party reporting tool to run PowerCenter and Metadata Manager reports.

For information about the PowerCenter Reports, see the *Informatica PowerCenter Using PowerCenter Reports Guide*. For information about the PowerCenter repository views, see the *Informatica PowerCenter Repository Guide*. For information about the Metadata Manager repository views, see the *Informatica Metadata Manager View Reference*.

Application Services

This section describes changes to application services in version 10.1

System Services

This section describes changes to system services in version 10.1.

Email Service for Scorecard Notifications

Effective in version 10.1, scorecard notifications use the email server that you configure on the Email Service.

Previously, scorecard notifications used the email server that you configured on the domain.

For more information about the Email Service, see the "System Services" chapter in the *Informatica 10.1 Application Service Guide*.

Big Data

This section describes changes to big data features.

JCE Policy File Installation

Effective in version 10.1, Informatica Big Data Management ships the JCE policy file and installs it when you run the installer.

Previously, you had to download and manually install the JCE policy file for AES encryption.

Business Glossary

This section describes changes to Business Glossary in version 10.1.

Custom Relationships

Effective in version 10.1, you can create custom relationships in the **Manage Glossary Relationships** workspace. Under **Manage** click **Glossary Relationships** to open the **Manage Glossary Relationships** workspace.

Previously, you had to edit the glossary template to create custom relationships.

For more information, see the "Glossary Administration" chapter in the *Informatica 10.1 Business Glossary Guide*.

Bi-Directional Default Relationships

Effective in version 10.1, the default business term relationships are bi-directional.

Previously, the default relationships were uni-directional.

For more information, see the "Finding Glossary Content" chapter in the *Informatica 10.1 Business Glossary Guide*.

Governed By Relationship

Effective in version 10.1, you can no longer create a "governed by" relationship between terns. The "governed by" relationship can only be used between a policy and a term.

Previously, you could create a "governed by" relationship between terms.

For more information, see the *Informatica 10.1 Business Glossary Guide*.

Glossary Workspace

Effective in version 10.1, in the **Glossary** workspace, the Analyst tool displays multiple Glossary assets in separate tabs.

Previously, the Analyst tool displayed only one Glossary asset in the **Glossary** workspace.

For more information, see the "Finding Glossary Content" chapter in the *Informatica 10.1 Business Glossary Guide*.

Business Glossary Desktop

Effective in version 10.1, you can install Business Glossary Desktop on the OS X operating system.

Previously, Business Glossary Desktop was available only for Windows.

For more information, see the *Informatica 10.1 Business Glossary Desktop Installation and Configuration Guide*.

Kerberos Authentication for Business Glossary Command Program

Effective in version 10.1, Business Glossary command program is supported in a domain that uses Kerberos authentication.

Previously, Business Glossary command program was not supported in a domain that uses Kerberos authentication.

For more information, see the "infacmd bg Command Reference" chapter in the *Informatica 10.1 Command Reference*.

Command Line Programs

This section describes changes to commands in version 10.1.

infacmd isp Commands

The following table describes the deprecated infacmd isp commands:

Command	Description
BackupDARepositoryContents	Backs up content for a Data Analyzer repository to a binary file. When you back up the content, the Reporting Service saves the Data Analyzer repository including the repository objects, connection information, and code page information.
CreateDARepositoryContents	Creates content for a Data Analyzer repository. You add repository content when you create the Reporting Service or delete the repository content. You cannot create content for a repository that already includes content.
CreateReportingService	Creates a Reporting Service in the domain.
DeleteDARepositoryContents	Deletes repository content from a Data Analyzer repository. When you delete repository content, you also delete all privileges and roles assigned to users for the Reporting Service.
RestoreDARepositoryContents	Restores content for a Data Analyzer repository from a binary file. You can restore metadata from a repository backup file to a database. If you restore the backup file on an existing database, you overwrite the existing content.
UpdateReportingService	Updates or creates the service and lineage options for the Reporting Service.

Command	Description
UpgradeDARepositoryContents	Upgrades content for a Data Analyzer repository.
UpgradeDARepositoryUsers	Upgrades users and groups in a Data Analyzer repository. When you upgrade the users and groups in the Data Analyzer repository, the Service Manager moves them to the Informatica domain.

For more information, see the "infacmd isp Command Reference" chapter in the *Informatica 10.1 Command Reference*.

Exception Management

This section describes the changes to exception management in version 10.1.

Default search and replace operations in an exception task

Effective in version 10.1, you can configure the options in an exception task to find and replace data values in one or more columns. You can specify a single column, or you can specify any column that uses a string, date, or numeric data type. By default, a find and replace operation applies to all columns that contain string data.

Previously, a find and replace operation ran by default on all of the data in the task. In version 10.1, you cannot configure a find and replace operation to run on all of the data in the task.

For more information, see the Exception Records chapter in the *Informatica 10.1 Exception Management Guide*.

Informatica Developer

This section describes the changes to the Developer tool in version 10.1.

Keyboard Shortcuts

Effective in version 10.1, the shortcut key to select the next area is **CTRL + Tab** followed by pressing the **Tab** button three times.

Previously, the shortcut key was Ctrl+Tab followed by Ctrl+Tab.

For more information, see the "Keyboard Shortcuts" appendix in the *Informatica 10.1.1 Developer Tool Guide*.

Live Data Map

This section describes changes to Live Data Map in version 10.1.

Enterprise Information Catalog

This section describes the changes to Enterprise Information Catalog.

Home Page

Effective in version 10.1, the home page displays the trending search, top 50 assets, and recently viewed assets. Trending search refers to the terms that were searched the most in the catalog in the last week. The top 50 assets refer to the assets with the most number of relationships with other assets in the catalog.

Previously, the Enterprise Information Catalog home page displayed the search field, the number of resources that Live Data Map scanned metadata from, and the total number of assets in the catalog.

For more information about the Enterprise Information Catalog home page, see the "Getting Started with Informatica Enterprise Information Catalog" chapter in the *Informatica 10.1 Enterprise Information Catalog User Guide*.

Asset Overview

Effective in version 10.1, you can view the schema name associated with an asset in the **Overview** tab.

Previously, the Overview tab for an asset did not display the associated schema name.

For more information about assets in Enterprise Information Catalog, see the *Informatica 10.1 Enterprise Information Catalog User Guide*.

Live Data Map Administrator Home Page

Effective in version 10.1, the Start workspace displays the total number of assets in the catalog, unused resources, and unassigned connections in addition to many other monitoring statistics.

Previously, the Live Data Map Administrator home page displayed several monitoring statistics, such as number of resources for each resource type, task distribution, and predictive job load.

For more information about Live Data Map Administrator home page, see the "Using Live Data Map Administrator" chapter in the *Informatica 10.1 Live Data Map Administrator Guide*.

Metadata Manager

This section describes changes to Metadata Manager in version 10.1.

Microsoft SQL Server Integration Services Resources

Effective in version 10.1, Metadata Manager organizes SQL Server Integration Services objects in the metadata catalog according to the connections in which the objects are used. The metadata catalog does not contain a separate folder for each package. To select an object such as a table or column in the metadata catalog, navigate to the object through the source or target connection in which the object is used.

Previously, Metadata Manager organized SQL Server Integration Services objects by connection and by package. The metadata catalog contained a Connections folder in addition to a folder for each package.

For more information about SQL Server Integration Services resources, see the "Data Integration Resources" chapter in the *Informatica 10.1 Metadata Manager Administrator Guide*.

Certificate Validation for Command Line Programs

Effective in version 10.1, when you configure a secure connection for the Metadata Manager web application, the Metadata Manager command line programs do not accept security certificates that have errors. The property that controls whether a command line program can accept security certificates that have errors is removed. This feature is also available in 9.6.1 HotFix 4. It is not available in 10.0.

Previously, the Security.Authentication.Level property in the MMCmdConfig.properties file controlled certificate validation for mmcmd or mmRepoCmd. You could configure the property to either accept all certificates or accept only certificates that do not have errors.

Because the command line programs no longer accept security certificates that have errors, the Security.Authentication.Level property is obsolete. The property no longer appears in the MMCmdConfig.properties files for mmcmd or mmRepoCmd.

For more information about certificate validation for mmcmd and mmRepoCmd, see the "Metadata Manager Command Line Programs" chapter in the *Informatica 10.1 Metadata Manager Administrator Guide*.

PowerCenter

This section describes changes to PowerCenter in version 10.1.

Operating System Profiles

Effective in version 10.1, the OS Profile tab in the Security page of the Administrator tool is renamed to the **Operating System Profiles** tab. To create operating system profiles, go to the Security Actions menu and click **Create Operating System Profile**. You can also assign a default operating system profile to users and groups when you create an operating system profile. Previously, the Security Actions menu had an Operating System Profiles Configuration option.

For more information about managing operating system profiles, see the "Users and Groups" chapter in the *Informatica 10.1 Security Guide*.

Security

This section describes changes to security in version 10.1.

Transport Layer Security (TLS)

Effective in version 10.1, Informatica uses TLS v1.1 and v1.2 to encrypt traffic. Additionally, Informatica disabled support for TLS v1.0 and lower.

The changes affect secure communication within the Informatica domain, secure connections to web application services, and connections from the Informatica domain to an external destination.

This feature is also available in 9.6.1 HotFix 4. It is not available in 10.0.

Permissions

Effective in version 10.1, the following Model repository objects have permission changes:

- Applications, mappings, and workflows. All users in the domain are granted all permissions.
- SQL data services and web services. Users with effective permissions are assigned direct permissions.

The changes affect the level of access that users and groups have to these objects.

After you upgrade, you might need to review and change the permissions to ensure that users have appropriate permissions on objects.

For more information, see the "Permissions" chapter in the *Informatica 10.1 Security Guide*.

Transformations

This section describes changed transformation behavior in version 10.1.

Informatica Transformations

This section describes the changes to the Informatica transformations in version 10.1.

Address Validator Transformation

This section describes the changes to the Address Validator transformation.

The Address Validator transformation contains the following updates to address functionality:

Address validation engine upgrade

Effective in version 10.1, the Address Validator transformation uses version 5.8.1 of the Informatica Address Verification software engine. The engine enables the features that Informatica adds to the Address Validator transformation in version 10.1.

Previously, the transformation used version 5.7.0 of the Informatica AddressDoctor software engine.

Product name change

Informatica Address Verification is the new name of Informatica AddressDoctor. Informatica AddressDoctor became Informatica Address Verification in version 5.8.0.

Changes to geocode options for United Kingdom addresses

Effective in version 10.1, you can select Rooftop as a geocode data property to retrieve rooftop-level geocodes for United Kingdom addresses.

Previously, you selected the Arrival Point geocode data property to retrieve rooftop-level geocodes for United Kingdom addresses.

If you upgrade a repository that includes an Address Validator transformation, you do not need to reconfigure the transformation to specify the Rooftop geocode property. If you specify rooftop geocodes and the Address Validator transformation cannot return the geocodes for an address, the transformation does not return any geocode data.

Support for unique property reference numbers in United Kingdom input data

Effective in version 10.1, the Address Validator transformation has a UPRN GB input port and a UPRN GB output port.

Previously, the transformation had a UPRN GB output port.

Use the input port to retrieve a United Kingdom address for a unique property reference number that you enter. Use the UPRN GB output port to retrieve the unique property reference number for a United Kingdom address.

These features are also available in 9.6.1 HotFix 4. They are not available in 10.0.

For more information, see the *Informatica 10.1 Address Validator Port Reference*.

Data Processor Transformation

This section describes the changes to the Data Processor transformation.

Excel 2013

Effective in version 10.1, the ExcelToXml_03_07_10 document processor can process Excel 2013 files. You can use the document processor in a Data Processor transformation as a pre-processor that converts the format of a source document before a transformation.

For more information, see the *Informatica 10.1 Data Transformation User Guide*.

Performance Improvement with Avro or Parquet Input

A Data Processor transformation receives Avro or Parquet data input from a complex file reader object. Effective in version 10.1, you can configure the complex file reader settings to optimize performance for Avro or Parquet input.

For more information, see the *Informatica10.1 Data Transformation User Guide*.

Performance Improvement with COBOL Input in the Hadoop Environment

Effective in version 10.1, you can configure the complex file reader settings to optimize performance when processing large COBOL files in a Hadoop environment. Use a regular expression to define how to split record processing for an appropriate COBOL input file.

For more information, see the *Informatica10.1 Data Transformation User Guide*.

Exception Transformations

Effective in version 10.1, you can configure a Bad Record Exception transformation and a Duplicate Record Exception transformation to create exception tables in a non-default database schema.

Previously, you configured the transformations to create exception tables in the default schema on the database.

This feature is also available in 9.6.1 HotFix 4. It is not available in 10.0.

For more information, see the *Informatica 10.1 Developer Transformation Guide*.

Workflows

This section describes changed workflow behavior in version 10.1.

Informatica Workflows

This section describes the changes to Informatica workflow behavior in version 10.1.

Parallel Execution of Human Tasks

Effective in version 10.1, the Data Integration Service can run Human tasks on multiple sequence flows in a workflow in parallel. To create the parallel sequence flows, add Inclusive gateways to the workflow in the Developer tool. Add one or more Human tasks to each sequence flow between the Inclusive gateways.

Previously, you added one or more Human tasks to a single sequence flow between Inclusive gateways.

For more information, see the *Informatica 10.1 Developer Workflow Guide*.

CHAPTER 16

Release Tasks (10.1)

This chapter includes the following topics:

Metadata Manager

This section describes release tasks for Metadata Manager in version 10.1.

Informatica Platform Resources

Effective in version 10.1, to extract metadata from an Informatica 10.0 application that is deployed to a Data Integration Service, you must install the version 10.0 Command Line Utilities. Install the utilities in a directory that the 10.1 Metadata Manager Service can access. For best performance, extract the files to a directory on the machine that runs the Metadata Manager Service.

When you configure the resource, you must also enter the file path to the 10.0 Informatica Command Line Utilities installation directory in the **10.0 Command Line Utilities Directory** property.

For more information about Informatica Platform resources, see the "Data Integration Resources" chapter in the *Informatica 10.1 Metadata Manager Administrator Guide*.

Verify the Truststore File for Command Line Programs

Effective in version 10.1, when you configure a secure connection for the Metadata Manager web application, the Metadata Manager command line programs do not accept security certificates that have errors. The property that controls whether a command line program can accept security certificates that have errors is removed. This feature is also available in 9.6.1 HotFix 4. It is not available in 10.0.

The Security.Authentication.Level property in the MMCmdConfig.properties file controlled certificate validation for mmcmd or mmRepoCmd. You could set the property to one of the following values:

- NO_AUTH. The command line program accepts the digital certificate, even if the certificate has errors.
- FULL_AUTH. The command line program does not accept a security certificate that has errors.

The NO_AUTH setting is no longer valid. The command line programs now only accept security certificates that do not contain errors.

If a secure connection is configured for the Metadata Manager web application, and you previously set the Security.Authentication.Level property to NO_AUTH, you must now configure a truststore file. To configure

mmcmd or mmRepoCmd to use a truststore file, edit the MMCmdConfig.properties file that is associated with mmcmd or mmRepoCmd. Set the TrustStore.Path property to the path and file name of the truststore file.

For more information about the MMCmdConfig.properties files for mmcmd and mmRepoCmd, see the "Metadata Manager Command Line Programs" chapter in the *Informatica 10.1 Metadata Manager Administrator Guide*.

Security

This section describes release tasks for security features in version 10.1.

Permissions

After you upgrade to 10.1, the following Model repository objects have permission changes:

- Applications, mappings, and workflows. All users in the domain are granted all permissions.
- SQL data services and web services. Users with effective permissions are assigned direct permissions.

The changes affect the level of access that users and groups have to these objects.

After you upgrade, review and change the permissions on applications, mappings, workflows, SQL data services, and web services to ensure that users have appropriate permissions on objects.

For more information, see the "Permissions" chapter in the *Informatica 10.1 Security Guide*.

Part IV: Version 10.0

This part contains the following chapters:

CHAPTER 17

New Products (10.0)

This chapter includes the following topic:

PowerExchange Adapters

PowerExchange Adapters for Informatica

This section describes new Informatica adapters in version 10.0.

PowerExchange for JD Edwards EnterpriseOne

Effective in version 10.0, you can use PowerExchange for JD Edwards EnterpriseOne to extract data from JD Edwards EnterpriseOne sources and write data to JD Edwards EnterpriseOne targets.

For more information, see the *Informatica PowerExchange for JD Edwards EnterpriseOne 10.0 User Guide*.

PowerExchange for LDAP

Effective in version 10.0, you can use PowerExchange for LDAP to read data from and write data to LDAP directory servers.

For more information, see the *Informatica PowerExchange for LDAP 10.0 User Guide*.

PowerExchange for Microsoft Dynamics CRM

Effective in version 10.0, you can use PowerExchange for Microsoft Dynamics CRM to read data from and write data to Microsoft Dynamics CRM. You can import Microsoft Dynamics CRM business entities as read and write data objects to create and run mappings to extract data from or load data to a Microsoft Dynamics CRM entity.

For more information, see the *Informatica PowerExchange for Microsoft Dynamics CRM 10.0 User Guide*.

PowerExchange for Netezza

Effective in version 10.0, you can perform the following tasks with PowerExchange for Netezza:

- You can use PowerExchange for Netezza to read data from and write data to Netezza databases. You can process large volumes of data by using PowerExchange for Netezza.
- You can use the Secure Sockets Layer (SSL) protocol to configure a secure connection between Netezza clients and the Netezza server.

For more information, see the *Informatica PowerExchange for Netezza 10.0 User Guide*.

PowerExchange for OData

Effective in version 10.0, you can use PowerExchange for OData to read data from an OData provider that exposes data through an OData service. You can also run a profile against OData data objects.

For more information, see the *Informatica PowerExchange for OData 10.0 User Guide*.

CHAPTER 18

New Features (10.0)

This chapter includes the following topics:

Application Services

This section describes new application services features in version 10.0.

Disabling and Recycling Application Services

Effective in version 10.0, disabling and recycling application services have the following new features:

Planned and Unplanned Notes

When you disable or recycle an application service from the Administrator tool, you can specify whether the action is planned or unplanned. Planned and unplanned notes appear on the **Command History** and **Events** panels in the **Domain** view on the **Manage** tab.

Comments

When you disable or recycle an application service from the Administrator tool, you can optionally enter comments about the action. Comments appear on the **Command History** and **Events** panels in the **Domain** view on the **Manage** tab.

For more information, see the *Informatica 10.0 Application Service Guide*.

Data Integration Service

This section describes new Data Integration Service features in version 10.0.

Architecture

Effective in version 10.0, the Data Integration Service includes the following types of components:

Service components

Service components include modules that manage requests from client tools, the logical Data Transformation Manager (LDTM) that optimizes and compiles jobs, and managers that manage application deployment and caches. The service components run within the Data Integration Service process. The Data Integration Service process must run on a node with the service role.

Compute component

The compute component of the Data Integration Service is the execution Data Transformation Manager (DTM). The DTM extracts, transforms, and loads data to complete a data transformation job. The DTM must run on a node with the compute role.

When the Data Integration Service runs on a single node, the service and compute components of the Data Integration Service run on the same node. The node must have both the service and compute roles.

When the Data Integration Service runs on a grid, the service and compute components of the Data Integration Service can run on the same node or on different nodes, based on how you configure the grid and the node roles. When you configure a Data Integration Service grid to run jobs in separate remote processes, the nodes in the grid can have a combination of the service only role, the compute only role, and both the service and compute roles. Some nodes in the grid are dedicated to running the service processes while other nodes are dedicated to running mappings.

For more information about Data Integration Service components, see the "Data Integration Service Architecture" chapter in the *Informatica 10.0 Application Service Guide*.

DTM Resource Allocation Policy

Effective in version 10.0, the Data Transformation Manager resource allocation policy determines how to allocate the CPU resources for tasks. The DTM uses an on-demand resource allocation policy to allocate CPU resources.

For more information about the DTM resource allocation policy, see the "Data Integration Service Architecture" chapter in the *Informatica 10.0 Application Service Guide*.

ASCII Data Movement Mode

Effective in version 10.0, the logical Data Transformation Manager (LDTM) component of the Data Integration Service determines whether to use the ASCII or Unicode data movement mode for mappings that read from a flat file or relational source. The LDTM determines the data movement mode based on the character sets that the mapping processes. When a mapping processes all ASCII data, the LDTM selects the ASCII mode. In ASCII mode, the Data Integration Service uses use one byte to store each character, which can optimize mapping performance. In Unicode mode, the service uses two bytes for each character.

For more information about the data movement mode, see the "Data Integration Service Architecture" chapter in the *Informatica 10.0 Application Service Guide*.

Maximize Parallelism for Profiles

Effective in version 10.0, you can enable the Data Integration Service to maximize parallelism when it runs a column profile and performs data domain discovery if you have the partitioning option. When you maximize parallelism, the Data Integration Service dynamically divides the profiling data into partitions and uses multiple threads to concurrently process the partitions. When the Data Integration Service uses additional threads, the service can optimize profiling performance.

For more information about how to maximize parallelism, see the "Data Integration Service Management" chapter in the *Informatica 10.0 Application Service Guide*.

Multiple Cache, Target, and Temporary Directories

Effective in version 10.0, you can configure multiple directories for the following Data Integration Service properties:

Cache Directory

Configure multiple cache directories to optimize performance during cache partitioning for Aggregator, Joiner, or Rank transformations.

Target Directory

Configure multiple target directories to optimize performance when multiple partitions write to a flat file target.

Temporary Directories

Configure multiple temporary directories to optimize performance during cache partitioning for Sorter transformations.

For more information about optimizing cache and target directories for partitioning, see the "Data Integration Service Management" chapter in the *Informatica 10.0 Application Service Guide*.

Model Repository Service

This section describes new Model Repository Service features in version 10.0.

Version Control System Support

Effective in version 10.0, you can integrate the Model repository with a supported version control system. When the Model repository is integrated with a version control system, the version control system protects objects from being overwritten by other members of the development team. You can check objects out and in, view and retrieve historical versions of objects, undo a checkout, and reassign a checked out object to another user.

You can integrate the Model repository with the following version control systems:

- Perforce

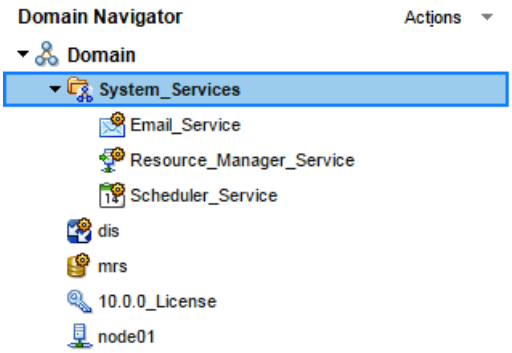
- Subversion

For more information, see the "Model Repository Service" chapter in the *Informatica 10.0 Application Service Guide*.

System Services

Effective in version 10.0, the domain includes system services. A system service is an application service that can have a single instance in the domain. System services are automatically created for you when you create or upgrade the domain. You can enable, disable, and configure system services.

The following image shows the System Services folder in the Domain Navigator:



The domain includes the following system services:

Email Service

The Email Service emails notifications for business glossaries and workflows. Enable the Email Service to allow users to configure email notifications.

The Email Service emails the following notifications:

- Business glossary notifications.
- Workflow notifications. Workflow notifications include emails sent from Human tasks and Notification tasks in workflows that the Data Integration Service runs.

Resource Manager Service

The Resource Manager Service manages computing resources in the domain and dispatches jobs to achieve optimal performance and scalability. The Resource Manager Service collects information about nodes with the compute role. The service matches job requirements with resource availability to identify the best compute node to run the job.

Enable the Resource Manager Service when you configure a Data Integration Service grid to run jobs in separate remote processes.

Scheduler Service

The Scheduler Service manages schedules for deployed mapping and workflow jobs in the domain.

Enable the Scheduler Service when you want to create schedules, assign jobs to them, and run scheduled jobs.

For more information about system services, see the "System Services" chapter in the *Informatica 10.0 Application Service Guide*.

Big Data

This section describes new big data features in version 10.0.

Big Data Management Configuration Utility

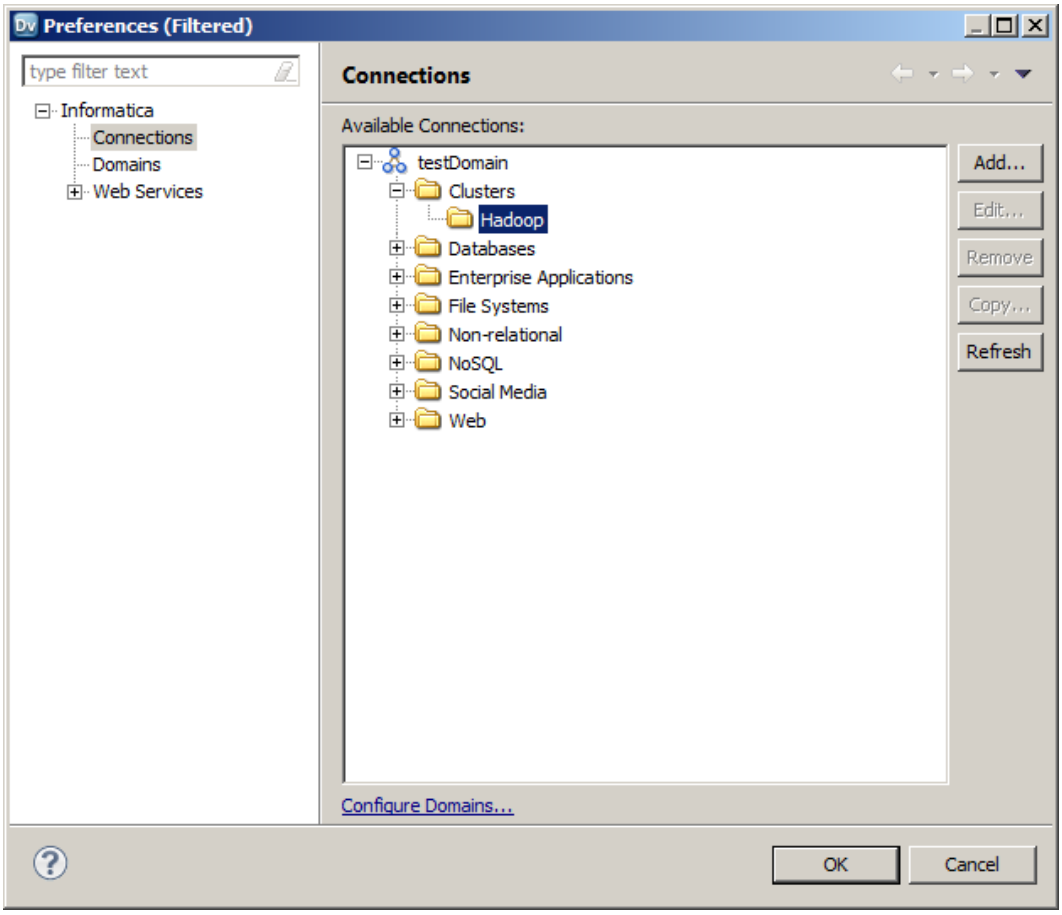
Effective in verison 10.0, you can use the Big Data Management Configuration Utility to automate part of the configuration process for Big Data Management.

For more information, see the *Informatica 10.0 Big Data Management Installation and Configuration Guide*.

Hadoop Connection

Effective in version 10.0, you must configure a Hadoop connection when you run a mapping in the Hadoop environment. You can edit the Hadoop connection to configure run-time properties for the Hadoop environment. The run-time properties include properties for the Hive and Blaze engines.

The following image shows the Hadoop connection as a cluster type connection:



For more information, see the "Connections" chapter in the *Informatica 10.0 Big Data Management User Guide*.

Hadoop Ecosystem

Effective in version 10.0, Informatica supports the following big data features and enhancements for the Hadoop ecosystem:

Hadoop clusters on Amazon EC2

You can read data from and write data to Hortonworks HDP clusters that are deployed on Amazon EC2.

Hadoop distributions

You can connect to Hadoop clusters that run the following Hadoop distributions:

- Cloudera CDH 5.4
- MapR 4.0.2 with MapReduce 1 and MapReduce 2

Hive on Tez

You can use Hive on Tez as the execution engine for Hadoop clusters that run Hortonworks HDP.

Kerberos Authentication

You can use Microsoft Active Directory as the key distribution center for Cloudera CDH and Hortonworks HDP Hadoop clusters.

Parameters for Big Data

Effective in version 10.0, you can use parameters to represent the following additional properties for big data:

- Complex file sources and targets
- Complex file sources and targets on HDFS
- Flat file sources and targets on HDFS
- HBase sources and targets
- Hive sources
- Hive targets in the Hadoop environment
- Run-time environment

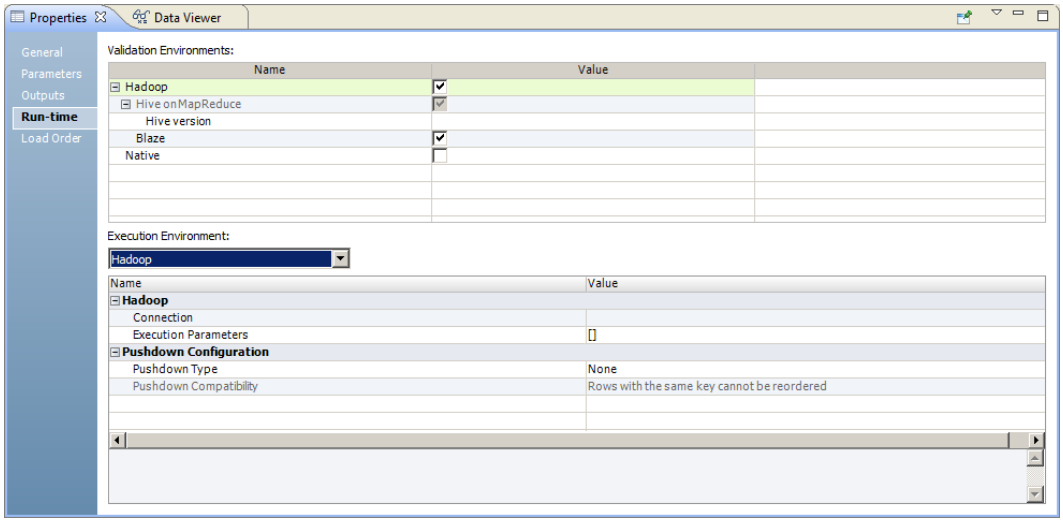
For more information, see the "Mappings in a Hadoop Environment" chapter in the *Informatica 10.0 Big Data Management User Guide*.

Run-Time and Validation Environments

Effective in version 10.0, you can select the Hadoop environment to run mappings on the Hadoop cluster. When you select the Hadoop environment, you can also select the Hive or Blaze engine to push the mapping logic to the Hadoop cluster. The Blaze engine is an Informatica proprietary engine for distributed processing on Hadoop.

When you run a mapping in the Hadoop environment, you must configure a Hadoop connection for the mapping. Validate the mapping to ensure that you can push the mapping logic to Hadoop. After you validate a mapping for the Hadoop environment, you can run the mapping.

The following image shows the Hadoop run-time and validation environments:



For more information, see the "Mappings in a Hadoop Environment" chapter in the *Informatica 10.0 Big Data Management User Guide*.

Business Glossary

This section describes new Business Glossary features in version 10.0.

Approval Workflow

Effective in version 10.0, data stewards can publish Glossary assets after a voting process. The glossary administrator configures the approval workflow for a glossary after which the data steward must publish or reject all the assets in the glossary through a voting process. The glossary administrator can configure up to two levels of approvals. The approvers can approve or reject the asset changes or abstain from voting. The data steward publishes or rejects the asset based on the voting results.

Glossary assets that are published after an approval workflow have a new tab called **Voting History** in the audit trail. This tab displays the details about the approval workflow.

For more information, see the "Approval Workflow" chapter in the *Informatica 10.0 Business Glossary Guide*.

Glossary Asset Attachments

Effective in version 10.0, you can add attachments to Glossary assets. Reference users can view the attachments when they open the Glossary assets in the **Glossary** workspace.

For more information about asset attachments, see the "Glossary Content Management" chapter in the *Informatica 10.0 Business Glossary Guide*. For more information about configuring the attachment directory, see the "Analyst Service" chapter in the *Informatica Application Service Guide*.

Long String Data Type

Effective in version 10.0, you can create a custom property that is of the long string data type. The long string data type does not have any limit on the number of characters that the content managers can use when adding content to the field.

For more information about the long string data type, see the "Glossary Content Management" chapter in the *Informatica 10.0 Business Glossary Guide*.

Support for Rich Text

Effective in version 10.0, data stewards can format content in rich text when they configure default asset properties such as **Description**, **Usage Context**, **Example**. Custom properties that have a long string data type also support rich text.

Data stewards can format the text in the following ways:

- Make the text bold, italicized, or underlined.
- Change the font and font color.
- Add an ordered or unordered list.
- Use predefined styles.
- Insert internal and external links to the text.

For more information about rich text, see the "Glossary Content Management" chapter in the *Informatica 10.0 Business Glossary Guide*.

Import and Export Enhancements

Effective in version 10.0, you can choose to import or export business glossaries with or without linked assets from other glossaries, attachments, and the audit history.

Optionally, you can choose to run the import task in the background. While the Analyst tool imports glossaries in the background, you can perform other tasks. After the import is complete, the Analyst tool sends you a notification.

In the final step of the import wizard, the Analyst tool now displays an enhanced summary and conflict resolution options.

For more information about the import and export enhancements, see the "Glossary Administration" chapter in the *Informatica 10.0 Business Glossary Guide*.

Email Notifications

Effective in version 10.0, you can choose to receive notifications through email. You continue to receive notifications in the Analyst tool. You can configure the email notification settings in the **Glossary Settings** workspace.

For more information about email notifications, see the "Finding Glossary Content" chapter in the *Informatica 10.0 Business Glossary Guide*.

Relationship View Diagram Enhancements

Effective in version 10.0, the relationship view diagram has the following enhancements:

View Full Asset Names

You have an option to view the full asset name and relationship name in the relationship view diagram. The Analyst tool truncates the asset names and relationship names that are longer than 200 characters by default.

Find Assets

You can search for assets that are displayed in the relationship view diagram.

Expand and Collapse Node

You can expand and collapse a node to show or hide the assets in the node.

Pan the Canvas

You can click and drag the relationship view canvas to pan across the canvas and view assets.

For more information, see the "Finding Glossary Content" chapter in the *Informatica 10.0 Business Glossary Guide*.

Analyst Tool Privileges

Effective in version 10.0, you can assign users the privilege to view published Glossary assets in the Administrator tool. Providing the **View Glossaries** privilege in the Administrator tool is equivalent to providing read permission for glossaries and published Glossary assets in the **Glossary Security** workspace in the Analyst tool.

For more information, see the *Informatica 10.0 Security Guide*.

Business Term Links

Effective in version 10.0, you can link profiles to business terms. The Analyst tool provides a hyperlink to linked technical assets and data objects. The Analyst tool opens the data objects in their respective workspaces when you click the hyperlink.

For more information, see the *Informatica 10.0 Business Glossary Guide*.

Glossary Security

Effective in version 10.0, the Analyst tool contains the following enhancements to the Glossary security:

Glossary Security User Interface

The **Glossary Security** workspace view displays the number of roles, users and groups.

Permissions and Privileges Wizard

In the **Glossary Security** workspace, when you use the wizard to add permissions or privileges to users, you can sort Glossary assets by category and type. You can also now bulk assign read and write permissions to all assets for a user.

Asset View

Effective in version 10.0, the asset view also displays the number of attachments and the name of the glossary that contains the asset.

For more information, see the "Introduction to Business Glossary" chapter in the *Informatica 10.0 Business Glossary Guide*.

Default Approvers

Effective in version 10.0, the service administrator can configure the default approvers for a glossary. Only the default approvers that the service administrator specifies receive notification during the normal approval process or can participate in level 1 voting during the advanced approval workflow.

For more information, see the "Glossary Administration" chapter in the *Informatica 10.0 Business Glossary Guide*.

Command Line Programs

This section describes new and changed commands in version 10.0.

infacmd bg Command

The following table describes a new infacmd bg command:

Command	Description
upgradeRepository	Upgrades the Business Glossary data in the Model repository. Run this command after you upgrade the domain.

infacmd dis Commands

The following table describes new infacmd dis commands:

Command	Description
addParameterSetEntries	Adds entries to a parameter set for a mapping or workflow that is deployed as an application.
deleteParameterSetEntries	Deletes entries from a parameter set for a mapping or workflow that is deployed as an application. You can delete specific parameter set entries or you can delete all of the parameter set entries.
listApplicationObjects	Lists the objects that an application contains.
listComputeOptions	Lists Data Integration Service properties for a node with the compute role.
listParameterSetEntries	Lists the entries in a parameter set.
listParameterSets	List the parameter sets in an application.
updateComputeOptions	Updates Data Integration Service properties for a node with the compute role. Use the command to override Data Integration Service properties for a specific compute node.
updateParameterSetEntries	Updates entries in a parameter set for a mapping or workflow in an application. Enter parameter name-value pairs to update, separated by spaces.
stopBlazeService	Stops the components of the Blaze engine from running.

The following table describes changes to infacmd dis command options:

Command	Description
UpdateServiceOptions	The following options are added for memory allocation: - MappingServiceOptions.MaxMemPerRequest - ProfilingServiceOptions.MaxMemPerRequest - SQLServiceOptions.MaxMemPerRequest - WSServiceOptions.MaxMemPerRequest Use these options to specify the maximum amount of memory, in bytes, that the Data Integration Service can allocate for a mapping, profile, SQL service, or web service request. The following options are added for workflow operations: - Modules.WorkflowOrchestrationService Use the option to enable or disable the module that runs workflows. - WorkflowOrchestrationServiceOptions.DBName Use the option to specify the connection name of the database that stores run-time metadata for workflows. The ExecutionOptions.OutOfProcessExecution option can be set to the following values: - IN_PROCESS. Runs jobs in the Data Integration Service process. - OUT_OF_PROCESS. Runs jobs in separate DTM processes on the local node. - OUT_OF_PROCESS_REMOTE. Runs jobs in separate DTM processes on remote nodes. Previously, the option could be set to true (IN_PROCESS) or false (OUT_OF_PROCESS). The following options are moved from the UpdateServiceProcessOptions command to the UpdateServiceOptions command: - ExecutionOptions.MaxExecutionPoolSize - ExecutionOptions.MaxMemorySize - ExecutionOptions.MaxMappingParallelism - ExecutionOptions.DisHadoopPrincipal - ExecutionOptions.DisHadoopKeytab - ExecutionOptions.TemporaryDirectories - ExecutionOptions.DisHomeDirectory - ExecutionOptions.CacheDirectory - ExecutionOptions.SourceDirectory - ExecutionOptions.TargetDirectory - ExecutionOptions.RejectFilesDirectory - ExecutionOptions.HadoopInfaHomeDir - ExecutionOptions.HadoopDistributionDir - ExecutionOptions.DisHadoopDistributionDir The following email server options are moved to the isp UpdateSMTPOptions command for scorecard notifications: - EmailServerOptions.SMTPServerHost - EmailServerOptions.SMTPServerPort - EmailServerOptions.SMTPServerUser - EmailServerOptions.SMTPServerPassword - EmailServerOptions.SenderEmailId The following email server options are removed for scorecard notifications: - EmailServerOptions.SMTPSwitchAuthenticationOn - EmailServerOptions.SMTPSwitchTLSOn - EmailServerOptions.SMTPSwitchSSLOn The following email server options are moved to the es UpdateSMTPOptions command for workflow notifications: - EmailServerOptions.SMTPServerHost - EmailServerOptions.SMTPServerPort - EmailServerOptions.SMTPServerUser - EmailServerOptions.SMTPServerPassword

Command	Description
	- EmailServerOptions.SMTPSwitchAuthenticationOn - EmailServerOptions.SenderEmailId - EmailServerOptions.SMTPSwitchTLSOn - EmailServerOptions.SMTPSwitchSSLOn The following email server options are removed: - EmailServerOptions.SMTPServerConnectionTimeout - EmailServerOptions.SMTPServerCommunicationTimeout The following options are removed for workflow operations: - HumanTaskServiceOptions.HTConnectionName - Modules.HumanTaskService - Modules.WorkflowService - WorkflowServiceOptions.HTDataIntegrationServiceName
UpdateServiceProcessOptions	The ExecutionOptions.MaxSessionSize option is obsolete. The remaining execution options are moved to the UpdateServiceOptions command.

infacmd es Commands

The new infacmd es program manages the Email Service.

The following table describes the new infacmd es commands:

Command	Description
ListServiceOptions	Returns a list of properties that are configured for the Email Service.
UpdateServiceOptions	Updates Email Service properties.
UpdateSMTPOptions	Updates the email server properties for the Email Service.

infacmd hts Commands

All infacmd hts commands are obsolete.

The following table describes the obsolete infacmd hts commands and identifies the commands that you can use to perform the corresponding actions in version 10.0:

Command	Description
CreateDB	Creates the database tables that store run-time metadata for Human tasks. In version 10.0, all run-time metadata for workflows is stored in a common set of tables. Use infacmd wfs CreateTables to create the workflow metadata tables.
DropDB	Drops the database tables that store run-time metadata for Human tasks. In version 10.0, all run-time metadata for workflows is stored in a common set of tables. Use infacmd wfs DropTables to drop the workflow metadata tables.
Exit	Stops a Human task and passes the records that the task identifies to the next stage in the workflow. Use infacmd wfs BulkComplete to stop a Human task and to pass the records that the task identifies to the next stage in the workflow.

infacmd isp Commands

The following table describes new infacmd isp commands:

Command	Description
GetSystemLogDirectory	Prints the system log directory.
ListNodeRoles	Lists all roles on a node in the domain.
UpdateNodeRole	Updates the role on a node in the domain. You can enable or disable the service role or the compute role on a node.

The following table describes changes to infacmd isp command options:

Command	Description
AddDomainNode	The following options are added: - EnableServiceRole - EnableComputeRole Use these options to enable the service role or the compute role on a node when you add the node to the domain.
AddNodeResource	The following options are added: - ResourceCategory. Use this option to specify that the resource is for the PowerCenter Integration Service. - ResourceValue. This option is reserved for future use.
CreateConnection	The connection options for the Hadoop connection are added.
DisableNodeResource, EnableNodeResource, ListNodeResources, and RemoveNodeResource	The ResourceCategory option is added. Use this option to specify that the resource is for the PowerCenter Integration Service.
GetLog	The following service types are added for the ServiceType option: - ES. Email Service - SCH. Scheduler Service - RMS. Resource Manager Service
GetNodeName	The Outputfile option is added. Use this option with a file name and path to print the node name in a file.
ListNodes	The NodeRole option is added. Use this option to list nodes with a specified role.
ListServices	The following service types are added for the ServiceType option: - ES. Email Service - SCH. Scheduler Service - RMS. Resource Manager Service

Command	Description
PurgeMonitoring	The NumDaysToRetainDetailedStat option is added. Use this option to configure the number of days of detailed historical data that are retained in the Model repository when the Data Integration Service purges statistics.
UpdateMonitoringOptions	The DetailedStatisticsExpiryTime option is added. Use this option to configure when the Data Integration Service purges detailed statistics from the Model repository. The valid StatisticsExpiryTime values are changed. Minimum is 0. Maximum is 366. Default is 180.

infacmd mrs Commands

The following table describes new infacmd mrs commands:

Command	Description
CheckInObject	Checks in a single object that is checked out. The object is checked in to the Model repository.
CreateFolder	Creates a folder in a project in a Model repository.
CreateProject	Creates a project in the default Model repository.
DeleteFolder	Deletes a folder from a project in a Model repository.
DeleteProject	Deletes a project in a Model repository.
ListCheckedOutObjects	Displays a list of objects that are checked out by a user.
ListFolders	Lists the names of all of the folders in the project folder path that you specify.
ListLockedObjects	Displays a list of objects that are locked by a user.
PopulateVCS	Synchronizes the Model repository with a version control system.
ReassignCheckedOutObject	Reassigns the ownership of a checked-out object to another user.
RenameFolder	Renames a folder in a project.
UndoCheckout	Reverts the checkout of a Model repository object.
UnlockObject	Unlocks a Model repository object that is locked by a user.

The following table describes changes to infacmd mrs command options:

Command	Description
UpdateServiceOptions	The following options are added: - VCS.Host - VCS.Port - VCS.User - VCS.Password - VCS.Type - VCS.MRSPath Use these options to configure versioning for the Model repository.

infacmd ms Commands

The following table describes new infacmd ms commands:

Command	Description
GetRequestLog	Writes the mapping log to the specified file.
UpgradeMappingParameterFile	Converts a parameter file you created in a previous Informatica version to a parameter file format that is valid for Informatica version 10.0.

The following table describes updated infacmd ms command options:

Command	Description
RunMapping	The following options are added: - OptimizationLevel. Use to control the optimization methods that the Data Integration Service applies to a mapping. - PushdownType. Use to control the pushdown type that the Data Integration Service applies to a mapping. - CustomProperties. Use to define custom properties for a mapping at the request of Informatica Global Customer Support.

infacmd rms Commands

The new infacmd rms program manages the Resource Manager Service.

The following table describes the new infacmd rms commands:

Command	Description
ListComputeNodeAttributes	Lists the compute node attributes that have been overridden for the specified node or for all nodes.
ListServiceOptions	Lists the properties for the Resource Manager Service.
SetComputeNodeAttributes	Overrides the compute node attributes for the specified node.
UpdateServiceOptions	Updates Resource Manager Service properties.

infacmd sch Commands

The new infacmd sch program manages the Scheduler Service.

The following table describes the new infacmd sch commands:

Command	Description
CreateSchedule	Creates a schedule for one or more deployed mapping or workflow objects.
DeleteSchedule	Deletes one or more schedules.
ListSchedule	Returns a list of jobs that are running on a schedule.
ListServiceOptions	Returns a list of the properties that are configured for the Scheduler Service.
ListServiceProcessOptions	Returns a list of the properties that are configured for a Scheduler Service process.
PauseAll	Pauses all schedules.
PauseSchedule	Pauses a schedule.
ResumeAll	Resumes all schedules.
ResumeSchedule	Resumes a schedule.
UpdateSchedule	Updates a schedule configuration.
UpdateServiceOptions	Updates the properties for the Scheduler Service.
UpdateServiceProcessOptions	Updates the properties for a Scheduler Service process.
Upgrade	Upgrades the Scheduler Service configuration.

infacmd wfs Commands

The following table describes new infacmd wfs commands:

Command	Description
BulkComplete	Stops operations for a Human task and passes the records that the task identifies to the next stage in the workflow.
CreateTables	Creates the database tables that store run-time metadata for workflows.
DropTables	Drops the database tables that store run-time metadata for workflows.
ListMappingPersistedOutputs	Lists the state of each persisted Mapping output from a Mapping task instance that the command specifies.
SetMappingPersistedOutputs	Updates the persisted mapping outputs for a Mapping task instance that you specify or sets the persisted mapping outputs to null values.
UpgradeParameterFile	Upgrades a parameter file to verify that the parameter values in the file are valid in the current release. When you run the command, you identify a parameter file to upgrade and you specify a target file to contain the valid parameter values.

The following table describes updated infacmd wfs command options:

Command	Description
abortWorkflow	The RuntimeInstanceID option is renamed to InstanceId. The option identifies the workflow instance to abort. The Wait option is removed.
cancelWorkflow	The RuntimeInstanceID option is renamed to InstanceId. The option identifies the workflow instance to cancel. The Wait option is removed.
recoverWorkflow	The RuntimeInstanceID option is renamed to InstanceId. The option identifies the workflow instance to recover. The Wait option is removed.
startWorkflow	The ParameterSet option is added. The option specifies the name of parameter set that the workflow use at run time.

infasetup Commands

The following table describes the new SystemLogDirectory option:

Command	Description
DefineDomain DefineGatewayNode DefineWorkerNode UpdateGatewayNode UpdateWorkerNode	The SystemLogDirectory option is added. Use this option to designate a custom location for logs.

For more information, see the *Informatica 10.0 Command Reference*.

pmrep Command Reference

The following table describes the pmrep massupdate command update:

Session Property Type	Description
session_property	This massupdate command updates the value of any supported session or session config property whether or not it is overridden.

Connectivity

This section describes new connectivity features in version 10.0.

PowerCenter Connectivity

This section describes new connectivity features in version 10.0.

Native Connectivity to Microsoft SQL Server

Effective in version 10.0, you can use the DataDirect ODBC driver for Microsoft SQL Server to configure native connectivity to Microsoft SQL Server databases from UNIX machines.

You can select the connection provider that you want to use to connect to the Microsoft SQL Server database. You can select either the ODBC or OLE DB connection type. You can also enable the Integration Service to use the Data Source Name (DSN) for the connection. Additionally, you can use NTLM authentication to authenticate the user who connects to Microsoft SQL Server.

For more information about configuring native connectivity, see the "Connecting to Databases from UNIX" appendix in the *Informatica 10.0 Installation and Configuration Guide*.

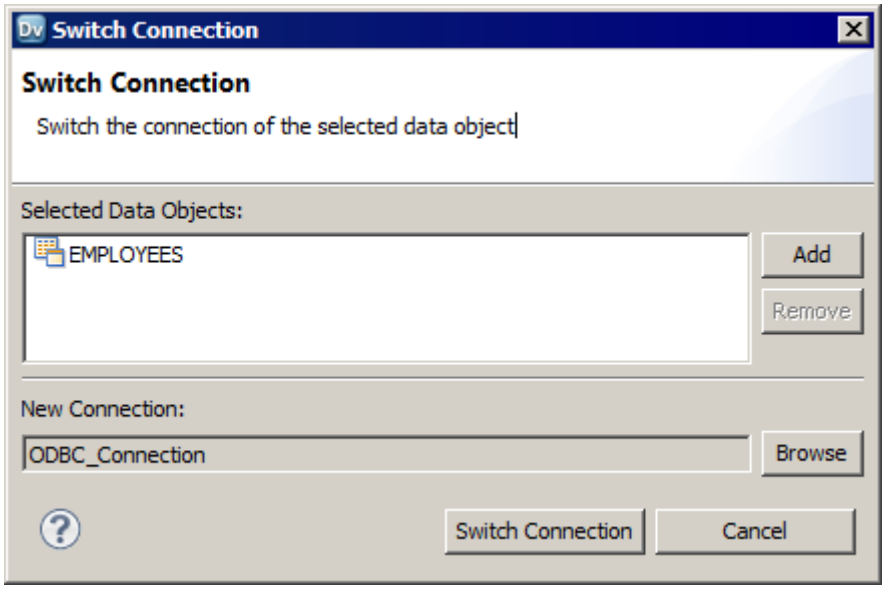
Connection Switching

Effective in version 10.0, in the Developer tool, you can switch the connection of a relational data object or customized data object to use a different relational database connection. After you switch the connection, the Developer tool updates the connection details for the data object in all Read, Write, and Lookup transformations that are based on the data object. You might want to switch the connection when you migrate from one database to another and want to simultaneously update the existing mappings to use the new connection.

You can switch a connection to one of the following connection types:

- IBM DB2
- Microsoft SQL Server
- ODBC
- Oracle

The following image shows the dialog box that you use to switch a connection:



For more information, see the "Connections" chapter in the *Informatica 10.0 Developer Tool Guide*.

Data Types

This section describes new data type features in version 10.0.

Informatica Data Types

This section describes new data types in the Developer tool.

Decimal Data Type

Effective in version 10.0, some transformations support the Decimal data type with a precision of up to 38 digits. The decimal data type has a precision of 1 to 38 digits and a scale of 0 to 38. All other transformations support the Decimal data type with a precision of up to 28 digits.

For transformations that support the Decimal data type of precision up to 38 digits, when the target contains a precision that is greater than 38 digits and has high precision enabled, the Data Integration Service stores the result as a double.

For more information, see the "Data Type Reference" appendix in the *Informatica 10.0 Developer Tool Guide*.

Mappings with the Decimal 38 Data Type

Effective in version 10.0, if you run a mapping that contains fields with precision greater than 28 but less than or equal to 38 in high precision mode, the Data Integration Service processes a precision of up to 38 digits. There is no behavior change if the precision is greater than 38 digits post upgrade.

The following table describes the post-upgrade behavior based on the applicable precision:

Precision	Previous	10.0
Greater than 28 but less than or equal to 38	Double	Decimal
Over 38	Double	Double

For example, you have the following source data: `12345678901234567890123456789012345678`

Previously, the target contains the following data: `12345678901234500000000000000000000000`

In 10.0, the target contains the following data: `12345678901234567890123456789012345678`

For more information, see the "Data Type Reference" appendix in the *Informatica 10.0 Developer Tool Guide*.

Timestamp with Time Zone

Effective in version 10.0, most transformations support the Timestamp with Time Zone data type. Timestamp with Time Zone is a variant of the Timestamp data type that includes a time zone offset or time zone region name.

When you import the Timestamp with Time Zone data type into the Developer tool, the associated transformation data type is timestampWithTZ. timestampWithTZ has a precision of 36 and a scale of 9. Timestamp with Time Zone displacement value range is from -12:00 < UTC < +14:00.

For more information, see the "Data Type Reference" appendix in the *Informatica 10.0 Developer Tool Guide*.

Timestamp with Local Time Zone

Effective in version 10.0, Timestamp with Local Time Zone data type is another variant of the Timestamp data where the time zone data is normalized to the database time zone.

When you import the Timestamp with Local Time Zone data type into the Developer tool, the associated transformation data type is date/time. The Timestamp with Local Time Zone data type is implicitly supported by most transformations as the functionality is equivalent to Timestamp.

Timestamp (6) with Local Time Zone has a precision of 26 and a scale of 6. It is mapped to the date/time (29,9) transformation data type.

For more information, see the "Data Type Reference" appendix in the *Informatica 10.0 Developer Tool Guide*.

Documentation

This section describes new or updated guides with the Informatica documentation in version 10.0.

The Informatica documentation contains the following new guides:

Informatica Accessibility Guide

Effective in version 10.0, the *Informatica Accessibility Guide* contains accessibility information and keyboard shortcuts for Informatica Administrator, Informatica Analyst, and Informatica Developer. The *Informatica Accessibility Guide* is included in the online help for the Administrator tool, Analyst tool, and Developer tool.

For more information, see the *Informatica 10.0 Accessibility Guide*.

Informatica Big Data Management Security Guide

Effective in version 10.0, the *Informatica Big Data Management Security Guide* contains security information for Big Data Management and Hadoop.

Previously, security for big data and Hadoop was documented in the *Informatica Big Data Edition User Guide*.

The following guides are removed from the PowerCenter documentation:

PowerCenter Data Profiling Guide

Effective in version 10.0, the *PowerCenter Data Profiling Guide* is removed from the PowerCenter documentation.

To learn more about profiling and discovery in Informatica, see the *Informatica 10.0 Data Discovery Guide*.

Informatica Big Data Edition User Guide

Effective in version 10.0, the *Informatica Big Data Edition User Guide* is removed from the PowerCenter documentation.

To learn more about big data in Informatica, see the *Informatica 10.0 Big Data Management User Guide*.

Informatica Big Data Edition Installation and Configuration Guide

Effective in version 10.0, the *Informatica Big Data Edition Installation and Configuration Guide* is removed from the PowerCenter documentation.

To learn more about big data installation and configuration in Informatica, see the *Informatica 10.0 Big Data Management Installation and Configuration Guide*.

The following guide is renamed:

Informatica Data Service Performance Tuning Guide

Effective in version 10.0, the *Informatica Data Services Performance Tuning Guide* is renamed to the *Informatica Performance Tuning Guide*.

To learn more about performance tuning in Informatica, see the *Informatica 10.0 Performance Tuning Guide*.

Domain

This section describes new domain features in version 10.0.

Nodes

Effective in version 10.0, each node has a role that defines the purpose of the node.

A node can have the following roles:

Service role

A node with the service role can run application services. When you enable the service role on a node, the Service Manager supports application services configured to run on that node.

Compute role

A node with the compute role can perform computations requested by remote application services. When you enable the compute role on a node, the Service Manager manages the containers on the node. A container is an allocation of memory and CPU resources. An application service uses the container to remotely perform computations on the node. For example, a Data Integration Service grid includes Node 1 with the service role and Node 2 with the compute role. The Data Integration Service process that runs on Node 1 runs a mapping within a container on Node 2.

Service and compute roles

A node with both roles can run application services and locally perform computations for those services.

By default, each gateway and worker node has both the service and compute roles enabled. If a node is assigned to a Data Integration Service grid that is configured to run jobs on remote nodes with the compute role, you might want to update the node role. Enable only the service role to dedicate the node to running the Data Integration Service process. Enable only the compute role to dedicate the node to running Data Integration Service mappings.

For more information about node roles, see the "Nodes" chapter in the *Informatica 10.0 Administrator Guide*.

Informatica Administrator

This section describes new Administrator tool features in version 10.0.

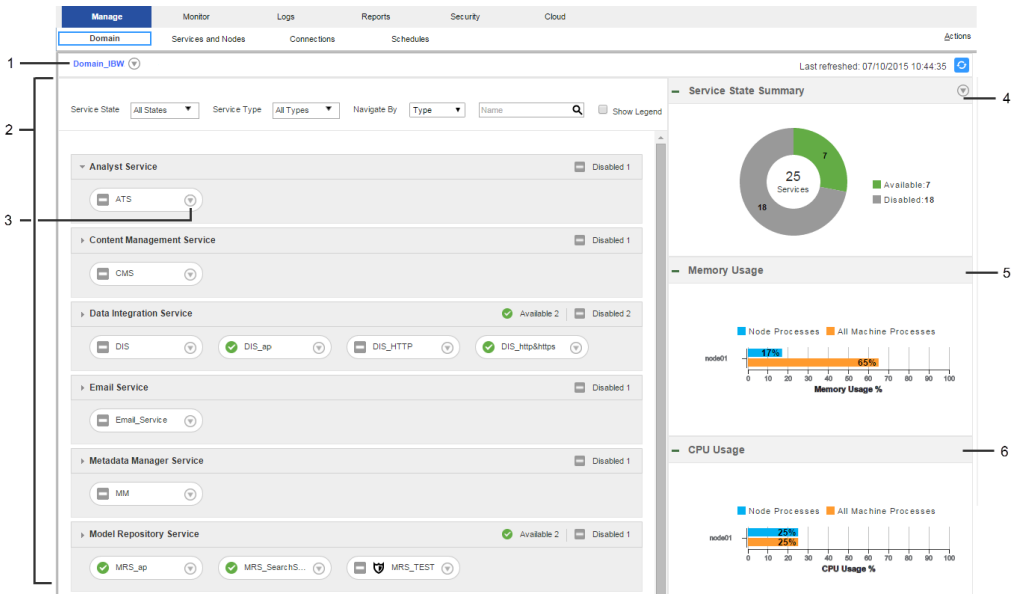
Manage Tab

Effective in version 10.0, the **Manage** tab has the following new features:

Domain view

The **Domain** view is an overview of the status of the domain. You can view information about the domain, view historical information about the domain, and perform common actions.

The following image shows the **Domain** view on the **Manage** tab:



1. Domain Actions menu
2. Contents panel
3. Object Actions menu
4. Service State Summary
5. Memory usage indicator
6. CPU usage indicator

The **Domain** view contains the following information:

- Domain. You can view properties, logs, and past events for the domain. You can also shut down the domain.
- Contents panel. Displays services, nodes, and grids in the domain. You can view properties, events, logs, and dependencies for objects. You can also enable, disable, and recycle services and shut down nodes.
- Filter. You can filter domain contents by state or service type. You can also search domain objects, or navigate domain objects by type, grid, or folder.
- Service State Summary. Doughnut chart that displays the number and states of services in the domain.
- Resource usage panels. Bar charts that compare memory and CPU usage for objects in the domain to memory and CPU usage for all processes on the machine.
- Command History. Displays service lifecycle commands that users issue from the Administrator tool. Lifecycle commands include enable, disable, and recycle.
- History view. Displays historical status, resource consumption, and events in the domain for a selected time range.

- Events panel. Displays events for services and nodes in the domain.

Navigator

You can search for and filter nodes, application services, and grids in the Domain Navigator on the **Services and Nodes** view. You can search for an object by name. Or, you can filter the list of objects that appear in the Navigator by object type.

Schedules view

You can view and manage schedules on the **Schedules** view.

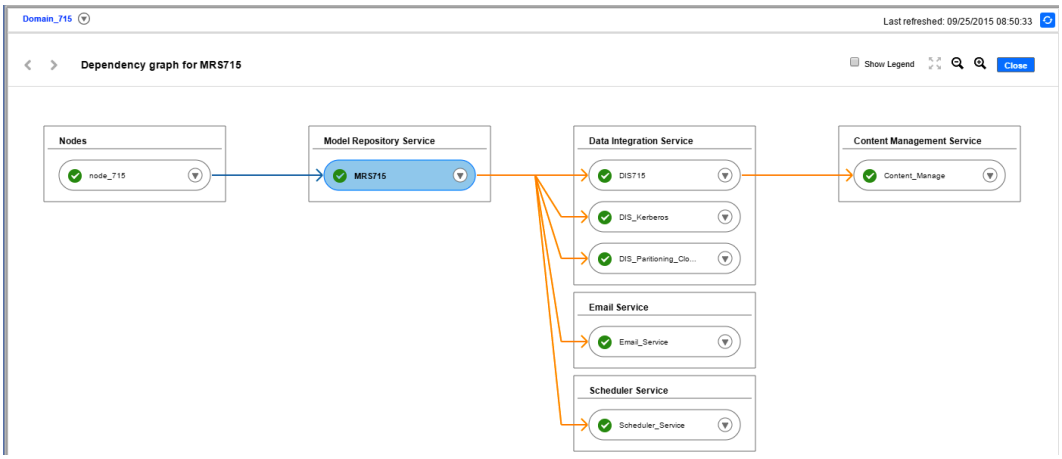
For more information, see the *Informatica 10.0 Administrator Guide*.

Dependency Graph

Effective in version 10.0, the **Dependency** graph is accessed from the **Domain** view on the **Manage** tab. Previously, the **Dependency** graph was accessed from the **Services and Nodes** view on the **Domain** tab.

The **Dependency** graph has a new user interface and additional functionality.

The following image shows the new **Dependency** graph:



You can perform the following tasks in the **Dependency** graph:

- View properties for a service, node, or grid.
- View logs for a service.
- Shut down a node.
- Enable or disable a service.
- Recycle a service.
- Disable downstream dependencies for a service. You can disable one or more services that depend on a service. Downstream processes are disabled in abort mode.
- Recycle downstream dependencies for a service. You can recycle one or more services that depend on a service. Downstream processes are recycled in abort mode.

For more information, see the *Informatica 10.0 Administrator Guide*.

Monitoring

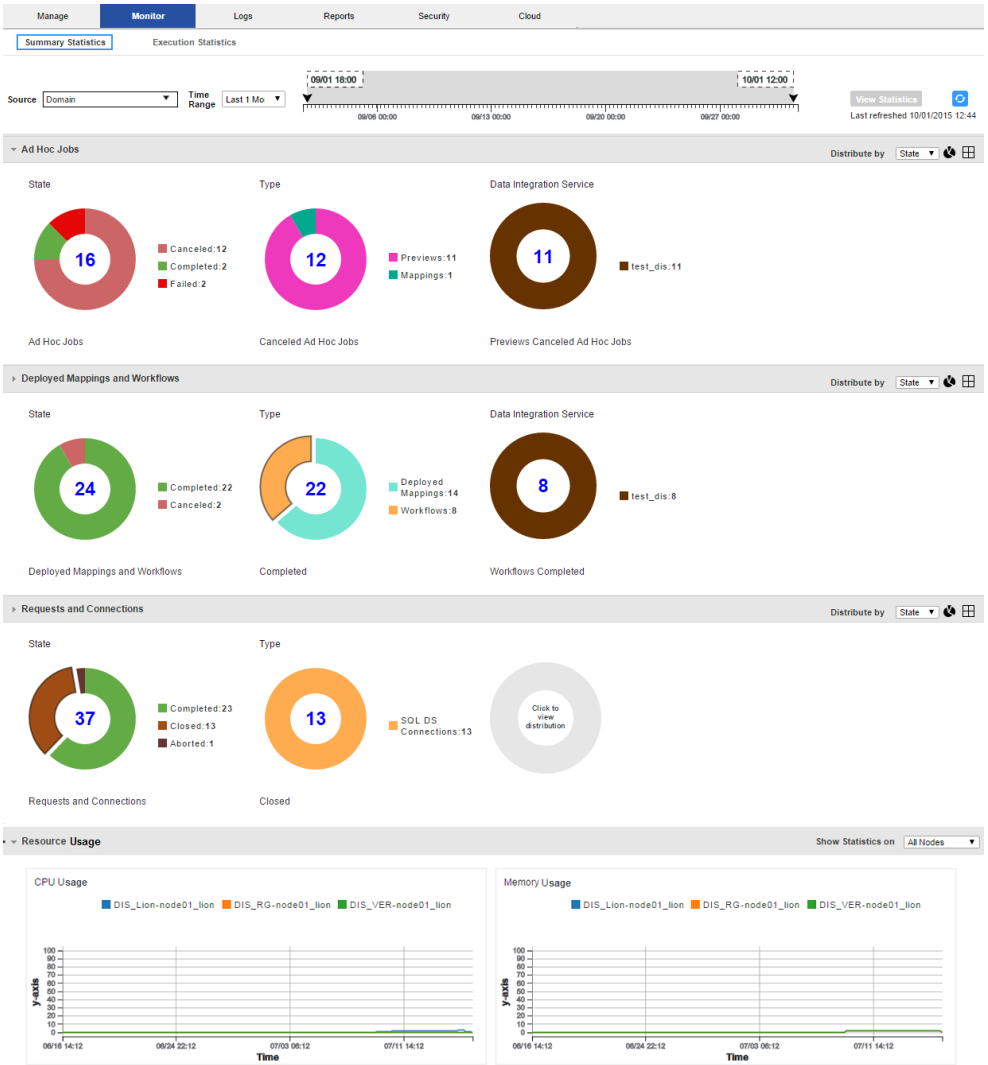
Effective in version 10.0, the **Monitoring** tab in the Administrator tool is renamed the **Monitor** tab.

The **Monitor** tab has the following new features:

Views on the Monitor tab

The **Monitor** tab contains the following views:

- **Summary Statistics** view. Displays resource usage, object distribution, and object states for a selected time range.
  The following image shows the **Summary Statistics** view:



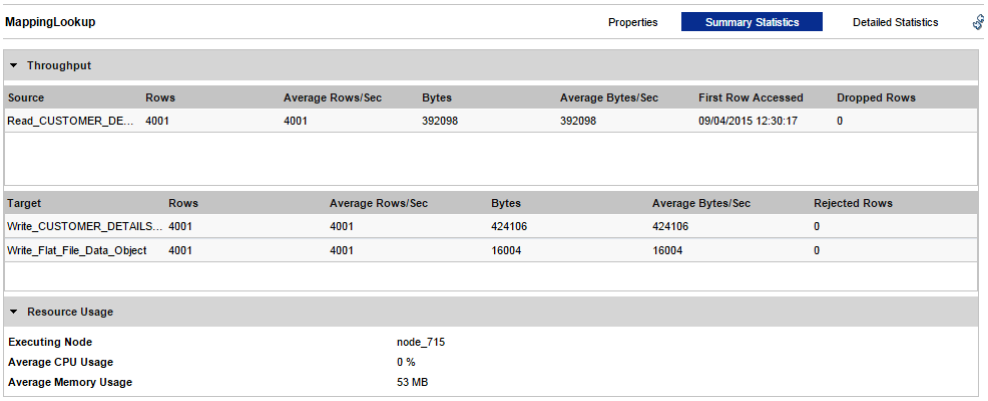
- **Execution Statistics** view. Contains the Navigator and views that were on the **Monitoring** tab in previous versions.

Views on the Execution Statistics view

You can view statistics about ad hoc mapping jobs, deployed mapping jobs, and mapping objects in a workflow.

When you select one of these objects in the contents panel, the details panel displays the following new views:

- **Summary Statistics** view. Displays throughput and resource usage information for the source and target.
  The following image shows the **Summary Statistics** view for a mapping job:



- **Detailed Statistics** view. Appears for jobs that run in separate local processes for longer than one minute. Displays graphs of throughput and resource usage information for the source and target.
  The following image shows the **Detailed Statistics** view for a mapping job in a workflow:

Configuration

Monitoring Configuration, formerly Global Settings, has the new optionPreserve Detailed Historical Data. Use this option to configure when expired per-minute statistics can be purged from the Model repository. Default is 14. Minimum is 1. Maximum is 14.

For more information, see the "Monitoring" chapter in the *Informatica 10.0 Administrator Guide*.

Informatica Analyst

This section describes new Analyst tool features in version 10.0.

Asset Versioning

Effective in version 10.0, when the Model repository is integrated with a version control system, the version control system protects assets from being overwritten by other members of the development team. You can check assets out and in, and undo the checkout of assets.

For more information, see the "Model Repository" chapter in the *Informatica 10.0 Analyst Tool Guide*.

Profiles

This section describes new Analyst tool features for profiles and profile results.

Column Profile

Effective in version 10.0, you can right-click the data object in the Library workspace to create a column profile. The data object and folder options are updated automatically in the profile wizard.

For more information about column profile, see the "Column Profiles in Informatica Analyst" chapter in the *Informatica 10.0 Data Discovery Guide*.

Column Profile Results

Effective in version 10.0, column profile results have the following new features and enhancements:

- View profile results in summary view and detailed view. The summary view provides a high-level overview of the profile results in a grid format. The detailed view displays column-specific information in detail.
- View outliers in the summary view and detailed view of profile results. An outlier is a pattern, value, or frequency for a column that does not fall within an expected range of values.
- View profile results for the latest profile run, historical profile run, and consolidated profile run. You can view the profile results for any historical profile run. When you run the consolidated profile run, you can view the latest results for each column in the profile.
- Compare profile results for two profile runs, and view the profile results in summary view and detailed view.
- View profile results for a profile with JSON or XML data sources.
- Add business terms, tags, and comments to a profile and columns in the profile.

For more information about column profile results, see the "Column Profile Results in Informatica Analyst" chapter in the *Informatica 10.0 Data Discovery Guide*.

Decimal Data Type

Effective in version 10.0, you can create profiles with columns that have the Decimal data type with a precision of up to 38 digits.

For more information, see the *Informatica 10.0 Data Discovery Guide*.

JDBC Connectivity

Effective in version 10.0, you can specify a JDBC connection as a profiling warehouse connection for IBM DB2 UDB, Microsoft SQL Server, and Oracle database types. You can create column profiles, rule profiles, domain discovery, and scorecards with a JDBC connection as a profiling warehouse connection.

For more information, see the *Informatica 10.0 Installation and Configuration Guide*.

Object Versioning

Effective in version 10.0, when the Model repository is integrated with a version control system, the version control system protects objects from being overwritten by other members of the development team. You can check profiles out and in, undo the checkout of profiles, and view and restore historical versions of profiles.

For more information about object versioning, see the "Column Profiles in Informatica Analyst" chapter in the *Informatica 10.0 Data Discovery Guide*.

Rules and Filters

Effective in version 10.0, you can add or edit rules and filters when you create a column profile.

For more information, see the *Informatica 10.0 Data Discovery Guide*.

Scorecard Filter

Effective in version 10.0, you can create and apply a filter on the metrics of a scorecard.

For more information about scorecard filter, see the "Scorecards in Informatica Analyst" chapter in the *Informatica 10.0 Data Discovery Guide*.

Informatica Developer

This section describes new Informatica Developer features in version 10.0.

Generate and Execute DDL

Effective in Informatica 10.0, you can create tables in a database by generating and executing a DDL script. By using the Developer tool, you can generate a DDL script for one or more relational data objects in the Model repository, and run the DDL script to create or replace tables in the target database. If a target already exists in that database, you can drop the target and re-create it.

For more information, see the "Physical Data Objects" chapter in the *Informatica Developer Tool Guide*.

Generate Relational and Flat File Metadata at Run Time

Effective in version 10.0, you can create mappings with dynamic sources and targets that allow metadata changes to the data sources. When you configure a source or target to be dynamic, the Data Integration Service can interpret metadata changes to relational and flat file data sources at run time.

The Data Integration Service can perform the following functions:

- Read data from sources where the order of the columns in the source is different from that of the columns in the physical data object.
- Read data from additional columns in sources that are not present in the physical data object.
- Ignore data for columns that are present in the physical data object but not in the source.

For relational data sources, the Data Integration Service directly fetches the metadata changes from the database schema.

For flat file data sources, you must configure the flat file data object for the Data Integration Service to fetch the metadata changes from the data file header, a control file, or automatically from the columns in the data source. Configure the **Generate Run-time Column Names** property on the **Advanced** tab of the flat file data object.

When you develop a mapping, configure the Read and Write transformations to get data object columns directly from the data sources at run time. You can also configure the Lookup transformations to get data object columns directly from the lookup sources. Select **At run time, get data object columns from data source** on the **Data Object** tab of the transformation.

For more information, see the "Dynamic Mappings" chapter in the *Informatica 10.0 Developer Mapping Guide*.

Import from PowerCenter

Effective in version 10.0, you can import the following PowerCenter transformations into the Developer tool:

- Normalizer transformation
- Sequence Generator transformation
- Update Strategy transformation

For more information, see the *Informatica 10.0 Developer Mapping Guide*.

Monitoring Tool

Effective in version 10.0, the Monitoring tool has the following new features:

Execution Statistics view

Contains the Navigator and views that were in the Monitoring tool in version 9.6.1.

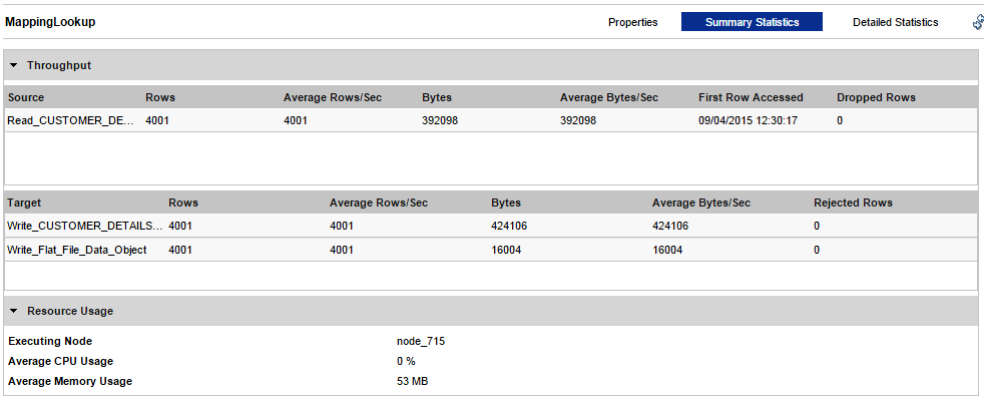
Summary Statistics view

Displays resource usage, object distribution, and object states for a selected time range.

Views on the Execution Statistics view

You can view additional information about ad hoc mapping jobs, deployed mapping jobs, and mapping objects in workflows in the **Execution Statistics** view. When you select one of these objects in the contents panel, the details panel displays the following new views:

- **Summary Statistics** view. Displays throughput and resource usage information for the source and target.
  The following image shows the **Summary Statistics** view for a mapping job:



- **Detailed Statistics** view. Displays graphs of throughput and resource usage information for the source and target. Appears for jobs that run in separate local processes for longer than one minute. The following image shows the **Detailed Statistics** view for a mapping job in a workflow:

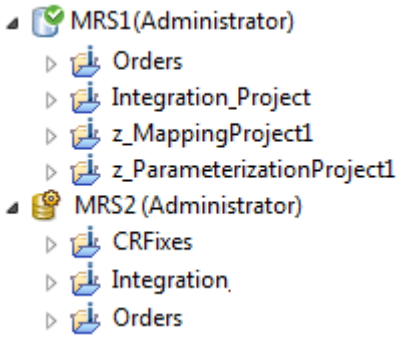
For more information, see the "Viewing Data" chapter in the *Informatica 10.0 Developer Tool Guide*.

Object Versioning

Effective in version 10.0, when the Model repository is integrated with a version control system, the version control system protects objects from being overwritten by other members of the development team. You can check objects out and in, undo the checkout of objects, and view and restore historical versions of objects.

The Developer tool depicts a versioned Model repository with a white icon decorated with a green check mark.

The following image shows two connected repositories: MRS1, which has been integrated with a version control system, and MRS2, which has not:



For more information, see the "Model Repository" chapter in the *Informatica 10.0 Developer Tool Guide*.

Physical Data Objects in an Application

Effective in version 10.0, you can add a physical data object to an application.

For more information, see the "Application Deployment" chapter in the *Informatica 10.0 Developer Tool Guide*.

Profiles

This section describes new Developer tool features for profiles and profile results.

Columns Profiles with JSON and XML Data Sources

Effective in version 10.0, you can use the following methods to create a column profile with JSON and XML data sources:

- Flat File. In this method, you need to create a text file, and add the JSON or XML file source location into the file. Create a flat file data object with the text file. Create a column profile on the flat file data object.
- Complex file reader. In this method, you create a complex file data object on the JSON or XML source file, and create a column profile with the complex file data object.
- JSON or XML file in HDFS. In this method, you need to create a connection with HDFS, and create a complex file data object on the JSON or XML file in HDFS. You can create a column profile with the complex file data object.
- JSON or XML files in a folder. In this method, you need to consolidate all the JSON or XML files into a folder. Create a connection with HDFS, and create a complex file data object with the folder. You can create a column profile on the complex file data object.

For more information about column profiles with JSON and XML data sources, see the "Data Object Profiles" chapter in the *Informatica 10.0 Data Discovery Guide*.

Decimal Data Type

Effective in version 10.0, you can create profiles with columns that have the Decimal data type with a precision of up to 38 digits.

For more information, see the *Informatica 10.0 Data Discovery Guide*.

Foreign Key Curation

Effective in version 10.0, when you reject an inferred column relationship, all the associated relationships are also rejected.

For more information about curation, see the "Enterprise Discovery Results" chapter in the *Informatica 10.0 Data Discovery Guide*.

JDBC Connectivity

Effective in version 10.0, you can specify a JDBC connection as a profiling warehouse connection for IBM DB2 UDB, Microsoft SQL Server, and Oracle database types. You can create column profiles, rule profiles, domain discovery, and scorecards with a JDBC connection.

For more information, see the *Informatica 10.0 Installation and Configuration Guide*.

Object Versioning

Effective in version 10.0, when the Model repository is integrated with a version control system, the version control system protects objects from being overwritten by other members of the development team. You can check profiles out and in, undo the checkout of profiles, and view and restore historical versions of profiles.

For more information about object versioning, see the "Informatica Developer Profiles" chapter in the *Informatica 10.0 Data Discovery Guide*.

Informatica Development Platform

This section describes new features and enhancements to the Informatica Development Platform.

Informatica Connector Toolkit

Effective in version 10.0, you can use the following features in the Informatica Connector Toolkit:

Java data types

You can map the native data types to Java data types. When you map the native data type, select the best Java data type to read from the data source and select the best native data type to write to the target database or application.

Multiple native metadata objects

You can define multiple native metadata definitions for an adapter. For example, you can create different native metadata objects for tables, views, and synonyms in a relational data source.

Sort and select

You can define Sort statement support for an adapter to retrieve data from the data source in a specific order. You can define whether the adapter supports Select statement when the adapter reads from the data source. You can use the Informatica Connector Toolkit to define the following Select statements for an adapter:

- Select All
- Select Any
- Select Distinct
- Select First Row
- Select Last Row

Partition

You can specify the partition type and implement the partition logic to use when the adapter reads or writes data.

You can specify one of the following partition types or all the partition types for an adapter:

- Dynamic. The Data Integration Service determines the number of partitions at run time based on the partition information from the data source.
- Static. The Data Integration Service determines partitioning logic based on the partition information that the user specifies, such as the number of partitions or key range partitioning.

Parameterization

You can specify whether the read and write capability attributes of a native metadata object support full parameterization or partial parameterization. The read and write capability attributes of the native metadata object can be assigned values or parameters at run time.

Pre and Post data operation

You can implement pre and post tasks that can be run before or after a read or write operation. For example, you can implement the functionality to truncate a target table before a write operation.

Messages

You can create messages to handle exceptions that occur during the design time or run time of the adapter. You can use the Message wizard to add, edit, or delete messages. You can localize the message files if required.

C run time

You can implement the run-time behavior of the adapter in C. You can write code to define how the adapter reads from and writes to the data source in C.

Reject files

You can implement support for reject files to handle data rejected by the target.

For more information, see the *Informatica Development Platform 10.0 Informatica Connector Toolkit Developer Guide*.

Mappings

This section describes new mapping features in version 10.0.

Informatica Mappings

This section describes new mapping features in version 10.0.

Dynamic Mappings

Effective in version 10.0, you can configure dynamic mappings to change sources, targets, and transformation logic at run time based on parameters and rules that you define. You can determine which ports a transformation receives, which ports to use in the transformation logic, and which links to establish between transformation groups. Dynamic mappings enable you to manage frequent metadata changes to the data sources or to reuse the mapping logic for different data sources with different schemas.

Dynamic mappings include the following features that you can configure:

- Dynamic sources allow changes to the metadata in flat file and relational sources at run time. When the metadata in a flat file or relational source changes, Read and Lookup transformations can get data object columns directly from the dynamic sources at run time.
- Transformations can include dynamic ports, which receive one or more columns that can change based on the rules that you define. You can define rules to include or exclude columns in a dynamic port.
  The following transformations can include dynamic ports:
  - Aggregator
  - Expression
  - Filter
  - Joiner
  - Lookup
  - Rank
  - Router
  - Sequence Generator
  - Sorter
  - Update Strategy
- You can define a port selector in the Joiner transformation, in the Lookup transformation, and in the Expression transformation. A port selector is an ordered list of ports that you can reference in the

transformation logic. Configure a port selector to filter the ports that flow into the transformation and to reference the ports in a join condition, a lookup condition, or a dynamic expression.

- You can define a dynamic expression in an Expression transformation. A dynamic expression returns results to a dynamic output port. You can reference a port selector or a dynamic port in a dynamic expression. When you reference a dynamic port or a port selector, the dynamic expression runs one time for each port in the dynamic port or the port selector. The Expression transformation generates a separate output port for each expression instance.
- Dynamic targets allow you to define the columns for flat file and relational targets at run time. Write transformations can generate columns for the targets at run time based on an associated data object or the mapping flow. Write transformations that represent relational targets can also create or replace tables at run time.
- Transformations can have links between groups that determine which ports to connect at run time based on a policy or a parameter.
- Sources and targets, rules for ports, and transformation properties can change at run time based on parameters.

For more information about dynamic mappings, see the "Dynamic Mappings" chapter in the *Informatica 10.0 Developer Mapping Guide*.

Mapping Outputs

Effective in version 10.0, you can create mapping outputs that return aggregated values from the mapping run. Mapping outputs are the result of aggregating a field value or an expression from each row that a mapping processes.

For example, you can configure a mapping output to summarize the total amount of an order field from the source rows that the transformation receives. You can persist a mapping output value in the repository. You can assign a persisted mapping output value to the Mapping task input parameter. You can also assign mapping outputs to workflow variables.

Create a mapping output in the mapping **Outputs** view. Define the expression to aggregate in an Expression transformation in the mapping.

For more information, see the *Informatica 10.0 Developer Mapping Guide*.

Mapping Task Input

Effective in version 10.0, you can assign persisted mapping outputs to input parameters of the same Mapping task. Persisted mapping outputs are mapping outputs that the Data Integration Service saved in the repository from a previous workflow run. For example, you might choose to persist the latest order date from a previous workflow run. In the Mapping task **Input** view, you can assign the persisted value to an input parameter. You might include the input parameter in a filter expression to skip rows with order dates that are less than the last date.

For more information, see the *Mapping Tasks* chapter in the *Informatica 10.0 Developer Workflow Guide*.

Mapping Task Output

Effective in version 10.0, you can assign mapping outputs to workflow variables. You can assign current user-defined mapping outputs and persisted user-defined mapping outputs to workflow variables. The current value is a value that the Mapping task generated in the workflow that is running. The persisted mapping output is a value that is in the repository from a previous run. You can also assign system-defined mapping outputs to workflow variables. Assign mapping outputs to workflow variables in the Mapping task **Output** view.

For more information, see the *Mapping Tasks* chapter in the *Informatica 10.0 Developer Workflow Guide*.

Optimization Methods

Effective in version 10.0, Informatica has the following new features for optimization methods:

Global predicate optimization method

The Data Integration Service can apply the global predicate optimization method. When the Data Integration Service applies the global predicate optimization method, it splits, moves, removes, or simplifies the filters in a mapping. The Data Integration Service filters data as close to the source as possible in the pipeline. It also infers the predicate expressions that a mapping generates.

For more information, see the "Mapping Optimization" chapter in the *Informatica 10.0 Performance Tuning Guide*.

Pushdown optimization method

You must select a pushdown type to push transformation logic to the source database. You can choose to push down none of the transformation logic, partial transformation logic, or full transformation logic to the source database. You can also view the mapping optimization plan for the pushdown type.

If the mapping has an Update Strategy transformation, you must determine pushdown compatibility for the mapping before you configure pushdown optimization.

For more information, see the "Pushdown Optimization" chapter in the *Informatica 10.0 Developer Mapping Guide*.

Dataship-join optimization method

If a mapping requires data in two different sized tables in different databases to be joined, the Data Integration Service can apply the dataship-join optimization method.

For more information, see the "Mapping Optimization" chapter in the *Informatica 10.0 Performance Tuning Guide*.

Mapping Optimization Plan

You can view how optimization methods affect mapping performance in a mapping optimization plan.

For more information, see the "Mapping Optimization" chapter in the *Informatica 10.0 Performance Tuning Guide*.

Parameters

Effective in version 10.0, Informatica has the following new features for parameters:

Parameter usage

You can use parameters to represent additional properties such as connections, SQL statements, sort and group-by port lists, expression variables, and run time environment.

Parameter types

You can use the following parameter types for dynamic mappings: expression, input link set, port, port list, resource, and sort list.

Binding parameters between mappings, mapplets, and transformations

You can bind mapping parameters to mapplet parameters or to transformation parameters in the **Instance Value** column of a **Parameters** tab. You can also bind mapplet parameters to transformation parameters.

When you bind a parameter to another parameter, the parameter overrides the other parameter at run time. You can create a mapping or a mapplet parameter from an existing parameter and bind the parameters in one step. Click the **Expose as Mapping Parameter** option or the **Expose as Mapplet Parameter** option for the parameter you want to override.

You can bind parameters from a mapping to parameters in a Read or Write logical data object mapping.

Parameter sets

You can define a parameter set for a workflow or mapping. A parameter set is an object in the Model repository that contains a set of parameters and parameter values to use at run time. You use a parameter set with a mapping, Mapping task, or workflow. You can add one or more parameter sets to an application when you deploy the application. You can add a parameter set to multiple applications and deploy them.

Run-time environment parameter

You can set the run-time environment with a parameter. Configure a string parameter at the mapping level. Set the default value to Native or Hadoop. When you select the run-time environment for the mapping, click **Assign Parameter** and select the parameter that you configured.

For more information about parameters, see the *Mapping Parameters* chapter in the *Informatica 10.0 Developer Mapping Guide*.

Partitioned Mappings

Effective in version 10.0, Informatica has the following new features for partitioned mappings:

Partitioned transformations

Additional transformations support partitioning. When a mapping enabled for partitioning contains the following transformations, the Data Integration Service can use multiple threads to transform the data:

- Address Validator
- Case Converter
- Classifier
- Comparison
- Data Masking
- Data Processor
- Decision
- Key Generator
- Labeler
- Match, when configured for identity match analysis
- Merge
- Normalizer
- Parser
- Sequence Generator
- Sorter
- Standardizer
- Weighted Average

Cache partitioning

For an Aggregator, Joiner, or Rank transformation, you can configure multiple cache directories to optimize performance during cache partitioning for the transformation. You can use the default CacheDir system parameter value if an administrator configured multiple cache directories for the Data Integration Service. Or, you can override the default CacheDir system parameter value to configure multiple cache directories specific to the transformation.

For a Sorter transformation, you can configure multiple work directories to optimize performance during cache partitioning for the transformation. You can use the default TempDir system parameter value if an administrator configured multiple temporary directories for the Data Integration Service. Or, you can override the default TempDir system parameter value to configure multiple directories specific to the transformation.

Mappings that order data

The Data Integration Service can create partitions for a mapping that establishes a sort order. You can establish sort order in a mapping with a sorted flat file source, a sorted relational source, or a Sorter transformation. When the Data Integration Service adds a partition point to a mapping, it might redistribute data and lose the order established earlier in the mapping. To maintain order in a partitioned mapping, you must specify that Expression, Java, Sequence Generator, SQL, and Write transformations maintain the row order in the transformation advanced properties.

Partitioned flat file targets

To optimize performance when multiple threads write to a flat file target, you can configure multiple output file directories for a flat file data object. You can use the default TargetDir system parameter value if an administrator has configured multiple target directories for the Data Integration Service. Or, you can override the default TargetDir system parameter value to configure multiple output file directories specific to the flat file data object.

Suggested parallelism value for transformations

If you override the maximum parallelism for a mapping, you can define a suggested parallelism value for a specific transformation. The Data Integration Service uses the suggested parallelism value for the number of threads for that transformation pipeline stage as long as the transformation can be partitioned. You can define a suggested parallelism value that is less than the maximum parallelism value defined for the mapping or the Data Integration Service. You might want to define a suggested parallelism value to optimize performance for a transformation that contains many ports or performs complicated calculations.

For more information about partitioned mappings, see the "Partitioned Mappings" chapter in the *Informatica 10.0 Developer Mapping Guide*.

Run-time Properties

Effective in version 10.0, you can configure the following run-time properties for a mapping:

Stop on Errors

Stops the mapping if a nonfatal error occurs in the reader, writer, or transformation threads. Default is disabled.

Target Commit Interval

The number of rows to use as a basis for a commit. The Data Integration Service commits data based on the number of target rows that it processes and the constraints on the target table.

For more information, see the *Informatica 10.0 Developer Mapping Guide*.

Target Load Order Constraints

Effective in version 10.0, you can configure constraints to control the order in which rows are loaded and committed across target instances in a mapping. Define constraints on the **Load Order** tab of the mapping **Properties** view. Each constraint consists of a primary target name and a secondary target name to restrict the load order.

For more information, see the *Informatica 10.0 Developer Mapping Guide*.

Metadata Manager

This section describes new Metadata Manager features in version 10.0.

Tableau Resources

Effective in version 10.0, you can create and configure a Tableau resource to extract metadata from Tableau Server.

For more information about creating and configuring Tableau resources, see the "Business Intelligence Resources" chapter in the *Informatica 10.0 Metadata Manager Administrator Guide*.

For more information about supported metadata source versions, see the *PCAE Metadata Manager XConnect Support* Product Availability Matrix on Informatica Network:https://network.informatica.com/community/informatica-network/product-availability-matrices/overview

Data Lineage Enhancements

Effective in version 10.0, data lineage diagrams have the following enhancements:

Summary lineage for PowerCenter mappings

When you view a data lineage diagram that includes a PowerCenter mapping, Metadata Manager displays a summarized view of the mapping by default. The summary view displays mapping inputs and outputs in the data lineage diagram but hides the transformation logic. The summary view reduces the complexity of the data lineage diagram. It also reduces the amount of time it takes for Metadata Manager to generate the data lineage diagram.

To view all of the transformation logic in a mapping, click **Switch to Detail** on the data lineage diagram toolbar. The following image shows the **Switch to Detail** button:

To switch from the detail view to back to the summary view, refresh the diagram.

Filter objects

You can filter the objects that appear in a data lineage diagram. You can filter individual objects or all objects of a particular class. For example, you might want to remove all business terms from a data lineage diagram. You can remove any filter that you apply.

Improved performance

Metadata Manager uses a file-based graph database for storing and retrieving data lineage linking information. As a result, Metadata Manager generates data lineage diagrams more quickly than it did in previous versions.

When you upgrade to version 10.0, the upgrade process creates the graph database and copies data lineage linking information from the Metadata Manager repository to the graph database. You can configure the location that Metadata Manager uses to store the graph database files.

Cancel creation of a diagram

If Metadata Manager takes a long time to generate a data lineage diagram, you can cancel creation of the diagram.

For more information about data lineage diagrams, see the "Working with Data Lineage" chapter in the *Informatica 10.0 Metadata Manager User Guide*. For more information about configuring the Metadata Manager lineage graph location, see the "Metadata Manager Service" chapter in the *Informatica 10.0 Application Service Guide*.

Metadata Catalog Views

Effective in version 10.0, the metadata catalog contains two different views for browsing metadata: the List view and the Tree view. Use the List view to drill-down through resources, logical groups, and metadata objects individually. Use the Tree view to display metadata objects in a hierarchy.

For more information about the metadata catalog views, see the "Viewing Metadata" chapter in the *Informatica 10.0 Metadata Manager User Guide*.

Impala Queries in Cloudera Navigator Resources

Effective in version 10.0, Metadata Manager can extract Impala query templates and query executions from a Cloudera Hadoop cluster.

For more information about Impala queries in Cloudera Navigator resources, see the "Database Management Resources" chapter in the *Informatica 10.0 Metadata Manager Administrator Guide*.

Parameters in Informatica Platform Resources

Effective in version 10.0, Informatica Platform resources can extract metadata for mappings that use mapping parameters.

If an Informatica Platform 10.x application includes a mapping that uses parameters, you can configure Metadata Manager to use the parameter values from a parameter set. You assign a parameter set to a mapping when you create an Informatica Platform resource. Metadata Manager uses the parameter values to display the mapping objects and to display data lineage.

For more information about Informatica Platform resources, see the "Data Integration Resources" chapter in the *Informatica 10.0 Metadata Manager Administrator Guide*.

Recent History

Effective in version 10.0, Metadata Manager maintains a history of the objects that you view in the metadata catalog. Use the recent history to quickly return to an object that you previously viewed. Metadata Manager clears the recent history when you log out.

For more information, see the "Viewing Metadata" chapter in the *Informatica 10.0 Metadata Manager User Guide*.

Related Catalog Objects and Impact Summary Filter and Sort

Effective in version 10.0, when you view details for a metadata object or business term, you can filter and sort the related catalog objects and the impact summary. You can filter and sort by object class, object name, or path. You can also filter the impact summary by metadata source type.

For more information, see the "Viewing Metadata" chapter in the *Informatica 10.0 Metadata Manager User Guide*.

Session Task Instances in the Impact Summary

Effective in version 10.0, the impact summary lists PowerCenter Session task instances. The impact summary lists a Session task instance when you view metadata details for an object that impacts or is impacted by a PowerCenter mapping. When you export the metadata object and include the impact summary, the export file also lists the associated Session task instance in the Impact Summary section.

The impact summary lists the Session task instance because it can affect the data flow. A Session task instance can override source or target connection information. It can also contain an SQL query that overrides the default query used to extract data from the source.

For more information about the impact summary, see the "Viewing Metadata" chapter in the *Informatica 10.0 Metadata Manager User Guide*.

Application and Data Lineage Properties

Effective in version 10.0, you can configure new application and data lineage properties in the Metadata Manager imm.properties file.

The following table describes new Metadata Manager application properties in imm.properties:

Property	Description
xconnect.custom.failLoadOnErrorCount	Maximum number of errors that the Metadata Manager Service can encounter before the custom resource load fails.
xconnect.io.print.batch.errors	Number of errors that the Metadata Manager Service writes to the in memory cache and to the mm.log file in one batch when you load a custom resource.

The following table describes new data lineage properties in imm.properties:

Property	Description
Lineage.PreCompute.ElementsInSingleTransaction	Maximum number of graph elements, including edges and vertices, that the Metadata Manager Service can process in a single transaction during lineage graph creation.
Lineage.PreCompute.FetchBlockSize	Number of records that the Metadata Manager Service processes in one block when it retrieves data lineage linking information from the Metadata Manager warehouse to populate the graph database.

For more information about the imm.properties file, see the "Metadata Manager Properties Files" appendix in the *Informatica 10.0 Metadata Manager Administrator Guide*.

PowerCenter

This section describes new PowerCenter features in version 10.0.

High Availability

Effective in version 10.0, you can enable the PowerCenter Integration Service and PowerCenter client to read from and write to a Hadoop cluster that uses a highly available NameNode.

For more information, see the "PowerExchange for Hadoop Configuration" chapter in the *Informatica 10.0 PowerExchange for Hadoop User Guide for PowerCenter*

DataDirect for Windows on PowerCenter

Effective in version 10.0, PowerCenter can connect to a Microsoft SQL Server database on Windows with the DataDirect ODBC driver in addition to the Microsoft SQL Server Native Client.

For more information, see the "Connecting to Databases from Windows" appendix in the *Informatica 10.2 HotFix 1 Application Service Guide*.

PowerExchange Adapters

This section describes new PowerExchange adapter features in version 10.0.

PowerExchange Adapters for Informatica

This section describes new Informatica adapter features in version 10.0.

PowerExchange for DataSift

Effective in version 10.0, you can parameterize the DataSift data object read operation properties.

For more information, see the *Informatica PowerExchange for DataSift 10.0 User Guide*.

PowerExchange for Facebook

Effective in version 10.0, you can parameterize the Facebook data object read operation properties.

For more information, see the *Informatica PowerExchange for Facebook 10.0 User Guide*.

PowerExchange for Greenplum

Effective in version 10.0, you can perform the following tasks with PowerExchange for Greenplum:

- You can configure dynamic partitioning for Greenplum data objects. You can configure the partition information so that the Data Integration Service determines the number of partitions to create at run time.
- You can parameterize Greenplum data object operation properties to override the write data object operation properties during run time.
- You can use the Max_Line_Length integer to specify the maximum length of a line in the XML transformation data that is passed to gpload.

For more information, see the *Informatica PowerExchange for Greenplum 10.0 User Guide*.

PowerExchange for HBase

Effective in version 10.0, you can parameterize the HBase data object read and write operation properties.

For more information, see the *Informatica PowerExchange for HBase 10.0 User Guide*.

PowerExchange for HDFS

Effective in version 10.0, you can parameterize the complex file data object read and write operation properties.

For more information, see the *Informatica PowerExchange for HDFS 10.0 User Guide*.

PowerExchange for LinkedIn

Effective in version 10.0, you can parameterize the LinkedIn data object read operation properties.

For more information, see the *Informatica PowerExchange for LinkedIn 10.0 User Guide*.

PowerExchange for SAP NetWeaver

Effective in version 10.0, you can perform the following tasks with PowerExchange for SAP NetWeaver:

- You can use the Developer tool to create an SAP Table data object and a data object read operation. You can then add the read operation as a source or lookup in a mapping, and run the mapping to read or look up data from SAP tables.
- When you read data from SAP tables, you can configure key range partitioning. You can also use parameters to change the connection and Table data object read operation properties at run time.
- You can run a profile against SAP Table data objects.
- When you create an SQL Data Service, you can add an SAP Table data object read operation as a virtual table.
- You can read data from the SAP BW system through an open hub destination or InfoSpoke.
- When you read data from the SAP BW system, you can configure dynamic or fixed partitioning. You can also use parameters to change the connection and BW OHS Extract data object read operation properties at run time.
- You can write data to the SAP BW system. You can use a 3.x data source or a 7.x data source to write data to the SAP BW system.
- When you write data to the SAP BW system, you can configure dynamic partitioning. You can also use parameters to change the connection and BW Load data object write operation properties at run time.
- You can create an SAP connection in the Administrator tool.
- When you use the Developer tool to read data from or write data to SAP BW, you can create an SAP BW Service in the Administrator tool.

For more information, see the *Informatica PowerExchange for SAP NetWeaver 10.0 User Guide*.

PowerExchange for Teradata Parallel Transporter API

Effective in version 10.0, you can perform the following tasks with PowerExchange for Teradata Parallel Transporter API:

- You can use PowerExchange for Teradata Parallel Transporter API to read large volumes of data from Teradata tables.
- You can use the Update system operator to perform insert, update, upsert, and delete operations against Teradata database tables.
- You can use the Secure Sockets Layer (SSL) protocol to configure a secure connection between the Developer tool and the Teradata database.
- You can configure dynamic partitioning for Teradata Parallel Transporter API data objects. You can configure the partition information so that the Data Integration Service determines the number of partitions to create at run time.

- You can parameterize Teradata data object operation properties to override the read and write data object operation properties during run time.

For more information, see the *Informatica PowerExchange for Teradata Parallel Transporter API 10.0 User Guide*.

PowerExchange for Twitter

Effective in version 10.0, you can parameterize the read operation properties for Twitter and Twitter Streaming data objects.

For more information, see the *Informatica PowerExchange for Twitter 10.0 User Guide*.

PowerExchange for Web Content-Kapow Katalyst

Effective in version 10.0, you can parameterize the Web Content-Kapow Katalyst data object read operation properties.

For more information, see the *Informatica PowerExchange for Web Content-Kapow Katalyst 10.0 User Guide*.

Reference Data

This section describes new reference data features in version 10.0.

Classifier Models

Effective in version 10.0, you can perform the following actions in a classifier model in the Developer tool:

- Import reference data values and label values to a classifier model from a data source.
- Select the configurable options from a ribbon in the classifier model. For example, select the Manage Labels option to access the options to add, delete, or update the label values in a classifier model.
- Use wildcard characters in the search filter in a classifier model.
- Add a single row of data to a classifier model.
- Apply a label value to multiple rows of classifier model data in a single operation.

For more information, see the "Classifier Models" chapter in the *Informatica 10.0 Reference Data Guide*.

Probabilistic Models

Effective in version 10.0, you can perform the following actions in a probabilistic model in the Developer tool:

- Assign a label to multiple reference data values in a single operation.
- Import label values and reference data values from a data source to a probabilistic model.
- View the current number of reference data values that use a label that you select.

Effective in version 10.0, the Developer tool displays the data rows in a probabilistic model on one or more pages. A page contains 100 reference data rows. You can move to the next page or the previous page in the model, and you can move to a page number that you specify.

For more information, see the "Probabilistic Models" chapter in the *Informatica 10.0 Reference Data Guide*.

Rule Specifications

This section describes new features in rule specifications in version 10.0.

Linked Assets

Effective in version 10.0, the Design workspace in the Analyst tool displays a hyperlink to an asset that you link to the rule specification. For example, if you use another rule asset in the rule specification, the workspace displays a link to the rule asset. The Design workspace also displays a hyperlink to any rule that you generate from the rule specification.

Find the hyperlinks under Assets in the rule specification properties.

For more information, see the "Rule Specification Configuration" chapter of the *Informatica 10.0 Rule Specification Guide*.

Mapplet Rules

Effective in version 10.0, you can use mapplet rules in the following ways:

- You can configure a rule specification that is valid during a time period that you define. You specify the dates and times that indicate the start and the end of the time period. The time period also applies to any mapplet rule that you compile from the rule specification. If you run a mapping that reads the mapplet rule outside the time period, the mapping fails.

  For more information, see the "Rule Specification Configuration" chapter of the *Informatica 10.0 Rule Specification Guide*.

- You can add a mapplet rule to a condition and an action in a rule statement. Connect an input from the rule specification to an input port on the mapplet rule. Or, use a constant value as an input to the mapplet rule. Select an output port from the mapplet rule as output from the condition or the action.

  For more information, see the "Rule Specification Configuration" chapter of the *Informatica 10.0 Rule Specification Guide*.

Rule Statements

Effective in version 10.0, you can perform the following operations in a rule statement:

- You can move or copy a rule statement within a rule set, and you can move or copy a rule statement to another rule set. You can move or copy a rule statement to a rule set in another rule specification. If you move or copy a rule statement to another rule specification, the operation moves or copies the inputs that the rule statement uses. The operation also moves or copies any test data that you entered and saved to test the rule statement.
- You can move or copy a rule set to another location in the rule specification and to another rule specification. If you move or copy a rule set to another rule specification, the operation moves or copies the inputs and the test data that the rule set uses.
- You can move or copy test data from a rule specification to another rule specification.
- You can select the CONTAINS operator when you configure a condition in a rule statement. Use the operator to determine the following information about the data values in an input column:
  - Determine if an input column contains a data value that you enter.
  - Determine if an input column contains a data value that appears on the same row in another input column.
- You can configure a rule statement to search for an input value in a list of values that you enter.
- A rule set includes a predefined rule statement that specifies an action to perform when the preceding rule statements generate no data. By default, the rule statement specifies that the rule set performs no action. You can update the action in the rule statement.

For more information, see the "Rule Statement Configuration" in the *Informatica 10.0 Rule Specification Guide*.

User Interface Enhancements

Effective in version 10.0, the Design workspace includes the following user interface enhancements for rule specifications:

- When you select the Inputs view for a rule set, the workspace hides any input that the rule set does not contain.
- You can drag the rule specification in the workspace canvas.
- You can use the mouse wheel to zoom in and zoom out of the rule specification.
- You can expand and collapse the rule specification tree structure to show or hide different parts of the rule specification.
- You can add a text description to an input.
- A rule set that reads the output of a child rule set displays the child rule set name in the list of inputs.
- A rule set that is not valid appears in a different color to a valid rule set.
- Some configurable options have new names.

For more information, see the *Informatica 10.0 Rule Specification Guide*.

Version Control

Effective in version 10.0, you can work with rule specifications in a versioned Model repository. If you open a rule specification from a Model repository that uses version control, the Analyst tool applies the version control properties to the rule specification. Use the Edit option in the Design workspace to check out a rule specification from the repository. Use the Save and Finish option in the workspace to check in the rule specification. You can also undo a checkout operation.

You can view an earlier version of the rule specification and revert to an earlier version in edit mode and in read-only mode. When you view an older version of a rule specification in read-only mode, you can perform all of the read-only operations that apply to the current version of the rule specification. You can view and validate a rule specification in read-only mode. You can test a rule specification in read-only mode if the rule specification contains test data.

For more information, see the "Model Repository" chapter in the *Informatica 10.0 Analyst Guide*.

Security

This section describes new security features in version 10.0.

Groups

Effective in version 10.0, Informatica includes a default group named Operator. Use the Operator group to manage multiple users who are assigned the Operator role.

For more information, see the *Informatica 10.0 Security Guide*.

Privileges

Effective in version 10.0, Informatica includes the following new privileges:

Model Repository Service privilege

The **Manage Team-based Development** privilege allows Model repository administrators to perform actions related to object lock management and versioned object management.

Scheduler Service privileges

The **Scheduler** privilege group determines the actions that users can perform on schedules and scheduled jobs.

For more information, see the "Command Line Privileges and Permissions" appendix in the *Informatica 10.0 Security Guide*.

Roles

Effective in version 10.0, Informatica includes a custom role named Operator. The Operator role includes privileges for managing, scheduling, and monitoring application services.

For more information, see the *Informatica 10.0 Security Guide*.

Transformation Language Functions

This section describes new features of transformation language functions in version 10.0.

Informatica Functions

This section describes new features of Informatica functions in version 10.0.

CaseFlag

Effective in version 10.0, the CaseFlag option does not support NULL values for the following functions: GREATEST, LEAST, IN, and INDEXOF.

Previously, the CaseFlag option supported NULL values.

For more information, see the "Functions" chapter in the *Informatica 10.0 Developer Transformation Language Reference*.

TO_DECIMAL38 Function

Effective in version 10.0, you can use the TO_DECIMAL38 function to convert a string or numeric value to a decimal value. The function returns a decimal value of precision and scale between 0 and 38, inclusive.

For more information, see the *Informatica 10.0 Transformation Language Reference*.

Transformations

This section describes new transformation features in version 10.0.

Informatica Transformations

This section describes new features in Informatica transformation in version 10.0.

Address Validator Transformation

Effective in version 10.0, you can define parameters to set the following transformation properties:

- Geocode data type
- Global Max Field Length
- Max Result Count
- Optimization Level
- Standardize Invalid Address

For more information, see the "Address Validator Transformation" chapter in the *Informatica 10.0 Developer Transformation Guide*.

Bad Record Exception Transformation

Effective in version 10.0, you can use parameters to specify the upper threshold and the lower threshold that the transformation uses to identify bad records.

For more information, see the "Mapping Parameters" chapter of the *Informatica 10.0 Developer Mapping Guide*.

Data Processor Transformation

This section describes new Data Processor transformation features.

Data Transformation Libraries

Data Transformation libraries contain predefined transformation components for a range of industry messaging standards. The Data Processor transformation uses a Library object to transform an industry messaging type input into a different format, such as an XML output document, or from an XML input to an industry message output.

The Library object contains many objects and components, such as Parsers, Serializers, and XML schemas, preset to transform the industry standard input and specific application messages into XML or other output. Some libraries contain additional objects for message validation, acknowledgments, and diagnostic displays. You can also customize the properties and validation settings of the Library object.

You can create Library objects for the DTCC-NTCC, EDIFACT, EDI-X12, HIPAA, HL7, and SWIFT libraries.

For more information, see the *Informatica Data Transformation 10.0 User Guide* and the *Informatica Data Transformation 10.0 Libraries Guide*.

Complex File Reader without a Streamer

You can use the Complex File Reader without a Streamer as the start-up component in a Data Processor transformation that receives the input.

For more information, see the *Informatica Data Transformation 10.0 User Guide*.

Pass-Through Ports with Custom Data Types

Data Processor transformations can include pass-through ports with custom data types.

For more information about custom data types, see the *Informatica Developer 10.0 User Guide*.

RunMapplet Statement for XMap

You can define a RunMapplet mapping statement to call a mapplet from an XMap in a Data Processor transformation. One or more MappletInput and MappletOutput statements can be nested under the RunMapplet statement. Values are mapped to the mapplet input ports in the same order that they are listed in the MappletInput statements. The values in the mapplet outlet ports are mapped to the MappletOutput statement in the same order that they are listed in the mapplet ports.

For more information, see the *Informatica Data Transformation 10.0 User Guide*.

Script Mode Editing

You can edit a Script for the Data Processor transformation with an external editor. For example, you can perform a global find and replace operation with an external editor.

For more information, see the *Informatica Data Transformation 10.0 User Guide*.

Decision Transformation

Effective in version 10.0, you can use parameters to specify input values in a Decision transformation script.

For more information, see the "Mapping Parameters" chapter of the *Informatica 10.0 Developer Mapping Guide*.

Duplicate Record Exception Transformation

Effective in version 10.0, you can use parameters to specify the upper threshold and the lower threshold that the transformation uses to identify duplicate records.

For more information, see the "Mapping Parameters" chapter of the *Informatica 10.0 Developer Mapping Guide*.

Expression Transformation

This section describes the new features in the Expression transformation.

Dynamic Expressions

Effective in version 10.0, you can create an expression in a dynamic output port. When you create an expression in a dynamic port, the expression is a dynamic expression. A dynamic expression might generate more than one output port when the expression contains a port selector or a dynamic port. When the dynamic expression runs against multiple ports, the expression returns an output value for each port.

For more information about dynamic expressions, see the *Expression Transformations* chapter in the *Informatica 10.0 Developer Transformation Guide*.

Mapping Outputs

Effective in version 10.0, you can configure mapping outputs. A mapping output is a single value that is the result of aggregating a field or expression from each row that the mapping processes. For example, a mapping output can summarize the total amount of an order field from all the source rows that the transformation receives. A mapping output expression is a field value or an expression to aggregate from the rows that the Expression transformation receives. You must define a mapping output in the mapping **Properties** view, before you can create the corresponding expression in the Expression transformation.

For more information about mapping outputs, see the *Mapping Outputs* chapter in the *Informatica 10.0 Developer Mapping Guide*.

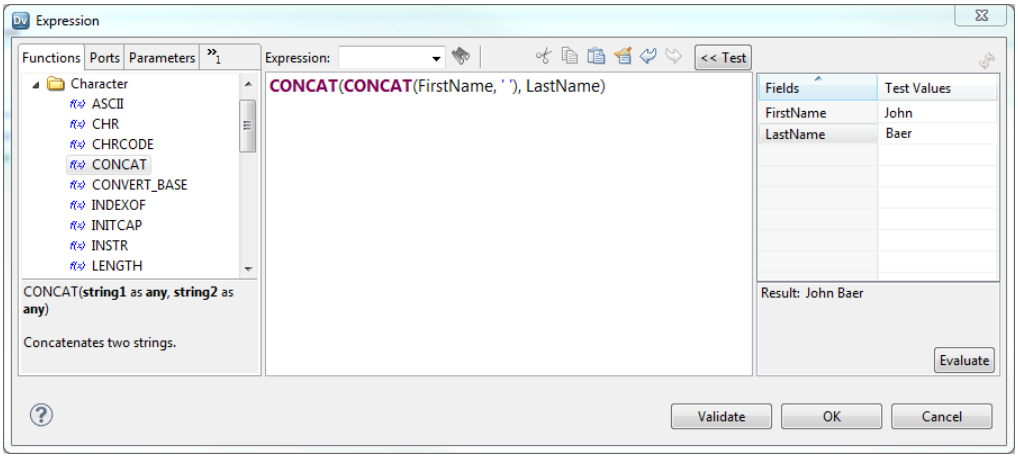
Test Expressions

Effective in version 10.0, you can test expressions that you configure in the Expression Editor. When you test an expression, you enter sample data and then evaluate the expression.

You can test expressions when you configure expressions in the following ways:

- In an output or variable port in the Expression transformation
- In the Mapping Outputs view of an Expression transformation after adding the transformation to a mapping

The following image shows the results of an expression that concatenates a sample first name and last name:



For more information about testing expressions, see the "Expression Transformation" chapter in the *Informatica 10.0 Developer Transformation Guide*.

Hierarchical to Relational Transformation

This section describes the Hierarchical to Relational transformation that you create in the Developer tool.

The Hierarchical to Relational transformation is an optimized transformation introduced in version 10.0 that converts hierarchical input to relational output.

For more information, see the *Informatica 10.0 Developer Transformation Guide*.

Match Transformation

Match Type Options in Identity Match Analysis

Effective in version 10.0, you can select the following options when you configure the Match transformation to read a persistent store of identity index data:

Remove IDs from the database

The transformation deletes rows from the index tables if the rows share sequence identifiers with rows in the mapping source data. The transformation does not perform match analysis when you select the option.

Update the current IDs in the database

The transformation replaces rows in the index tables with rows from the mapping source data if the rows share sequence identifiers. The transformation does not add rows to the index. The transformation can include the rows that it does not add in the match analysis.

For more information, see the "Match Transformations in Identity Analysis" chapter of the *Informatica 10.0 Developer Transformation Guide*.

Matching Process Options in Identity Match Analysis

Effective in version 10.0, you can enable and disable match analysis when you configure the transformation to update a persistent store of identity index data. Use the **Matching Process** option to enable or disable match analysis.

For more information, see the "Match Transformations in Identity Analysis" chapter of the *Informatica 10.0 Developer Transformation Guide*.

Status Codes for Identity Analysis with an Persistent Index Store

Effective in version 10.0, the Match transformation can generate the following status codes to describe the results of match analysis on a persistent index data store:

Absent

The index data store does not contain data for the current record.

Invalid

The transformation cannot analyze the current record. For example, the transformation cannot generate index data for the record because the key field on the Match Type tab is not compatible with the record data.

Removed

The transformation removes the index data for the record from the index data store.

Updated

The transformation updates the rows in the persistent data store with index data from the transformation input record. The transformation input data and the persistent index data have common sequence identifiers.

For more information, see the "Match Transformation" chapter of the *Informatica 10.0 Developer Transformation Guide*.

Parameter Usage

Effective in version 10.0, you can use parameters to set the following options on the Match transformation:

- The match score threshold value.
- The relative weight that the transformation applies to the scores from each match strategy.
- The persistence method that the transformation applies to the persistent index data store in identity match analysis.

For more information, see the "Mapping Parameters" chapter of the *Informatica 10.0 Developer Mapping Guide*.

Sequence ID Port

Effective in version 10.0, the Match transformation output ports include a Sequence ID port when you configure the transformation to read a persistent index store. The transformation uses the sequence identifier values to track the index data through the different stages of the match analysis.

For more information, see the "Match Transformation" chapter of the *Informatica 10.0 Developer Transformation Guide*.

SQL Transformation

This section describes new features in the SQL transformation.

Effective in version 10.0, you can parameterize the connection for an SQL transformation. Define the parameter in the mapping. Then, assign the parameter to the Connection Name in the SQL transformation run-time properties.

For more information, see the *SQL Transformation* chapter in the *Informatica 10.0 Transformation Guide*.

Transformations in Dynamic Mappings

This section describes new features in the transformations for dynamic mappings.

Effective in version 10.0, you can add dynamic ports to some transformations. You can also parameterize which input ports to link to ports from an upstream transformation. You can configure port selectors to reference multiple ports in transformation logic.

The transformations contain the following new tabs in the **Properties** view:

Group By

The Aggregator transformation, the Rank transformation, and the Sorter transformation require that you configure groups of ports. You can now configure the groups on a **Group By** tab. You can define groups by selecting ports or you can configure parameters that contain port lists. The **Group By** tab provides flexibility when you configure the transformations with generated ports.

Port Selector

You can reference multiple ports in transformation logic. Define a port selector, which is an ordered list of ports. You can use reference port selectors in dynamic expressions, join conditions, or lookup conditions. When you define a port selector, you can include or exclude transformation ports based on the port name, the port type, or a pattern of text characters.

Run-time Linking

When you configure transformations in a dynamic mapping, you can set parameters or link policies that determine which ports to link between transformations. Configure run-time linking to link dynamic ports to static ports. You can configure a link policy to link ports by name. You can configure an InputLinkSet parameter to specify the names of the of ports to link at run time.

For more information, see the *Informatica 10.0 Transformation Guide*.

Workflows

This section describes new workflow features in version 10.0.

Informatica Workflows

This section describes new features in Informatica workflows in version 10.0.

Parallel Execution of Workflow Tasks

Effective in 10.0 Update 1, the Data Integration Service can run tasks on multiple sequence flows in a workflow in parallel. To create the parallel sequence flows, add Inclusive gateways to the workflow in the Developer tool.

Use an Inclusive gateway to split a sequence flow into multiple sequence flows. The Data Integration Service runs the objects on every branch with a sequence flow condition that evaluates to true. The Data Integration Service runs the objects on each branch concurrently. Use another Inclusive gateway to merge the sequence flows into a single sequence flow. When the objects on all branches are complete, the Data Integration Service passes the data from the second Inclusive gateway to the next object in the workflow.

You can add one or more instances of any type of task to a sequence flow between two Inclusive gateways. You cannot add a Human task or a Voting task to more than one sequence flow between two Inclusive gateways.

For more information, see the *Informatica 10.0 Update 1 Developer Workflow Guide*.

Mapping Tasks

Effective in version 10.0, Informatica has the following new features for Mapping tasks:

Mapping task log file directory

You can configure the directory where the Data Integration Service writes the Mapping task log. By default, the Data Integration Service writes the Mapping task log file in the directory defined by the system parameter, LogDir. The default location is disLogs/mappingtask. You can configure a different directory for the Mapping task log file in the Mapping task **Advanced** properties. You can parameterize the log file directory.

Mapping task log file name

You can configure a file name for the Mapping task log file. The Data Integration Service appends the file name to the information in the Masking Task Log File Directory field. It appends the log file name to a UID and time stamp or to a mapping run number, based on how you choose to save the log file. You can parameterize the log file name. Configure the log file name in the Mapping task **Advanced** properties.

Mapping task log save type

You can save the Mapping task log file by timestamp or by the number of mapping task runs. The suffix of the mapping task log file name reflects the option you select. You can configure how many log files to save.

Java classpath

You can enter the classpath to add to the beginning of the system classpath when the Data Integration Service runs the mapping task. Enter a Java classpath in the **Advanced** properties if you use third-party Java packages, built-in Java packages, or custom Java packages in a Java transformation.

Mapping task parameter usage

Effective in version 10.0, you can view which objects in a mapping use a specific parameter. Select a parameter on the Mapping task **Input** tab, and click **Parameter Usage**.

Custom properties

You can define custom properties for a Mapping task and configure the property values. You can also parameterize a custom property.

For more information, see the *Informatica 10.0 Developer Workflow Guide*.

CHAPTER 19

Changes (10.0)

This chapter includes the following topics:

Installation

This section describes changes to the Informatica installation in version 10.0.

Changed Support

Effective in version 10.0, Informatica implemented the following changes in support that affect upgrade:

Support Change	Level of Support	Comments
HP-UX	Dropped support	Migrate to a supported operating system before you upgrade.
Windows 32-bit	Dropped support for application services and for the Developer tool	Migrate to a supported operating system before you upgrade.
zLinux	Deferred support	Informatica will reinstate support in a future release.
Solaris	Deferred support	Informatica will reinstate support in a future release.

For more information about product requirements and supported platforms, see the Product Availability Matrix on Informatica Network:https://network.informatica.com/community/informatica-network/product-availability-matrices

Application Services

This section describes changes to application services in version 10.0.

Analyst Service

This section describes changes to Analyst Service features in version 10.0.

Stop Mode

Effective in version 10.0, the Analyst Service has complete, abort, and stop modes to disable the Analyst Service. Select the stop mode to stop all jobs, and then disable the Analyst Service.

Previously, only complete and abort modes were available to disable the service.

For more information, see the Analyst Service chapter in the*Informatica 10.0 Application Service Guide*.

Data Integration Service

This section describes changes to the Data Integration Service in version 10.0.

Email Server

Effective in version 10.0, you can no longer configure an email server for the Data Integration Service. The email server properties for the Data Integration Service are removed. Scorecard notifications use the email server configured for the domain. Workflow notifications use the email server configured for the Email Service. Workflow notifications include emails sent from Human tasks and Notification tasks in workflows.

Previously, scorecard and workflow notifications used the email server configured for the Data Integration Service.

The upgrade determines the email server to use based on the following notification types:

Scorecard notifications

Scorecard notifications use the email server configured for the domain. If you did not configure SMTP for the domain in the previous version, the upgraded domain uses the email server configured for the first Data Integration Service encountered during the upgrade. If you configured SMTP for the domain in the previous version, the upgraded domain continues to use that email server.

The following email server properties available on the Data Integration Service in previous versions are not available on the domain. You can no longer configure these properties for scorecard notifications:

- SMTP Server Connection Timeout
- SMTP Server Communication Timeout
- SMTP Authentication Enabled
- Use TLS Security
- Use SSL Security

Before you send scorecard notifications in version 10.0, verify that SMTP is correctly configured for the domain. To use the same email server configured for the Data Integration Service in previous versions, record the Data Integration Service values before upgrading.

Workflow notifications

Workflow notifications use the email server configured for the Email Service.

The following email server properties available on the Data Integration Service in previous versions are not available on the Email Service. You can no longer configure these properties for workflow notifications:

- SMTP Server Connection Timeout
- SMTP Server Communication Timeout

Before you send workflow notifications in version 10.0, configure an email server for the Email Service, and then enable the Email Service. To use the same email server configured for the Data Integration Service in previous versions, record the Data Integration Service values before upgrading.

For more information about configuring SMTP for the domain, see the "Domain Management" chapter in the *Informatica 10.0 Administrator Guide*.

For more information about the Email Service, see the "System Services" chapter in the *Informatica 10.0 Application Service Guide*.

Execution Options

Effective in version 10.0, you configure the following execution options on the Properties view for the Data Integration Service:

- Maximum Execution Pool Size
- Maximum Memory Size
- Maximum Parallelism
- Hadoop Kerberos Service Principal Name
- Hadoop Kerberos Keytab
- Temporary Directories
- Home Directory
- Cache Directory
- Source Directory

- Target Directory
- Rejected Files Directory
- Informatica Home Directory on Hadoop
- Hadoop Distribution Directory
- Data Integration Service Hadoop Distribution Directory

When the Data Integration Service is configured to run on primary and back-up nodes or on a grid, you can override some of the execution options to define different values for each node with the compute role. When the DTM runs a job on the compute node, the DTM uses the overridden value. You can override the following options on the Compute view for the Data Integration Service:

- Home Directory
- Temporary Directories
- Cache Directory
- Source Directory
- Target Directory
- Rejected Files Directory

Previously, you configured the execution options on the Processes view for the Data Integration Service. You could configure the execution options differently for each node where a service process ran.

If you configured the execution options differently for each service process in a previous version, the upgrade determines the version 10.0 values based on the following situations:

Options without a compute override

If the option defines a maximum integer value, the highest value defined for all processes is used as the Data Integration Service value on the Properties view. If the option defines a string value, the value defined for the first node encountered during the upgrade is used as the Data Integration Service value on the Properties view.

Options with a compute override

The value defined on the Processes view for a node is used as the compute override on the Compute view for the same node. The value defined for the first node encountered during the upgrade is used as the Data Integration Service value on the Properties view.

For more information about the execution options, see the "Data Integration Service" chapter in the *Informatica 10.0 Application Service Guide*.

Maximum Session Size

Effective in version 10.0, the Data Integration Service process property Maximum Session Size is renamed to Maximum Memory Per Request. You configure the Maximum Memory Per Request property for the following Data Integration Service modules:

- Mapping Service Module. Default is 536,870,912 bytes.
- Profiling Service Module. Default is 536,870,912 bytes.
- SQL Service Module. Default is 50,000,000 bytes.
- Web Service Module. Default is 50,000,000 bytes.

Previously, you configured the Maximum Session Size for each Data Integration Service process. All of the Data Integration Service modules used the same value. The default was 50,000,000 bytes.

The upgraded service uses the version 10.0 default value for each module. If you changed the default value of Maximum Session Size in a previous version, you must change the value of Maximum Memory Per Request after you upgrade.

For more information about the Maximum Memory Per Request property, see the "Data Integration Service" chapter in the *Informatica 10.0 Application Service Guide*.

Run Jobs in Separate Processes

Effective in version 10.0, the Launch Jobs in Separate Processes property is renamed to the Launch Job Options property. You can configure one of the following values for the Launch Job Options property:

In the service process

Runs jobs in the Data Integration Service process. Configure when you run SQL data service and web service jobs on a single node or on a grid where each node has both the service and compute roles. SQL data service and web service jobs typically achieve better performance when the Data Integration Service runs jobs in the service process.

In separate local processes

Runs jobs in separate DTM processes on the local node. Configure when you run mapping, profile, and workflow jobs on a single node or on a grid where each node has both the service and compute roles. When the Data Integration Service runs jobs in separate local processes, stability increases because an unexpected interruption to one job does not affect all other jobs.

In separate remote processes

Runs jobs in separate DTM processes on remote nodes. Configure when you run mapping, profile, and workflow jobs on a grid where nodes have a different combination of roles.

When the Data Integration Service runs jobs in separate remote processes, stability increases because an unexpected interruption to one job does not affect all other jobs. In addition, you can better use the resources available on each node in the grid. When a node in a Data Integration Service grid has the compute role only, the node does not have to run the service process. The machine uses all available processing power to run mappings.

Previously, you set the Launch Jobs in Separate Processes property to true to run jobs in the Data Integration Service process. You set the property to false to run jobs in separate DTM processes on the local node.

For more information about running jobs in separate processes, see the "Data Integration Service Management" chapter in the *Informatica 10.0 Application Service Guide*.

Workflow and Human Task Configuration

The following Data Integration Service options change in version 10.0:

Workflow Orchestration Service Module replaces Workflow Service Module

Effective in version 10.0, you select the Workflow Orchestration Service Module to enable the Data Integration Service to run workflows.

Previously, you selected the Workflow Service Module to run workflows.

Human Task Service Module is obsolete

Effective in version 10.0, the Workflow Orchestration Service Module runs all tasks in a workflow.

Previously, the Workflow Service Module ran all workflow tasks except Human tasks. The Human Task Service Module ran any Human task in a workflow.

Workflow database replaces the Model repository and Human task database as workflow metadata store

Effective in version 10.0, a single database stores all run-time metadata for workflows, including Human task instance metadata. Select the workflow database connection on the Data Integration Service.

Previously, you selected a database to store Human task metadata on the Data Integration Service. The Model repository stored all other run-time metadata for workflows.

For more information about workflow and Human task configuration, see the "Data Integration Service" chapter and the "Analyst Service" chapter in the *Informatica 10.0 Application Service Guide*.

Model Repository Service

This section describes changes to Model Repository Service features in version 10.0.

Repository Object Locks and Versions

Effective in version 10.0, if you try to edit an object that another user has locked, you receive a notification that the object is locked by another user. You can choose to review the object in read-only mode, or you can save the object with another name.

Previously, more than one user was allowed to open and edit an object. Only the last user who tried to save the object received a notification that the object had been changed by another user.

If the Model repository is integrated with a version control system, you must check out an object before you edit it.

For more information, see the "Model Repository" chapter in the *Informatica 10.0 Developer Tool Guide*.

Model Repository Paths

Effective in version 10.0, use the forward slash (/) when you specify a path in the Model repository. For example, use the following path to specify a folder:

```
ModelRepository_name/Project_name/Folder_name
```

Previously, you could use other characters as the divider character between path elements. For example, in some instances, a colon character followed the Model repository name.

For more information, see the "Model Repository" chapter in the *Informatica 10.0 Developer Tool Guide*.

SAP BW Service

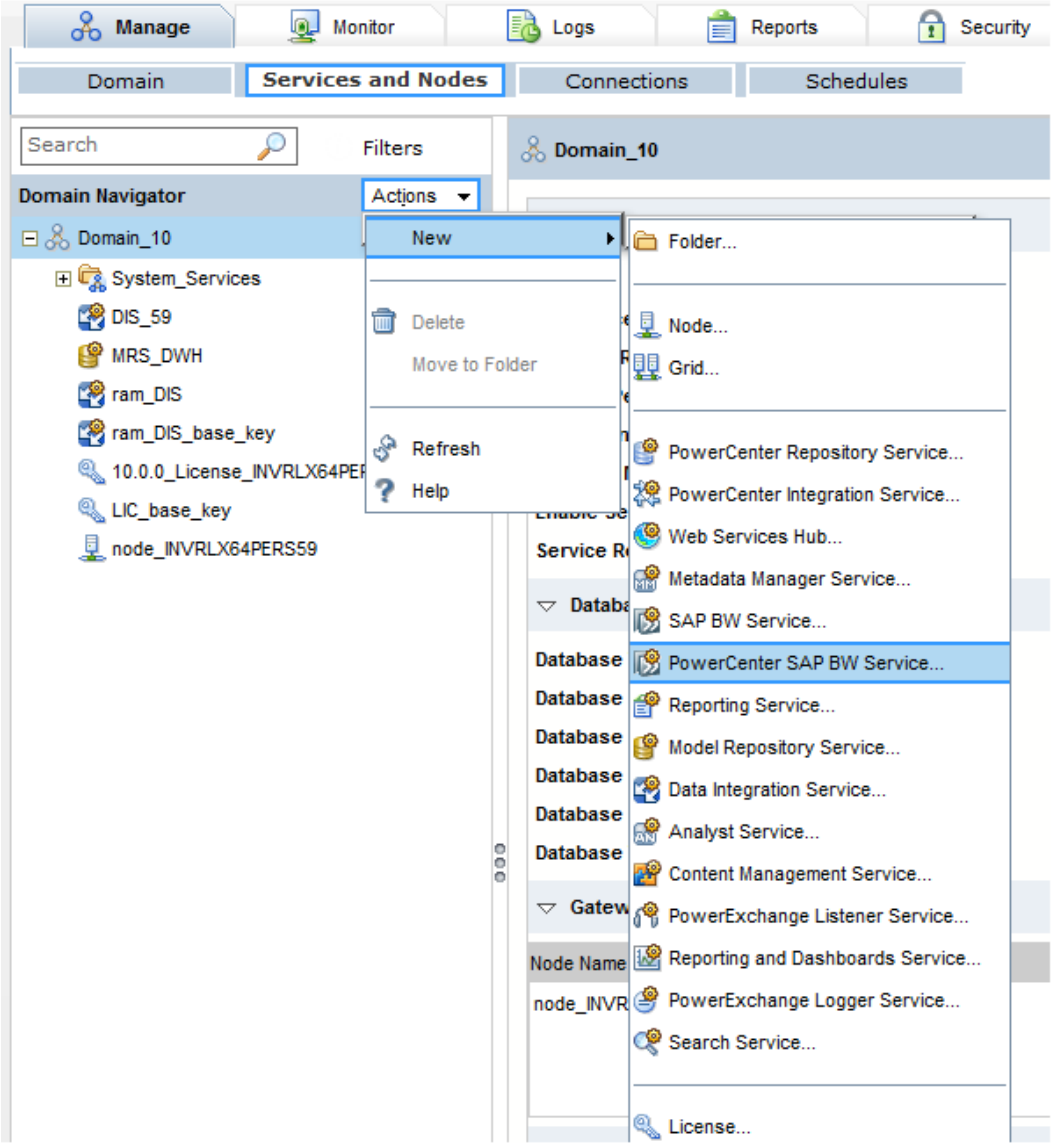
This section describes changes to the SAP BW Service in version 10.0.

SAP BW Service for PowerCenter

Effective in version 10.0, the user interface option that you use in the Administrator tool to create an SAP BW Service for PowerCenter has changed.

To create an SAP BW Service for PowerCenter, log in to Informatica Administrator. In the **Domain Navigator**, right-click the domain, and click **Actions** > **New** > **PowerCenter SAP BW Service**.

The following image shows the user interface option that you must use in the Administrator tool to create an SAP BW Service for PowerCenter.



Previously, you clicked **Actions** > **New** > **SAP BW Service** to create an SAP BW Service for PowerCenter.

Note: Effective in version 10.0, the **SAP BW Service** option is reserved for creating an SAP BW Service for the Developer tool.

For more information, see the "SAP BW Service" chapter in the *Informatica 10.0 Application Services Guide*.

Big Data

This section describes changes to big data features.

Hive Environment

Effective in version 10.0, the Hive environment no longer appears as a run-time or validation environment in the Developer tool user interface. The Hive environment is changed to the Hive engine that uses Hadoop technology for processing batch data such as MapReduce or Tez.

For more information, see the *Informatica 10.0 Big Data Edition User Guide*.

JCE Policy File Installation

Effective in version 10.0, Informatica Big Data Management ships the JCE policy file and installs it when you run the installer.

Previously, you had to download and manually install the JCE policy file for AES encryption.

Kerberos Authentication

Effective in version 10.0, a Hadoop cluster cannot use only an MIT key distribution center (KDC) for Kerberos authentication. Hadoop clusters can use a Microsoft Active Directory KDC or an MIT KDC connected to Active directory with a one-way cross realm trust.

Business Glossary

This section describes changes to Business Glossary in version 10.0.

Relationship View

Effective in version 10.0, the relationship view has the following changes:

Highlight Asset Occurrences

When you left-click an asset, the Analyst tool highlights the occurrences of the asset. Previously, you had to right-click the asset to highlight the occurrences of the asset.

Display Asset Details

When you hover the mouse over the asset name, the Analyst tool displays the asset details. Previously you had to click the asset name for the Analyst tool to display the asset details.

For more information, see the "Finding Glossary Content" chapter in the *Informatica 10.0 Business Glossary Guide*.

Asset Phase

Effective in version 10.0, the asset phase has the following changes:

Pending Publish Phase

When you export the assets and not the associated business initiative, the Analyst tool changes the phase of the assets from **Pending Publish** to **Published** in the export file.

In Review Phase

You cannot modify assets that are in the **In Review** phase.

For more information, see the *Informatica 10.0 Business Glossary Guide*.

Library Workspace

Effective in version 10.0, the **Library** workspace has the following changes:

Sort Assets

When you view the assets by asset type you can sort Glossary assets by status and phase in the **Library** workspace. Previously, you could not sort by the status and phase of the asset.

Find Option

When you look up assets by glossary, the option to enter search strings in the filter panel is no longer available. Previously, you could search for assets when you look up assets by glossary.

Default Asset List

When you view the assets by asset type or by glossary, the Analyst tool applies filters by default to hide inactive and rejected assets. Previously, the Analyst tool did not filter the inactive and rejected assets by default.

For more information, see the *Informatica 10.0 Business Glossary Guide*.

Import and Export

Effective in version 10.0, you can import and export Glossary templates independently of Glossary assets. Previously, the Analyst tool did not have unique menu options to import or export Glossary templates.

When you export a glossary, you now have an option to include attachments and audit history. The Analyst tool generates a .zip file when you export the audit history or attachments along with Glossary assets.

For more information, see the "Glossary Administration" chapter in the *Informatica 10.0 Business Glossary Guide*.

Command Line Programs

This section describes changes to commands in version 10.0.

infacmd isp Obsolete Commands

The following table describes commands that are obsolete effective in version 10.0.

Command	Description
purgeMonitoringData	Purges monitoring data from the Model repository.

Domain

This section describes changes to the domain in version 10.0.

Logs

Effective in version 10.0, the default location for system logs is `<Informatica installation directory>/logs/<node name>/`.

The domain stores application services logs and system logs in the default location. You can change the default directory path for logs with the System Log Directory option. You can use this option with any of the following commands:

- infasetup DefineDomain
- infasetup DefineGatewayNode
- infasetup DefineWorkerNode
- infasetup UpdateGatewayNode
- infasetup UpdateWorkerNode

Previously, the domain stored application services logs and system logs in different locations. The default directory for system logs was `<Informatica installation directory>/tomcat/logs/`.

For more information, see the "Log Management" chapter in the *Informatica 10.0 Administrator Guide*.

Log Format

Effective in version 10.0, all logs consistently contain the following information by default:

- Thread name.
- Timestamp, in milliseconds.

Previously, this information was not consistent in logs. For example, some logs did not contain timestamp information, and of those that did, the timestamp format was not consistent.

For more information, see the "Log Management" chapter in the *Informatica 10.0 Administrator Guide*.

Job Log Events

When a Mapping task in a workflow starts a DTM instance to run a mapping, the DTM generates log events for the mapping. The DTM stores the log files in a folder named `mappingtask` in the log directory that you specify for the Data Integration Service process.

Previously the DTM stored the log files in a folder named `builtinhandlers`.

Informatica Administrator

This section describes changes to the Administrator tool in version 10.0.

Domain tab

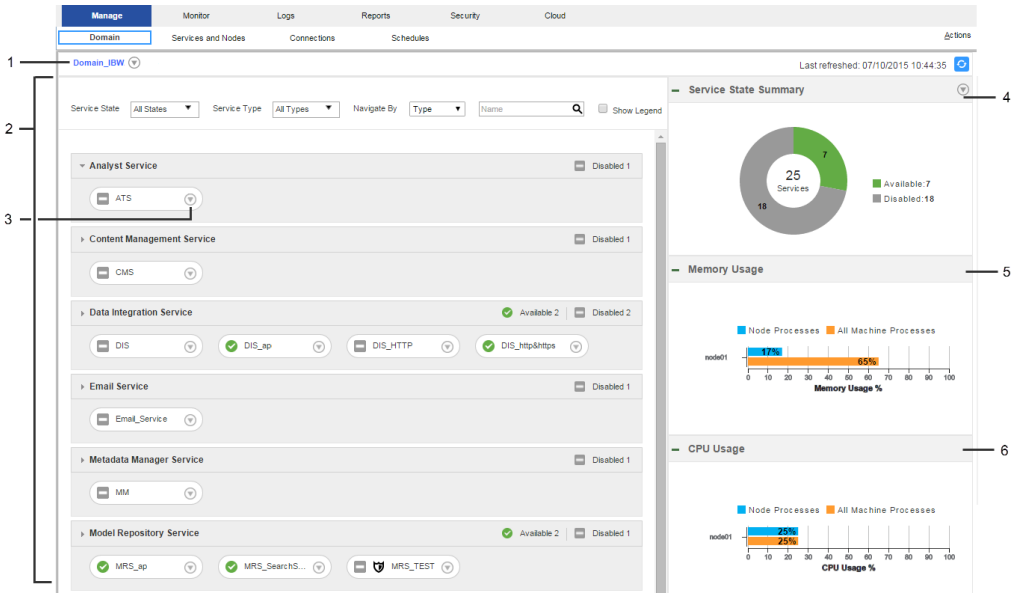
Effective in version 10.0, the **Domain** tab is renamed the **Manage** tab.

The **Manage** tab has the following changes:

Views on the Manage tab

The **Manage** tab includes the **Domain** and **Schedules** views. Use the **Domain** view to view and manage the status and resource consumption of the domain. Use the Schedules view to create and manage reusable schedules for deployed mappings and workflows.

The following image shows the **Domain** view on the **Manage** tab:



1. Domain Actions menu
2. Contents panel
3. Object Actions menu
4. Service State Summary
5. Memory usage indicator
6. CPU usage indicator

Dependency graph

The dependency graph is moved from the **Services and Nodes** view to the **Domain** view. To access the dependency graph, click the **Actions** menu for the domain, a service, or a node, and then choose **View Dependencies**

Global Settings

Global Settings are moved from the **Monitor** tab, formerly **Monitoring** tab, to the **Services and Nodes** view. The Global Settings are renamed **Monitoring Configuration** and are a view in the **Services and Nodes** view.

Overview views

The **Overview** views for the domain and folders in the **Services and Nodes** view are removed. They are replaced by the **Domain** view on the **Manage** tab.

For more information, see the *Informatica 10.0 Administrator Guide*.

Monitoring

Effective in version 10.0, monitoring in the Administrator tool has the following changes:

Global Settings

Global Settings have the following changes:

- Global Settings are moved from the **Monitor** tab Actions menu to the **Manage** tab. Configure global settings on the **Monitoring Configuration** view on the **Services and Nodes** view.
- The **Number of Days to Preserve Historical Data** option is renamed **Preserve Summary Historical Data**. Minimum is 0. Maximum is 366. Default is 180.
- The **Date Time Field** option is renamed **Show Milliseconds in Date Time Field**.

Jobs

Jobs that users deploy from the Developer and Analyst tools are called ad hoc jobs. Ad hoc jobs include previews, mappings, reference tables, enterprise discovery profiles, profiles, and scorecards. Previously, ad hoc jobs were called jobs.

Navigation

The **Monitoring** tab is renamed the **Monitor** tab. Object monitoring is moved to the **Execution Statistics** view.

Preferences

Preferences in the **Monitor** tab Actions menu is renamed **Report and Statistic Settings**.

For more information, see the "Monitoring" chapter in the *Informatica 10.0 Administrator Guide*.

Informatica Analyst

This section describes changes to the Analyst tool in version 10.0.

Profiles

Effective in version 10.0, profiles in the Analyst tool have the following changes:

Column Profile

Effective in version 10.0, you can create a column profile with the **Specify General Properties**, **Select Source**, **Specify Settings**, and **Specify Rules and Filters** steps in the profile wizard.

Previously, you created a column profile with the **Step 1 of 6** through **Step 6 of 6** steps in the profile wizard.

For more information about column profile, see the "Column Profiles in Informatica Analyst" chapter in the *Informatica 10.0 Data Discovery Guide*.

Column Profile Results

Effective in version 10.0, you can view all the columns and rules in a profile in the summary view, and view the properties of a column or rule in detail in the detailed view.

Previously, the profile results were displayed in **Column Profiling**, **Properties**, and **Data Preview** views.

For more information about column profile results, see the "Column Profile Results in Informatica Analyst" chapter in the *Informatica 10.0 Data Discovery Guide*.

Edit a Column Profile

Effective in version 10.0, you can edit a column profile through the profile wizard.

Previously, you could click **Actions** > **Edit** to select and edit one of the options.

For more information about column profile, see the "Column Profiles in Informatica Analyst" chapter in the *Informatica 10.0 Data Discovery Guide*.

Discovery Workspace

Effective in version 10.0, you can click **Discovery workspace** > **Profile**, and choose to create a single source profile or enterprise discovery profile in the profile wizard.

Previously, you had to click **Discovery workspace** > **Data Object Profile** to create a profile, or click **Discovery workspace** > **Enterprise Discovery Profile** to create an enterprise discovery profile.

For more information about column profile, see the "Column Profiles in Informatica Analyst" chapter in the *Informatica 10.0 Data Discovery Guide*.

New Option

Effective in version 10.0, you can click **New** > **Profile** in the header area, and choose to create a single source profile or enterprise discovery profile in the profile wizard.

Previously, you had to click **New** > **Data Object Profile** to create a profile, or click **New** > **Enterprise Discovery Profile** to create an enterprise discovery profile.

For more information about column profile, see the "Column Profiles in Informatica Analyst" chapter in the *Informatica 10.0 Data Discovery Guide*.

Create a Rule

Effective in version 10.0, you can create, add, or delete rules for a profile in the profile wizard.

Previously, you had to click **Actions** > **Edit** > **Column Profiling Rules** to add, delete, or create rules for the profile.

For more information about rules, see the "Rules in Informatica Analyst" chapter in the *Informatica 10.0 Data Discovery Guide*.

Create a Column Profile from a Data Object in Library Workspace

Effective in version 10.0, you can right-click on the data object in the **Library** workspace and create a column profile.

Previously, this option was not available.

For more information about column profiles, see the "Column Profiles in Informatica Analyst" chapter in the *Informatica 10.0 Data Discovery Guide*.

Filters

Effective in version 10.0, all the filters that you create for a profile are applicable to all the columns and data domains in the profile and can be reused in the scorecard that you create on the profile.

Previously, you could create filters for the profile.

For more information about filters, see the "Filters in Informatica Analyst" chapter in the *Informatica 10.0 Data Discovery Guide*.

Sampling Options

Effective in version 10.0, the sampling option is applicable to both column profile and data domain discovery. Previously, you could select different sampling options for the column profile and data domain discovery.

For more information about filters, see the "Filters in Informatica Analyst" chapter in the *Informatica 10.0 Data Discovery Guide*.

Scorecards

This section describes changes to scorecards in the Analyst tool.

Notifications

Effective in version 10.0, scorecards send notifications using the email server configuration in the domain SMTP Configuration properties.

Previously, scorecards used the email server configuration in the Data Integration Service properties.

Scorecard URL

Effective in version 10.0, when you add a scorecard URL to the source code of external applications or web portals and access the URL, you need to log in to Informatica Analyst to view the scorecard due to security reasons.

Previously, scorecard URL for external applications did not prompt for a login access.

Informatica Developer

This section describes changes to the Developer tool in version 10.0.

Application Deployment Changes

This section describes changes to application deployment in version 10.0.

Retain State Information Check Box

Effective in Informatica 10.0, when you redeploy an application, the “Retain state information” check box allows you to choose to retain the current state of run-time objects that are part of the deployed application. The state refers to mapping properties and the properties of run-time objects such as Sequence Generator Transformations.

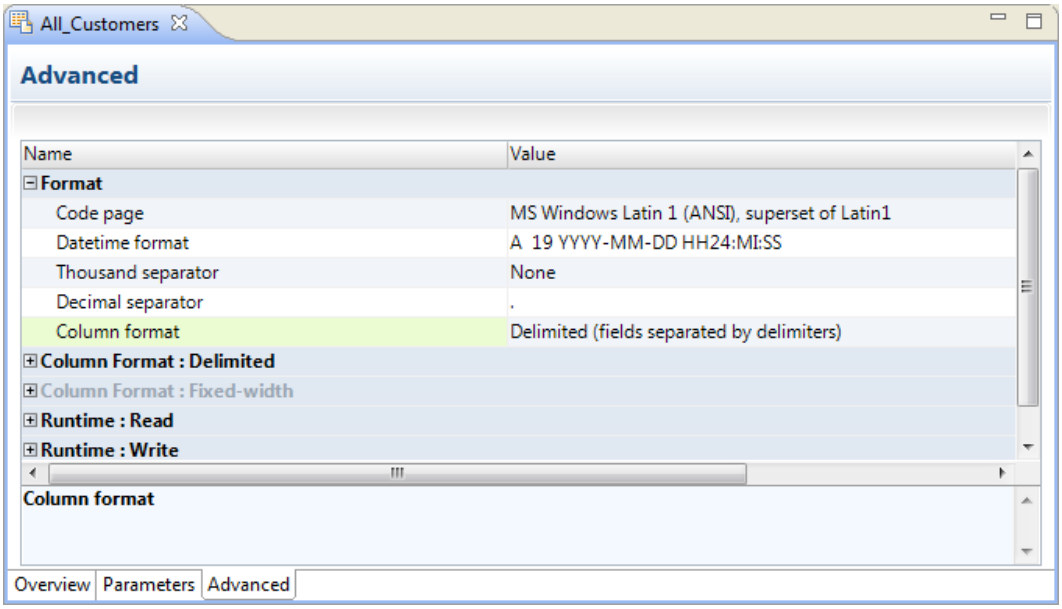
Previously, the Deploy dialog box gave you a choice of “Update” or “Replace.” The “Retain state information” check box replaces the “Update” check box, and is selected by default.

If you select "Retain state information," you retain run-time settings and properties in the deployed application. If you clear “Retain state information,” you discard the state of these settings and properties in the deployed application.

Flat File Data Objects

Effective in version 10.0, you configure all of the format and run-time properties for a flat file data object in the **Advanced** view. The **Advanced** view contains property sections that you can collapse and expand. The column format sections that display depend on whether you configure a delimited or fixed-width column format.

The following image shows the property sections in the **Advanced** view:



Previously, you configured the format and run-time properties for a flat file data object in the **Read** and **Write** views. In the **Read** view, you selected the source transformation to configure format properties. You selected the Output transformation to configure run-time properties. In the **Write** view, you selected the Input transformation to configure run-time properties. You selected the target transformation to configure format properties.

Microsoft SQL Server Changes

Effective in Informatica 10.0, Microsoft SQL Server contains the following changes:

- You can use the ODBC connection type to connect to Microsoft SQL Server.
- You can upgrade your existing connections by using the pmrep and infacmd commands. When you run the upgrade command, all the existing connections are upgraded.
- The existing Microsoft SQL Server connection is deprecated and support will be dropped in the next major release. You can run the existing mappings without manual updates. If you are using SSL connections, you must select the provider type as ODBC in the connection, and configure SSL in the DSN.

Logical Data Object Editing

This section describes changes to the ways you edit logical data objects in the Developer tool in version 10.0.

Logical Data Object and Logical Data Object Model Editors

Effective in Informatica 10.0, you edit logical data objects and logical data object models in separate editors.

Previously, you used the same editor to edit logical data objects and logical data object models.

For more information, see "Logical View of Data" chapter in the *Informatica 10.0 Developer Tool Guide*.

Logical Data Object Mappings

Effective in Informatica 10.0, you create logical data object mappings from the logical data object editor. Click the **Add** button to add a read mapping or a write mapping for the logical data object.

Previously, you clicked **File** > **New** to create logical data object mappings.

For more information, see "Logical View of Data" chapter in the *Informatica 10.0 Developer Tool Guide*.

Pushdown Optimization for ODBC Sources and Targets

Effective in version 10.0, Informatica dropped support for pushdown optimization to ODBC sources and targets that use a provider type of "Other." You must use a provider type that is database-specific.

Mappings

This section describes changes to mappings in version 10.0.

Parameter Files

Effective in version 10.0, the parameter file format is changed. The parameter file no longer contains transformation parameters.

You can run mappings and workflows with the parameter files from previous versions. When you run a mapping or workflow with the previous version parameter file, the Data Integration Service converts the parameter file to the Informatica 10.0 version.

When you create a parameter file with the infacmd listMappingParams command, the Data Integration Service creates a mapping parameter file without transformation parameters. The infacmd listWorkflowParams command creates a workflow parameter file without transformation parameters.

In previous versions, when you created parameter files, the parameter files contained transformation parameters.

For more information about parameter files, see the *Mapping Parameters* chapter of the Informatica Developer Mapping Guide.

Partitioned Mappings

This section describes changes to partitioned mappings in version 10.0.

Parallelism Value Calculations

Effective in version 10.0, the Data Integration Service can create a different number of threads for each mapping pipeline stage. The service determines the optimal number of threads for each pipeline stage. The number of threads created for a single pipeline stage cannot exceed the maximum parallelism value.

Previously, the Data Integration Service calculated a single actual parallelism value and used that same value for each mapping pipeline stage. The service calculated the actual parallelism value based on the maximum parallelism values and on the maximum number of partitions for all flat file, IBM DB2 for LUW, or Oracle sources ready by a mapping.

Partitioned Decision and SQL Transformations

Effective in version 10.0, you can disable partitioning for a Decision or SQL transformation by clearing the **Partitionable** advanced property for the transformation. The Data Integration Service uses one thread to process the transformation, and can use multiple threads to process the remaining mapping pipeline stages. You might want to disable partitioning for these transformations because these transformations might not return the same result for each mapping run when they are processed with multiple threads.

Previously, the Decision transformation did not support partitioning. When a mapping contained a Decision transformation, the Data Integration Service did not create partitions for the entire mapping. The SQL transformation did support partitioning. You disabled partitioning for the entire mapping when this transformation needed to be processed with one thread.

Partitioned Targets

Effective in version 10.0, if a mapping establishes order with a sorted relational source or a Sorter transformation, the Data Integration Service can use multiple threads to run the mapping. To maintain order in a partitioned mapping, you must specify that targets maintain the row order in the advanced properties for the Write transformation. When you configure Write transformations to maintain row order, the Data Integration Service uses a single thread to write to the target.

Previously, if a mapping included a sorted relational source, the Data Integration Service used one thread to process each mapping pipeline stage. If a mapping included a Sorter transformation, the Data Integration Service used one thread to process the Sorter transformation and all downstream mapping pipeline stages.

If you upgrade from an earlier version, all existing Write transformations are configured to maintain row order. The Data Integration Service uses a single thread to write to the target to ensure that any order established in the mapping is maintained. If an upgraded mapping does not establish an order, you can clear the **Maintain Row Order** property in the advanced properties for a Write transformation so that the Data Integration Service can use multiple threads to write to the target.

Partitioned Java Transformations

Effective in version 10.0, you can disable partitioning for a Java transformation by clearing the **Partitionable** advanced property for the transformation. The Data Integration Service uses one thread to process the transformation, and can use multiple threads to process the remaining mapping pipeline stages. You might want to disable partitioning for a Java transformation when the Java code requires that the transformation be processed with one thread.

You can configure a Java transformation to maintain the row order of the input data by selecting the **Stateless** advanced property for the transformation.

Previously, you cleared the stateless property if the Java transformation needed to be processed with one thread. When the stateless property was cleared, the Data Integration Service did not create partitions for the entire mapping.

Transformations that Do Not Support Partitioning

Effective in version 10.0, when a mapping contains a transformation that does not support partitioning, the Data Integration Service uses one thread to process the transformation. The service can use multiple threads to process the remaining mapping pipeline stages.

Previously, when a mapping contained a transformation that did not support partitioning, the Data Integration Service did not create partitions for the mapping. The service used one thread to process each mapping pipeline stage.

For more information about partitioned mappings, see the "Partitioned Mappings" chapter in the *Informatica 10.0 Developer Mapping Guide*.

Pushdown Optimization

Effective in version 10.0, pushdown optimization is removed from the mapping optimizer level. To configure a mapping for pushdown optimization you must select a pushdown type in the mapping run-time properties.

Previously, the Data Integration Service applied pushdown optimization by default with the normal or full optimizer level.

For more information, see the *Informatica 10.0 Developer Mapping Guide*.

Run-time Properties

Effective in version 10.0, configure **Validation Environments** on the **Run-time** tab. The mapping **Properties** view no longer contains an **Advanced** properties tab.

Previously, you configured the **Validation Environments** property on the **Advanced** properties tab.

For more information, see the *Informatica 10.0 Developer Mapping Guide*.

Metadata Manager

This section describes changes to Metadata Manager in version 10.0.

ODBC Connectivity for Informix Resources

Effective in version 10.0, when you load an Informix resource, the PowerCenter Integration Service uses ODBC to connect to the Informix database. Therefore, you can create and load Informix resources whether the Informatica domain runs on Windows or UNIX. To connect to Informix, you must configure an ODBC connection to the Informix database.

Previously, the PowerCenter Integration Service used native connectivity to connect to the Informix database. You could create and load Informix resources only when the Informatica domain ran on 32-bit Windows.

For more information about configuring Informix resources, see the "Database Management Resources" chapter in the *Informatica 10.0 Metadata Manager Administrator Guide*.

ODBC Connectivity for Microsoft SQL Server Resources

Effective in version 10.0, when you load a Microsoft SQL Server resource, the PowerCenter Integration Service uses ODBC to connect to the database. The PowerCenter Integration Service retrieves the server name and the database name from the connect string and creates a data source using the installed ODBC driver.

Therefore, you no longer need to perform the following tasks when you configure a Microsoft SQL Server resource:

- On Windows, you do not need to install the Microsoft SQL Server Native Client.
- On UNIX, you do not need to create a data source for the Microsoft SQL Server database in the odbc.ini file.

  Note: If you previously created a data source in the odbc.ini file, you can still use it by entering the data source name as the connect string.
- You do not need to set the **ODBC Connection Mode** property for the Metadata Manager Service in the Administrator tool. This property is removed because the connection mode for Microsoft SQL Server is always ODBC.

Previously, the PowerCenter Integration Service used native connectivity on Windows and ODBC connectivity on UNIX.

For more information about configuring Microsoft SQL Server resources, see the "Database Management Resources" chapter in the *Informatica 10.0 Metadata Manager Administrator Guide*.

Impact Summary for PowerCenter Objects

Effective in version 10.0, the impact summary displays different information when you view metadata details for some PowerCenter objects.

The impact summary has the following behavior changes:

- When you view metadata details for a session task instance, Metadata Manager lists the mappings that the session task instance runs as related catalog objects but not in the impact summary.

  Previously, Metadata Manager listed the mappings as related catalog objects and in the upstream and downstream impact summary.
- When you view metadata details for a mapplet instance that contains a source definition, Metadata Manager does not list the parent mapping in the impact summary.

  Previously, Metadata Manager listed the parent mapping in the downstream impact summary.
- When you view metadata details for a mapplet instance that does not contain a source, Metadata Manager does not display an impact summary.

  Previously, Metadata Manager displayed an impact summary for mapplet instances that do not contain a source.
- When you view metadata details for an Input or Output transformation instance in a mapplet, Metadata Manager does not display an impact summary.

  Previously, Metadata Manager displayed an impact summary for Input and Output transformation instances in a mapplet.
- When you view metadata details for a Source Qualifier instance in a mapplet that contains a source definition, Metadata Manager does not display the parent mapping in the impact summary.

  Previously, Metadata Manager displayed the parent mapping in the impact summary.

For more information about the impact summary, see the "Viewing Metadata" chapter in the *Informatica 10.0 Metadata Manager User Guide*.

Maximum Concurrent Resource Loads

Effective in version 10.0, the maximum value for the **Max Concurrent Resource Load** property for the Metadata Manager Service is 10. Therefore, you can load up to 10 resources simultaneously.

Previously, the maximum value for the property was 5.

For more information about the **Max Concurrent Resource Load** property, see the "Metadata Manager Service" chapter in the *Informatica 10.0 Application Service Guide*.

Search

Effective in version 10.0, Metadata Manager displays the advanced search criteria and the search results in the Search Results panel at the bottom of the Browse tab. The Search Results panel allows you to view the metadata catalog, business glossaries, shortcuts, or data lineage diagram while you perform a search. You can resize, minimize, and restore the Search Results panel.

Previously, Metadata Manager displayed the advanced search criteria and the search results on a separate tab.

For more information about searches, see the "Searching Metadata" chapter in the *Informatica 10.0 Metadata Manager User Guide*.

Metadata Manager Log File Changes

Effective in version 10.0, the location for the Metadata Manager log files is updated to store all the log files in one directory.

The following Metadata Manager log files are stored in the directory `<Informatica installation directory>\logs\<node name>\services\MetadataManagerService\<Metadata Manager service name>`:

- Load details log
- mm_agent.log
- mm.log
- resourcemigration.log
- mmrepocmd.log

  Note: mmerepocmd.log is stored in the new log files directory when the Metadata Manager Service calls mmRepoCmd. If you run mmRepoCmd from the command line, the utility creates the log file in the directory where mmRepoCmd is located.

In the previous versions of Metadata Manager, these log files were located in different directories. After you upgrade Metadata Manager from a previous version to version 10.0, the existing log files do not get moved to the new location.

For more information about Metadata Manager log files, see the *Informatica 10.0 Metadata Manager Administrator Guide*.

Business Glossary Model

Effective in version 10.0, you cannot export or import the Business Glossary model. Additionally, you cannot customize the Business Glossary model by configuring attributes or relationships.

To export and import business glossary assets and templates or to customize business glossaries, use the Analyst tool.

Profiling

Effective in version 10.0, Metadata Manager does not extract profiling information from relational metadata sources.

Profiling is available in the Analyst tool and the Developer tool.

PowerCenter

This section describes changes to PowerCenter in version 10.0.

Informix Native Connections

Effective in version 10.0, the Informix native connection is obsolete. Informatica dropped support for Informix native connections.

Create an ODBC connection to connect to an Informix database.

For more information, see the *Informatica 10.0 Application Services Guide*.

pmrep Changes

This section describes the changes to pmrep commands.

PurgeVersion command

- Effective in version 10.0, you can use `pmrep purgeVersion -c` with or without the -p option.

  When you use the -c option with the -p option, the output lists the object versions that purge, then lists which object versions are contained in deployment groups.

  When you use the -c option without the -p option, the command does not purge versions that are part of deployment groups.

  Previously, when you used the -c option, the -p option was required.
- Effective in version 10.0, if an object version is a member of a deployment group, the version will not purge.

  When you use `pmrep purgeVersion` with the -k option, the results display all versions that do not purge, and the reason the version does not purge.

  When a version will not be purged because it is in a deployment group, the reason lists only the first deployment group that causes the object not to purge.

  Previously, the inclusion of a version in a deployment group did not affect whether or not it would be purged.

For more information, see the *Informatica 10.0 Command Reference*.

PowerCenter Data Profiling

Effective in version 10.0, PowerCenter Data Profiling is obsolete.

To perform profiling and discovery, use Informatica Analyst or Informatica Developer.

For more information, see the *Informatica 10.0 Data Discovery Guide.*.

PowerExchange Adapters

This section describes changes to PowerExchange adapters in version 10.0.

PowerExchange Adapters for Informatica

This section describes changes to Informatica adapters in version 10.0.

PowerExchange for SAP NetWeaver

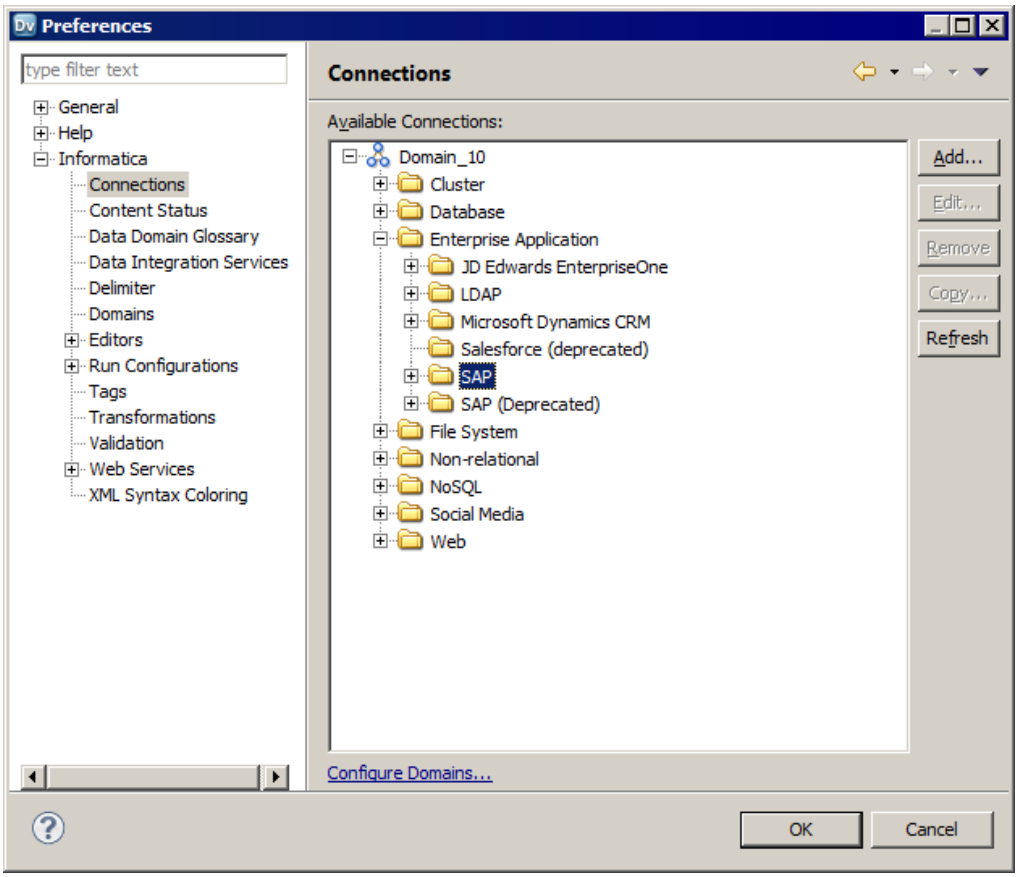
Effective in version 10.0, PowerExchange for SAP NetWeaver contains the following changes:

SAP Connections

The SAP connections that you created in versions earlier than 10.0 are deprecated. The deprecated connection category is named as **SAP (Deprecated)** under **Enterprise Application**.

Informatica will drop support for the deprecated connections in a future release. You can run mappings with the deprecated connections and also create a new deprecated connection. However, Informatica recommends that you create a new SAP connection by using the **SAP** category under **Enterprise Application**.

The following image shows the deprecated SAP connection category and the new SAP connection category that you must use:

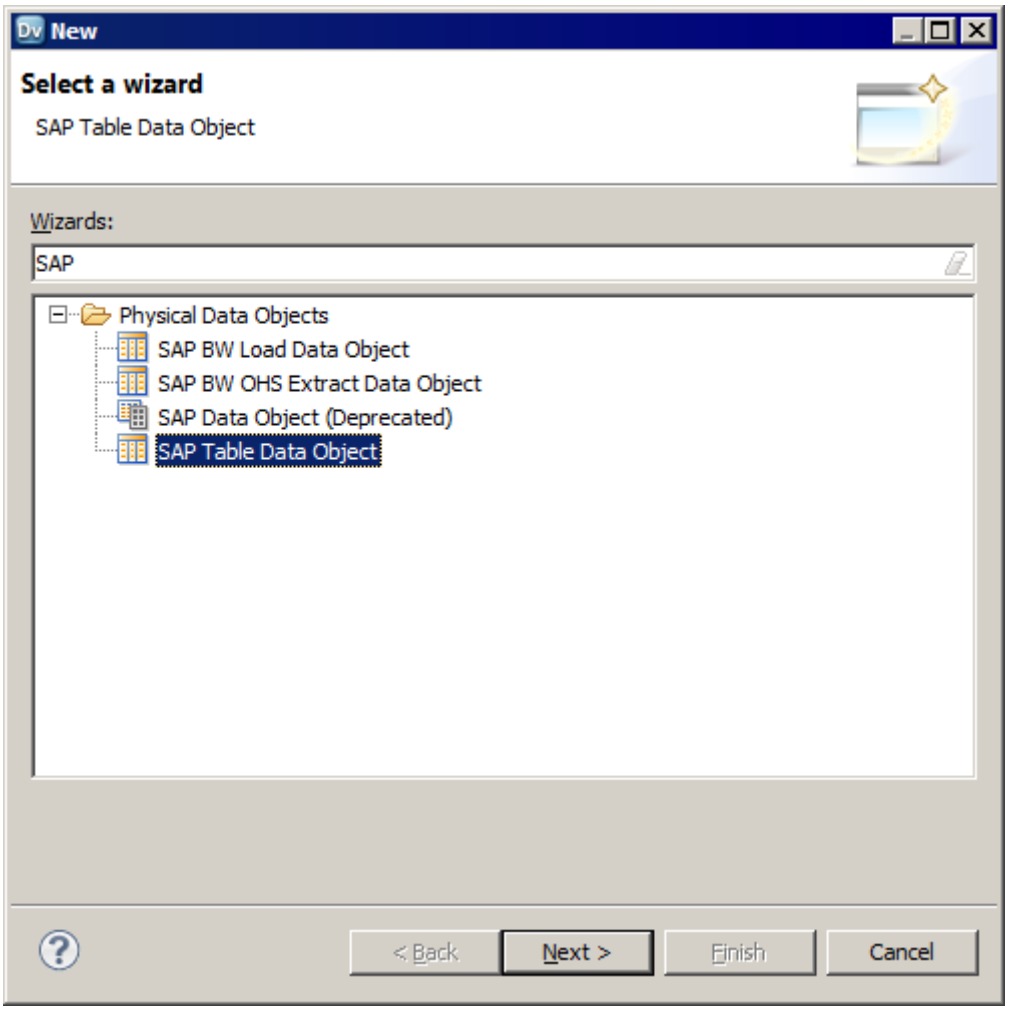


SAP Data Objects

The SAP data objects that you created in versions earlier than 10.0 are deprecated. The deprecated data object type is named as **SAP Data Object (Deprecated)**.

Informatica will drop support for the deprecated data objects in a future release. You can run mappings with the existing data objects and also create a new deprecated data object. However, Informatica recommends that you create a new data object of type **SAP Table Data Object** to read data from SAP tables.

The following image shows the deprecated SAP data object and the new SAP Table data object that you must use:



For more information, see the *Informatica 10.0 PowerExchange for SAP NetWeaver User Guide*.

Reference Data

This section describes changes to reference data operations in version 10.0.

Classifier Models

Effective in version 10.0, you view and manage the data in a classifier model in a single view in the Developer tool.

Previously, you toggled between two views in the Developer tool to see all of the options on a classifier model.

For more information, see the "Classifier Models" chapter of the *Informatica 10.0 Reference Data Guide*.

Probabilistic Models

Effective in version 10.0, Informatica uses version 3.4 of the natural language processing engine from the Stanford Natural Language Processing Group.

Previously, Informatica used version 1.2.6 of the engine.

For more information, see the "Reference Data in the Developer Tool" chapter of the *Informatica 10.0 Reference Data Guide*.

Rule Specifications

This section describes changes in rule specifications in version 10.0.

- Effective in version 10.0, you create inputs and update the input properties in the **Manage Global Inputs** dialog box.

  Previously, you created and updated an input in the rule set that read the input.
- Effective in version 10.0, a rule set uses text indicators to describe the sequence in which data moves through the rule statements.

  Previously, a rule set used numbers to indicate the sequence.
- Effective in version 10.0, the Design workspace in the Analyst tool uses the term "generate" to identify to the operation that creates a mapplet rule from a rule specification.

  Previously, the Design workspace used the term "compile" to identify the operation.
- Effective in version 10.0, you can validate and generate a rule specification that contains unused inputs.

  Previously, a rule specification that contained unused inputs was not valid.
- Effective in version 10.0, you can create and begin work on a rule specification in a single operation.

  Previously, you created and opened a rule specification in separate operations.

For more information, see the *Informatica 10.0 Rule Specification Guide*.

Security

This section describes changes to security in Informatica version 10.0

Authentication

This section describes changes to authentication for the Informatica domain.

Effective in Informatica 10.0, single sign-on for an Informatica domain without Kerberos authentication has the following changes:

Single sign-on with the Developer tool

When you open a web application client from the Developer Tool, you must log in to the web application.

Previously, you did not have to enter log in information for the web application.

Logging out from web application clients

You must log out from each web application client separately if you use the Administrator tool to open a web application client. For example, if you use the Administrator tool to open the Analyst tool, you must log out of the Administrator tool and the Analyst tool separately.

Sources and Targets

This section describes changes to sources and targets in version 10.0.

Sources and Targets in PowerCenter

Effective in version 10.0, the Data Transformation source and target are no longer supported. Instead of the Data Transformation source and target, you can use a flat file source and flat file target that point to the relevant file.

For more information, see the *Informatica PowerCenter 10.0 Designer Guide*.

Transformations

This section describes changed transformation behavior in version 10.0.

Informatica Transformations

This section describes the changes to the Informatica transformations in version 10.0.

Address Validator Transformation

Effective in Informatica 10.0, you cannot use a country name as a parameter value on the Default Country advanced property. When you define a parameter to specify the default country, enter the three-character ISO country code as the parameter value.

Previously, you entered the country name or the three-character ISO country code as the parameter value.

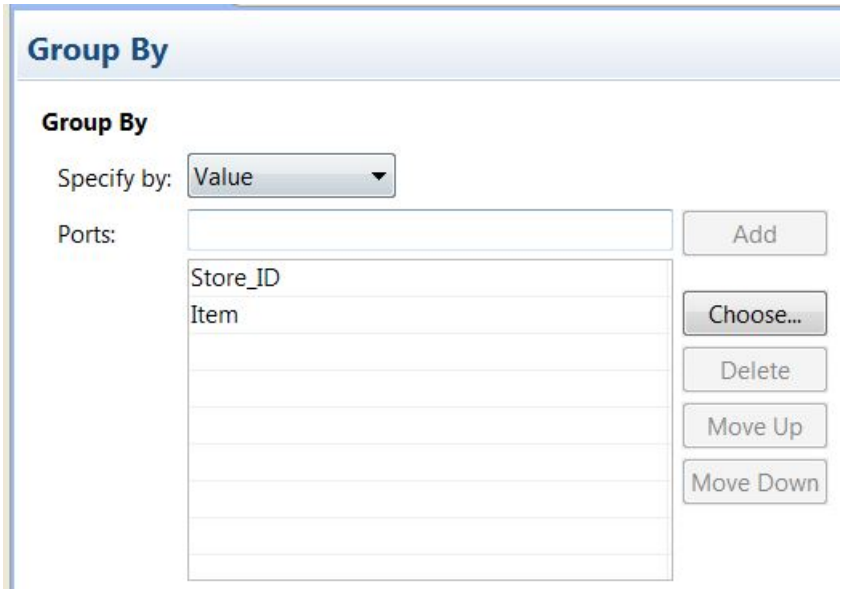
Aggregator Transformation

Effective in version 10.0, you define the group by ports on the **Group By** tab of the Aggregator transformation **Properties** view.

You can parameterize the ports you want to include in the aggregator group with a port list parameter. You can include dynamic ports in the Aggregator transformation.

Previously, you selected group by ports on the **Ports** tab of the transformation **Properties** view.

The following image shows the Group By tab in the Aggregator transformation:



For more information about the Aggregator transformation, see the Aggregator Transformation chapter in the *Informatica 10.0 Developer Transformation Guide*.

Data Processor Transformation

This section describes the changes to the Data Processor transformation.

Additional Output Ports for Relational to Hierarchical Transformation

Effective in version 10.0, a Data Processor transformation with relational input and hierarchical output can have additional output ports. For example, a transformation can work with services that produce validation reports in addition to the main output. Previously, additional output ports were not available.

Multiple JSON Input

Effective in version 10.0, you can use a wizard to create a Data Processor transformation in the Developer with an input file that contains multiple JSON messages. The transformation can process up to 1 M of JSON messages. Previously the transformation processed a single JSON message.

Pass-Through Ports for Relational to Hierarchical Transformation

Effective in version 10.0, a Data Processor transformation with relational input and hierarchical output can use pass-through ports. You add pass-through ports to the root group of the relational structure. Previously, pass-through ports were not available.

Match Transformation

Effective in Informatica 10.0, the Match transformation displays the following changes in behavior:

- Effective in version 10.0, the Match transformation generates unique cluster ID values across all threads in the same process.

  Previously, the Match transformation generated the cluster ID values independently on each thread.
- Effective in version 10.0, you select the following option to connect the Match transformation to a persistent store of identity index data:

  Identity Match with Persistent Record ID

Previously, you selected the **Persist Record IDs** option.

- Effective in version 10.0, you can select the **Clusters - Best Match** output option in all types of identity match analysis.

  Previously, you selected the **Clusters - Best Match** option in single-source identity match analysis.

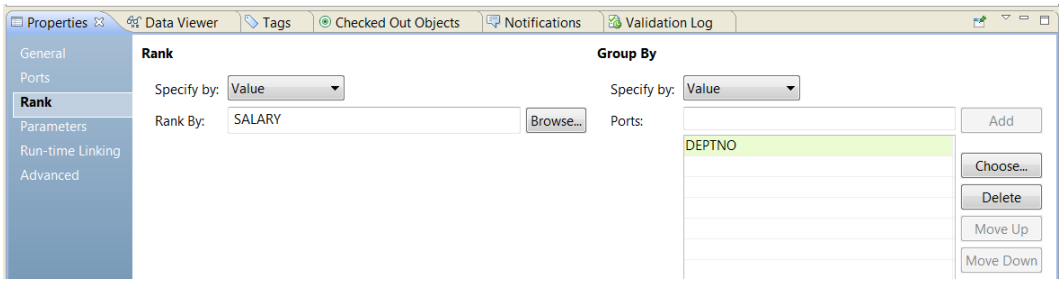
Rank Transformation

Effective in version 10.0, you define the rank port and the group by ports on the **Rank** tab of the transformation **Properties** view.

You can parameterize the rank port with a port parameter. You can parameterize the group by ports with a port list parameter. You can include dynamic ports in the Rank transformation.

Previously, you selected the rank port and the group by ports on the **Ports** tab of the transformation **Properties** view.

The following image shows the Rank tab:



For more information about the Rank transformation, see the *Informatica 10.0 Developer Transformation Guide*.

Sorter Transformation

This section describes changes to the Sorter transformation in version 10.0.

Cache Size

Effective in version 10.0, the Sorter transformation pages fewer cache files to the disk which improves performance. If the configured cache size is too small for the Sorter transformation, the Data Integration Service processes some of the data in memory and only stores overflow data in cache files.

Previously, if the cache size was too small, the Data Integration Service paged all the cache files to the disk.

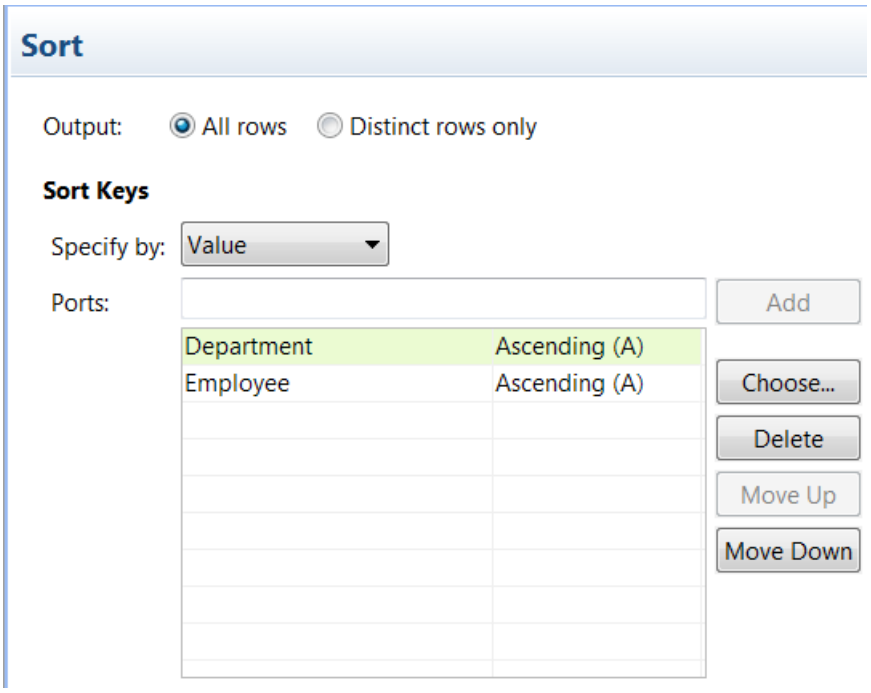
Sort Keys and Distinct Rows

Effective in version 10.0, you define the sort keys on the **Sort** tab of the Sorter transformation **Properties** view. You can also choose to create distinct rows on the **Sort** tab.

You can parameterize the ports you want to include in the sort key with a sort list parameter. You can include dynamic ports in the Sorter transformation.

Previously, you selected ports for sort keys on the **Ports** tab of the transformation **Properties** view. You selected to create distinct rows on the **Advanced** tab.

The following image shows the Sort tab:



For more information, see the *Informatica 10.0 Developer Transformation Guide*.

Workflows

This section describes changed workflow behavior in version 10.0.

Informatica Workflows

This section describes the changes to Informatica workflow behavior in version 10.0.

Command Tasks

Effective in version 10.0, a Command task does not fail when the working directory that the task specifies is not valid.

Previously, a Command task failed when the working directory was not valid.

For more information, see the *Informatica 10.0 Developer Workflow Guide*.

Data Integration Service Options

Effective in version 10.0, you configure a single Data Integration Service to run workflows.

Previously, you might configure different Data Integration Services to run Human tasks and to run the other stages in a workflow.

Effective in version 10.0, the Workflow Orchestration Service module on the Data Integration Service runs all stages in a workflow.

Previously, the Workflow Service module ran all stages in a workflow with the exception of a Human task. The Human Task Service module on the Data Integration Service ran a Human task in a workflow. The Workflow Orchestration Service module replaces the Workflow Service module and the Human Task Service module in version 10.0.

Note: Complete all Human tasks that you run in an earlier version of Informatica before you upgrade to version 10.0.

For more information, see the *Informatica 10.0 Application Service Guide*.

Human Tasks

Effective in version 10.0, a Human task does not stop a workflow when the exceptionLoadCount input value on the task is less than 1. When the exceptionLoadCount input value is less than 1, the Human task completes but generates no data for Analyst tool users.

Previously, a Human task stopped a workflow when the exceptionLoadCount input value was less than 1.

Effective in version 10.0, a Human task sends email notifications using the email server configuration in the Email Service properties.

Previously, a Human task sent email notifications using the email server configuration in the Data Integration Service properties.

Effective in version 10.0, you cannot move from one step to another in a Human task if you cancel the workflow in the following scenario:

- The Human task is running.
- The Data Integration Service distributed all of the task instances that the Human task specifies.

Previously, when you canceled the workflow, you could complete all of the steps in the Human task.

For more information, see the *Informatica 10.0 Developer Workflow Guide*.

Mapping Tasks

Effective in version 10.0, the Data Integration Service creates a log file for each instance of a Mapping task that runs in a workflow instance. If the Mapping task restarts following an interruption in an earlier workflow run, the Data Integration Service creates a log file for the restarted task.

Previously, the Data Integration Service stored log data for all instances of a Mapping task that ran in a workflow instance in a single file.

For more information, see the *Informatica 10.0 Administrator Guide*.

Notification Tasks

Effective in version 10.0, a Notification task sends email notifications using the email server configuration in the Email Service properties.

Previously, a Notification task sent email notifications using the email server configuration in the Data Integration Service properties.

For more information, see the *Informatica 10.0 Developer Workflow Guide*.

Run-Time Metadata

Effective in version 10.0, the Data Integration Service stores all run-time metadata for a workflow in a set of tables in a single database. You select the database connection as a Workflow Orchestration Service property on the Data Integration Service.

Previously, the Data Integration Service stored run-time metadata for a workflow in the Model repository and stored any Human task metadata in the Human task database. The Human task database is obsolete in version 10.0.

Note: You must create the workflow database contents before you run a workflow. To create the contents, use the Actions menu options for the Data Integration Service in the Administrator tool.

For more information, see the *Informatica 10.0 Application Service Guide*.

Workflow Monitoring

Effective in version 10.0, a workflow can enter a completed state if a Command task or a Mapping task in the workflow sequence fails to complete.

For example, a workflow can continue to run to completion if a Mapping task fails in one of the following scenarios:

- You enabled the workflow for recovery, and you configured the Mapping task with a skip recovery strategy.
- You did not enable the workflow for recovery.

Previously, a workflow entered a failed state if a Command task or a Mapping task failed during the workflow run.

For more information, see the *Informatica 10.0 Administrator Guide* and the *Informatica 10.0 Developer Workflow Guide*.

Workflow Object Names

Effective in version 10.0, the following object names must use characters and symbols that conform to the XML 1.0 specification:

- Workflow names
- Task names
- Gateway names
- Workflow application names
- Workflow variable names
- Workflow parameter names

The XML 1.0 specification excludes a small number of characters and symbols from the names. If any name contains a character or symbol that the specification excludes, the workflow fails to run.

Previously, the XML 1.0 specification did not determine the range of valid characters and symbols in workflow names and associated object names.

If you upgrade to version 10.0 or later, edit any workflow or associated object name that contains a character or a symbol that the XML 1.0 specification does not support.

For more information, see the *Informatica 10.1 Upgrading from Version 9.5.1 Guide* and the *Informatica 10.1 Upgrading from Version 9.6.1 Guide*.

Workflow Recovery

Effective in version 10.0, the Data Integration Service does not impose a limit on the number of attempts to recover a workflow. The Administrator tool does not display the number of times that you try to recover the workflow.

Previously, you configured a maximum number of recovery attempts in the Developer tool. The monitoring features of the Administrator tool displayed the number of times that you tried to recover the workflow.

Effective in version 10.0, an aborted workflow is not recoverable.

Previously, an aborted workflow was recoverable.

Effective in version 10.0, when you cancel a workflow, the currently running task might remain in a Running state while the workflow enters a Canceled state. Because the task runs to completion, the workflow status can change to Canceled while the task is still running.

Previously, when you canceled a workflow, the workflow entered a Canceled state when the currently running task ended.

For more information, see the *Informatica 10.0 Administrator Guide* and the *Informatica 10.0 Developer Workflow Guide*.

CHAPTER 20

Release Tasks (10.0)

This chapter includes the following topic:

Mappings

This section describes release tasks for Mappings in version 10.0.

Parameter Precision

Effective in version 10.0, the size of a default parameter value must be less than or equal to the precision specified for the parameter. In previous versions, if the parameter default value was greater than the precision size, the Data Integration Service truncated the parameter default value and the mapping ran successfully.

After the upgrade to 10.0 is complete, you must verify that the size of each parameter default value is less than or equal to the precision specified for the parameter. If the parameter default value is greater than the precision, update the default value or change the precision. Redeploy the mapping.

In version 10.0, if the size of the parameter default value is greater than the parameter precision, a mapping fails with the following error:

```
The parameter [my_parameter] should have a default value length less than or equal to the
precision.
```

Part V: Version 9.6.1

This part contains the following chapters:

CHAPTER 21

New Features, Changes, and Release Tasks (9.6.1 HotFix 4)

This chapter includes the following topics:

New Features (9.6.1 HotFix 4)

This section describes new features in version 9.6.1 HotFix 4.

Command Line Programs

This section describes new commands in version 9.6.1 HotFix 4.

infacmd isp Commands

The following table describes a new infacmd isp command:

Command	Description
ListDomainCiphers	Displays one or more of the following cipher suite lists used by the Informatica domain or a gateway node: **Black list** User-specified list of cipher suites that the Informatica domain blocks. **Default list** List of cipher suites that Informatica supports by default. **Effective list** The list of cipher suites that the Informatica domain uses after you configure it with the infasetup updateDomainCiphers command. The effective list supports cipher suites in the default list and white list but blocks cipher suites in the black list. **White list** User-specified list of cipher suites that the Informatica domain can use in addition to the default list. You can specify which lists that you want to display.

For more information, see the "infacmd isp Command Reference" chapter *Informatica 9.6.1 HotFix 4 Command Reference*.

infasetup Commands

The following table describes new infasetup commands:

Command	Description
ListDomainCiphers	Displays one or more of the following cipher suite lists used by the Informatica domain or a gateway node uses: **Black list** User-specified list of cipher suites that the Informatica domain blocks. **Default list** List of cipher suites that Informatica supports by default. **Effective list** The list of cipher suites that the Informatica domain uses after you configure it with the infasetup updateDomainCiphers command. The effective list supports cipher suites in the default list and white list but blocks cipher suites in the black list. **White list** User-specified list of cipher suites that the Informatica domain can use. You can specify which lists that you want to display.
updateDomainCiphers	Updates the cipher suites that the Informatica domain can use with a new effective list.

The following table describes updated options for infasetup commands:

Command	Description
- DefineDomain - DefineGatewayNode - DefineWorkerNode - UpdateGatewayNode - UpdateWorkerNode	The commands contain the following new options: - cipherWhiteList |-cwl - cipherWhiteListFile |-cwlf - cipherBlackList |-cbl - cipherBlackListFile |-cblf Use these options to configure cipher suites for an Informatica domain that uses secure communication within the domain or secure connections to web application services.

For more information, see the "infasetup Command Reference" chapter in the *Informatica 9.6.1 HotFix 4 Command Reference*.

Connectivity

This section describes new connectivity features in version 9.6.1 HotFix 4.

Schema Names in IBM DB2 Connections

Effective in version 9.6.1 HotFix 4, when you use an IBM DB2 connection to import a table in the Developer tool or the Analyst tool, you can specify one or more schema names from which you want to import the table. Use the ischemaname attribute in the metadata connection string URL to specify the schema names. Use the pipe (|) character to separate multiple schema names.

For example, enter the following syntax in the metadata connection string URL:

```
jdbc:informatica:db2://<host name>:<port>;DatabaseName=<database
name>;ischemaname=<schema_name1>|<schema_name2>|<schema_name3>
```

For more information, see the *Informatica 9.6.1 HotFix 4 Developer Tool Guide* and *Informatica 9.6.1 HotFix 4 Analyst Tool Guide*.

Exception Management

This section describes new exception management features in version 9.6.1 HotFix 4.

Search and replace data values by data type

Effective in version 9.6.1 HotFix 4, you can configure the options in an exception task to search and replace data values based on the data type. You can configure the options to search and replace data in any column that contains date, string, or numeric data.

When you specify a data type, the Analyst tool searches for the value that you enter in any column that uses the data type. You can find and replace any value that a string data column contains. You can perform case-sensitive searches on string data. You can search for a partial match or a complete match between the search value and the contents of a field in a string data column.

For more information, see the Exception Records chapter in the *Informatica 9.6.1 HotFix 4 Exception Management Guide*.

Informatica Domain

This section describes new features to Informatica Domain.

Domain Reports

Effective in version 9.6.1 HotFix 4, the License Management Report includes the consumed cores property. This property indicates the number of cores on the machine.

For more information about the License Management Report, see the "Domain Reports" chapter in the *Informatica 9.6.1 HotFix 4 Administrator Guide*.

Informatica Transformations

This section describes new Informatica transformation features in version 9.6.1 HotFix 4.

Address Validator Transformation

This section describes the new Address Validator transformation features.

The Address Validator transformation contains additional address functionality for the following countries:

Ireland

Effective in version 9.6.1 HotFix 4, you can return the eircode for an address in Ireland. An eircode is a seven-character code that uniquely identifies an Ireland address. The eircode system covers all residences, public buildings, and business premises and includes apartment addresses and addresses in rural townlands.

To return the eircode for an address, select a Postcode port or a Postcode Complete port.

France

Effective in version 9.6.1 HotFix 4, address validation uses the Hexaligne 3 repository of the National Address Management Service to certify a France address to the SNA standard.

The Hexaligne 3 data set contains additional information on delivery point addresses, including sub-building details such as building names and residence names.

Germany

Effective in version 9.6.1 HotFix 4, you can retrieve the three-digit street code part of the *Frachtleitcode* or Freight Code as an enrichment to a valid Germany addresses. The street code identifies the street within the address.

To retrieve the street code as an enrichment to verified Germany addresses, select the Street Code DE port. Find the port in the DE Supplementary port group.

Informatica adds the Street Code DE port in version 9.6.1 HotFix 4.

South Korea

Effective in version 9.6.1 HotFix 4, you can verify older, lot-based addresses and addresses with older, six-digit post codes in South Korea. You can verify and update addresses that use the current format, the older format, and a combination of the current and older formats. A current South Korea address has a street-based format and includes a five-digit post code. A non-current address has a lot-based format and includes a six-digit post code.

To verify a South Korea address in an older format and to change the information to another format, use the Address Identifier KR ports. You update the address information in two stages. First, run the address validation mapping in batch or interactive mode and select the Address Identifier KR output port. Then, run the address validation mapping in address code lookup mode and select the Address Identifier KR input port. Find the Address Identifier KR input port in the Discrete port group. Find the Address Identifier KR output port in the KR Supplementary port group.

To verify that the Address Validator transformation can read and write the address data, add the Supplementary KR Status port to the transformation.

Informatica adds the Address Identifier KR ports, the Supplementary KR Status port, and the KR Supplementary port group in version 9.6.1 HotFix 4.

Effective in version 9.6.1 HotFix 4, you can retrieve South Korea address data in the Hangul script and in a Latin script.

United Kingdom

Effective in version 9.6.1 HotFix 4, you can retrieve delivery point type data and organization key data for a United Kingdom address. The delivery point type is a single-character code that indicates whether the address points to a residence, a small organization, or a large organization. The organization key is an eight-digit code that the Royal Mail assigns to small organizations.

To add the delivery point type to a United Kingdom address, use the Delivery Point Type GB port. To add the organization key to a United Kingdom address, use the Organization Key GB port. Find the ports in the UK Supplementary port group. To verify that the Address Validator transformation can read and write the data, add the Supplementary UK Status port to the transformation.

Informatica adds the Delivery Point Type GB port and the Organization Key GB port in version 9.6.1 HotFix 4.

For more information, see the *Informatica 9.6.1 HotFix 4 Address Validator Port Reference*.

Metadata Manager

This section describes new Metadata Manager features in version 9.6.1 HotFix 4.

Application Properties

Effective in version 9.6.1 HotFix 4, you can configure new application properties in the Metadata Manager imm.properties file.

The following table describes new Metadata Manager application properties in imm.properties:

Property	Description
xconnect.custom.failLoadOnErrorCount	Maximum number of errors that the Metadata Manager Service can encounter before the custom resource load fails.
xconnect.io.print.batch.errors	Number of errors that the Metadata Manager Service writes to the in memory cache and to the mm.log file in one batch when you load a custom resource.

For more information about the imm.properties file, see the "Metadata Manager Properties Files" appendix in the *Informatica 9.6.1 HotFix 4 Metadata Manager Administrator Guide*.

Migrate Business Glossary Audit Trail History and Links to Technical Metadata

Effective in version 9.6.1 HotFix 4, you can migrate audit trail history and links to technical metadata when you export business glossaries. You can import the audit trail history and links in the Analyst tool.

For more information, see the *Informatica 9.6.1 HotFix 4 Upgrading from Version 9.5.1 Guide*.

PowerExchange Adapters

This section describes new PowerExchange adapter features in version 9.6.1 HotFix 4.

PowerExchange Adapters for PowerCenter

This section describes new PowerCenter adapter features in version 9.6.1 HotFix 4.

PowerExchange for Greenplum

Effective in version 9.6.1 HotFix 4, you can configure Kerberos authentication for native Greenplum connections.

For more information, see the "Greenplum Sessions and Workflows" chapter in the *Informatica 9.6.1 HotFix 4 PowerExchange for Greenplum User Guide for PowerCenter*.

PowerExchange for Teradata Parallel Transporter API

Effective in version 9.6.1 HotFix 4, you can configure Kerberos authentication for native Teradata PT connections.

For more information, see the "Teradata PT API Sessions and Workflows" chapter in the *Informatica 9.6.1 HotFix 4 PowerExchange for Teradata Parallel Transporter API User Guide for PowerCenter*.

Security

This section describes new security features in version 9.6.1 HotFix 4.

Custom Cipher Suites

Effective in version 9.6.1 HotFix 4, you can customize the cipher suites that the Informatica domain uses for secure communication within the domain and secure connections to web application services. You can create a whitelist and blacklist to enable or block specific ciphersuites.

The Informatica domain uses an effective list of cipher suites that uses the cipher suites in the default and whitelists but blocks cipher suites in the blacklist.

For more information, see the "Domain Security" chapter in the *Informatica 9.6.1 HotFix 4 Security Guide*.

Changes (9.6.1 HotFix 4)

This section describes changes in version 9.6.1 HotFix 4.

Change to Support in Version 9.6.1 HotFix 4

Effective in version 9.6.1 HotFix 4, Informatica deferred support for Big Data Edition. Support will be reinstated in a future release.

Application Services

This section describes changes to Application Services in version 9.6.1 HotFix 4.

Reporting and Dashboards Service (Deprecated)

Effective in version 9.6.1 HotFix 4, Informatica deprecated the Reporting and Dashboards Service. Informatica will drop support for the Reporting and Dashboards Service in a future release.

If you upgrade to version 9.6.1 HotFix 4, you can continue to use the Reporting and Dashboards Service. Informatica recommends that you begin using a third-party reporting tool before Informatica drops support. You can use the recommended SQL queries for building all the reports shipped with earlier versions of PowerCenter.

If you install version 9.6.1 HotFix 4, you cannot create a Reporting and Dashboards Service. You must use a third-party reporting tool to run PowerCenter and Metadata Manager reports.

For information about the PowerCenter Reports, see the *Informatica PowerCenter Using PowerCenter Reports Guide*. For information about the PowerCenter repository views, see the *Informatica PowerCenter Repository Guide*.

Informatica Domain

This section describes changes to Informatica Domain in version 9.6.1 HotFix 4.

Domain Reports

Effective in version 9.6.1 HotFix 4, the property cores in the License Management Report is renamed to cores per socket. This property describes the number of cores for each socket on the machine.

For more information about the License Management Report, see the "Domain Reports" chapter in the *Informatica 9.6.1 HotFix 4 Administrator Guide*.

Informatica Installation

This section describes the changes to the Informatica Installer in version 9.6.1 HotFix 4.

Install the Java Runtime Environment

Effective in version 9.6.1 HotFix 4, Informatica uses the Java Runtime Environment (JRE) instead of the Java Development Kit (JDK).

Before you install or upgrade Informatica on AIX, HP-UX, or zLinux, you must first install the Java runtime environment (JRE) and set the INFA_JRE_HOME environment variable. When you upgrade, remove the INFA_JDK_HOME environment variable.

For more information, see the "Install the Java Runtime Environment" chapter in the *Informatica 9.6.1 HotFix 4 Installation and Configuration Guide* and the Informatica upgrade guides.

Informatica Transformations

This section describes changes to Informatica transformations in version 9.6.1 HotFix 4.

Address Validator Transformation

This section describes the changes to the Address Validator transformation.

The Address Validator transformation contains the following updates to address functionality:

Address validation engine upgrade

Effective in version 9.6.1 HotFix 4, the Address Validator transformation uses version 5.8.1 of the Informatica Address Verification software engine. The engine enables the features that Informatica adds to the Address Validator transformation in version 9.6.1 HotFix 4.

Previously, the transformation used version 5.7.0 of the Informatica AddressDoctor software engine.

Product name change

Informatica Address Verification is the new name of Informatica AddressDoctor. Informatica AddressDoctor became Informatica Address Verification in version 5.8.0.

Changes to geocode options for United Kingdom addresses

Effective in version 9.6.1 HotFix 4, you can select Rooftop as a geocode data property to retrieve rooftop-level geocodes for United Kingdom addresses.

Previously, you selected the Arrival Point geocode data property to retrieve rooftop-level geocodes for United Kingdom addresses.

If you upgrade a repository that includes an Address Validator transformation, you do not need to reconfigure the transformation to specify the Rooftop geocode property. If you specify rooftop geocodes and the Address Validator transformation cannot return the geocodes for an address, the transformation does not return any geocode data.

Support for unique property reference numbers in United Kingdom input data

Effective in version 9.6.1 HotFix 4, the Address Validator transformation has a UPRN GB input port and a UPRN GB output port.

Previously, the transformation had a UPRN GB output port.

Use the input port to retrieve a United Kingdom address for a unique property reference number that you enter. Use the UPRN GB output port to retrieve the unique property reference number for a United Kingdom address.

For more information, see the *Informatica 9.6.1 HotFix 4 Address Validator Port Reference*.

Metadata Manager

This section describes changes to Metadata Manager in version 9.6.1 HotFix 4.

Certificate Validation for Command Line Programs

Effective in version 9.6.1 HotFix 4, when you configure a secure connection for the Metadata Manager web application, the Metadata Manager command line programs do not accept security certificates that have errors. The property that controls whether a command line program can accept security certificates that have errors is removed.

Previously, the Security.Authentication.Level property in the MMCmdConfig.properties file controlled certificate validation for mmcmd or mmRepoCmd. You could configure the property to either accept all certificates or accept only certificates that do not have errors.

Because the command line programs no longer accept security certificates that have errors, the Security.Authentication.Level property is obsolete. The property no longer appears in the MMCmdConfig.properties files for mmcmd or mmRepoCmd.

For more information about certificate validation for mmcmd and mmRepoCmd, see the "Metadata Manager Command Line Programs" chapter in the *Informatica 9.6.1 HotFix 4 Metadata Manager Administrator Guide*.

Changes to Security

This section describes changes to security in version 9.6.1 HotFix 4.

Transport Layer Security (TLS)

Effective in version 9.6.1 HotFix 4, Informatica uses TLS v1.1 and v1.2 to encrypt traffic. Additionally, Informatica disabled support for TLS v1.0 and lower.

The changes affect secure communication within the Informatica domain, secure connections to web application services, and connections between the Informatica domain to an external destination.

Release Tasks (9.6.1 HotFix 4)

This section describes the release tasks in version 9.6.1 HotFix 4.

Metadata Manager

This section describes release tasks for Metadata Manager in version 9.6.1 HotFix 4.

Verify the Truststore File for Command Line Programs

Effective in version 9.6.1 HotFix 4, when you configure a secure connection for the Metadata Manager web application, the Metadata Manager command line programs do not accept security certificates that have

errors. The property that controls whether a command line program can accept security certificates that have errors is removed.

The Security.Authentication.Level property in the MMCmdConfig.properties file controlled certificate validation for mmcmd or mmRepoCmd. You could set the property to one of the following values:

- NO_AUTH. The command line program accepts the digital certificate, even if the certificate has errors.
- FULL_AUTH. The command line program does not accept a security certificate that has errors.

The NO_AUTH setting is no longer valid. The command line programs now only accept security certificates that do not contain errors.

If a secure connection is configured for the Metadata Manager web application, and you previously set the Security.Authentication.Level property to NO_AUTH, you must now configure a truststore file. To configure mmcmd or mmRepoCmd to use a truststore file, edit the MMCmdConfig.properties file that is associated with mmcmd or mmRepoCmd. Set the TrustStore.Path property to the path and file name of the truststore file.

For more information about the MMCmdConfig.properties files for mmcmd and mmRepoCmd, see the "Metadata Manager Command Line Programs" chapter in the *Informatica 9.6.1 HotFix 4 Metadata Manager Administrator Guide*.

CHAPTER 22

New Features, Changes, and Release Tasks (9.6.1 HotFix 3)

This chapter includes the following topics:

New Features (9.6.1 HotFix 3)

This section describes new features in version 9.6.1 HotFix 3.

Business Glossary

This section describes new Business Glossary features in version 9.6.1 HotFix 3.

Delete Draft Assets

Effective in version 9.6.1 HotFix 3, you can delete draft assets before you publish them for the first time. You cannot delete assets that are in the review, published, or rejected phases. You cannot delete drafts after you revise published or rejected assets.

For more information, see the *Informatica 9.6.1 HotFix 3 Business Glossary Guide*.

Cross Glossary Relationships

Effective in version 9.6.1 HotFix 3, you can create relationships between assets from any glossary. You can link business terms across glossaries. You can link a policy from any glossary to a business term. You can view assets from across glossaries in the relationship view diagram. When you import or export a glossary, you can choose to import or export linked assets from other glossaries.

For more information, see the *Informatica 9.6.1 HotFix 3 Business Glossary Guide*.

Create Hyperlinks from URLs

Effective in version 9.6.1 HotFix 3, you can create hyperlinks when you insert URLs in the **Description**, **Usage Context**, **Example**, and **Reference Table URL** properties for business terms. You can link to assets from any glossary.

For more information, see the *Informatica 9.6.1 HotFix 3 Business Glossary Guide*.

Informatica Data Services

This section describes new Informatica Data Services features in version 9.6.1 HotFix 3.

Query datetime data from Microsoft Access

Effective in version 9.6.1 HotFix 3, you can query an SQL data service that contains datetime data from Microsoft Access. When you configure the Informatica Data Services ODBC Driver, enter the following parameter in the **Optional Parameters** field in the **Configure Data Source to Informatica Data Services** dialog box:

```
APPLICATION=ACCESS
```

When you configure the ODBC driver with this parameter, the Data Integration Service uses the date/time data type for Microsoft Access date data.

Informatica Transformations

This section describes new Informatica transformation features in version 9.6.1 HotFix 3.

Address Validator Transformation

This section describes the new Address Validator transformation features.

Support for locality and neighborhood identification codes in Belgium addresses

Effective in version 9.6.1 HotFix 3, you can configure the Address Validator transformation to return a code that uniquely identifies the neighborhood that contains a Belgium address. To return the code, select the NIS Code output port. Find the port in the BE Supplementary port group.

The NIS Code port returns the five-digit NIS code that identifies the locality and a four-character code that identifies the neighborhood within the locality. The national statistics directorate in Belgium defines the codes.

To return the data on the NIS Code port, the Address Validator transformation reads supplementary address reference data for Belgium. To verify that the Address Validator transformation can read the supplementary data, add the Supplementary BE Status output port to the transformation. Informatica adds the NIS Code port, the Supplementary BE Status port, and the BE Supplementary port group in version 9.6.1 HotFix 3.

Support for Federal Information Addressing System identifiers in Russian Federation addresses

Effective in version 9.6.1 HotFix 3, you can configure the Address Validator transformation to return the Federal Information Addressing System identifier for an address in the Russian Federation. To return the identifier, select the FIAS ID output port. Find the port in the RU Supplementary port group.

The FIAS ID port returns up to 36 characters. The Federal State Statistics Service of the Russian Federation maintains the identifier data.

To return the data on the FIAS ID port, the Address Validator transformation reads supplementary address reference data for the Russian Federation. To verify that the Address Validator transformation can read the supplementary data, add the Supplementary RU Status output port to the transformation.

Informatica adds the FIAS ID port, the Supplementary RU Status port, and the RU Supplementary port group in version 9.6.1 HotFix 3.

Support for unique property reference numbers in Great Britain addresses

Effective in version 9.6.1 HotFix 3, you can configure the Address Validator transformation to return the unique property reference number for an address in Great Britain. The number uniquely identifies the plot of land that contains an address in the United Kingdom. To return the unique property reference number, select the UPRN output port. Find the port in the UK Supplementary port group.

The unique property reference number contains 12 digits. The Ordnance Survey of Great Britain maintains the unique property reference numbers.

To return the data on the UPRN port, the Address Validator transformation reads supplementary address reference data for the Great Britain. To verify that the Address Validator transformation can read the supplementary data, add the Supplementary UK Status output port to the transformation. Informatica adds the UPRN port in version 9.6.1 HotFix 3.

Ability to remove locality and province descriptors from China and Japan addresses

Effective in version 9.6.1 HotFix 3, you can configure the Address Validator transformation to remove locality descriptors and province descriptors from addresses in China and Japan. For example, the Address Validator transformation can return Chaoyang instead of Chaoyangqu and Beijing instead of Beijingshi in Chinese addresses.

To remove the descriptors, configure the Preferred Language property and the Preferred Script property on the transformation.

Ability to validate Bulgaria addresses in Cyrillic script

Effective in version 9.6.1 HotFix 3, you can validate Bulgaria addresses in the Cyrillic script. By default, the Address Validator transformation returns the results in the Cyrillic script.

To receive the results in the Latin script, configure the Preferred Script property on the transformation.

Ability to validate Slovakia addresses that contain street name abbreviations

Effective in version 9.6.1 HotFix 3, you can validate Slovakia addresses that contain major street name abbreviations.

The transformation replaces the abbreviations with the names that the postal authority specifies in the valid address output.

Ability to retrieve province ISO codes in batch, interactive, and fast completion modes

Effective in version 9.6.1 HotFix 3, the Address Validator transformation extends support for ISO 3166-2 province codes to the following countries:

- Canada
- France
- United States

For example, the transformation returns the province code NC, which identifies North Carolina, for the following address:

```
15501 WESTON PKWY STE 150
CARY 27513
USA
```

For more information, see the *Informatica 9.6.1 HotFix 3 Address Validator Port Reference* and the *Informatica 9.6.1 HotFix 3 Developer Transformation Guide*.

Metadata Manager

This section describes new Metadata Manager features in version 9.6.1 HotFix 3.

Metadata Source Versions

Effective in version 9.6.1 HotFix 3, some metadata sources have new supported versions.

The following metadata sources have new supported versions:

- Cloudera Navigator
- ERwin
- Informix

For more information about supported metadata source versions, see the *PCAE Metadata Manager XConnect Support* Product Availability Matrix on Informatica Network:https://network.informatica.com/community/informatica-network/product-availability-matrices/overview

Cloudera Navigator Resources

Effective in version 9.6.1 HotFix 3, you can enable incremental loading and create search queries to decrease the amount of time it takes for Metadata Manager to load Cloudera Navigator resources.

You can configure the following properties when you create or edit a Cloudera Navigator resource:

Enable incremental load

Enables incremental loading for Cloudera Navigator resources after the first successful resource load. When you enable this option, Metadata Manager loads recent changes to the metadata instead of loading complete metadata.

During an incremental load, Metadata Manager extracts only the following entities:

- HDFS entities that were created or changed after the previous resource load
- All Hive tables, views, and partitions
- Operation executions that were created after the previous resource load
- All templates related to the new operation executions

Search query

Query that limits the HDFS entities that Metadata Manager extracts. By default, Metadata Manager does not extract HDFS entities from certain directories that contain only canary files, log files, history files, or deleted files. You can update the default search query to prevent Metadata Manager from extracting other HDFS entities. The query that you enter must use valid Cloudera Navigator search syntax.

For more information about Cloudera Navigator resources, see the *Informatica 9.6.1 HotFix 3 Metadata Manager Administrator Guide*.

Microsoft SQL Server Resources

Effective in version 9.6.1 HotFix 3, Metadata Manager extracts the value of the MS_Description extended property for Microsoft SQL Server table and view columns.

For more information about extracting extended properties for Microsoft SQL Server resources, see the *Informatica 9.6.1 HotFix 3 Metadata Manager Administrator Guide*.

PowerExchange Adapters for PowerCenter

This section describes new PowerCenter adapter features in version 9.6.1 HotFix 3.

PowerExchange for SAP Netweaver

Effective in version 9.6.1 HotFix 3, you can set the `AddQuotesForCachedLookup` custom session property to Yes. This ensures that sessions do not fail when you use HANA table metadata that contains special characters, symbols, or lowercase characters in cached lookups.

PowerExchange for Greenplum

Effective in version 9.6.1 HotFix 3, you can configure the MAX_LINE_LENGTH attribute in the session properties when you load data to a column. This ensures that you can load data to a column with precision 104857600.

Changes (9.6.1 HotFix 3)

This section describes changes in version 9.6.1 HotFix 3.

Business Glossary

This section describes changes to Business Glossary in version 9.6.1 HotFix 3.

Business Glossary Export File

Effective in version 9.6.1 HotFix 3, the order of worksheets in the Business Glossary export file is rearranged. The worksheets that are not recommended to be altered in Microsoft Excel are hidden. The first worksheet is a home page and it provides a brief description of other worksheets in the export file.

Previously, the export file did not have hidden worksheets and a home page.

Business Glossary Security

Effective in version 9.6.1 HotFix 3, a user who is assigned the **Manage Glossaries** privilege in the Analyst tool for a particular glossary cannot perform user and role management for any other glossary.

Previously, a user who was assigned the **Manage Glossaries** privilege in the Analyst tool could modify the permissions and privileges of a user for any glossary.

Glossary Import

Effective in version 9.6.1 HotFix 3, when you import a glossary that is not present in Business Glossary, the Analyst tool creates the glossary during import. When you import a glossary, the Analyst tool automatically populates the custom properties which are present in the glossary with values from the export file. The Analyst tool also attaches the custom properties to the relevant templates, even if the custom properties were not attached to any template before the import process.

Previously, if wanted to import a glossary that was not present in Business Glossary, you first needed to create the glossary in the Analyst tool before importing the glossary contents from the export file. The Analyst tool did not populate the custom properties with information from the export file, when they were not attached to any template.

Synonyms

Effective in version 9.6.1 HotFix 3, synonyms in business terms have the following changed behavior:

- You can remove or modify the **Retirement Date** that you have set for the Synonym property.
- You do not have to use the date picker to set the **Create Date** and **Retirement Date**. You can manually set the date, but it must be in the format determined by the locale of the installation.
- You can see the **Create Date** of a synonym when you open a business term.

Previously, you could not remove or modify the retirement date. You could only use the date picker to set the date. You could not view the date of creation in the business term.

Informatica Transformations

This section describes the changes to the Informatica transformations in version 9.6.1HotFix 3.

Address Validator Transformation

This section describes the changes to the Address Validator transformation.

- Effective in version 9.6.1 HotFix 3, the Address Validator transformation uses version 5.7.0 of the Informatica Address Doctor software engine. The engine enables the features that Informatica adds to the Address Validator transformation in version 9.6.1 HotFix 3.

  Previously, the transformation used version 5.6.0 of the Informatica Address Doctor software engine.
- Effective in version 9.6.1 HotFix 3, you can configure the Address Validator transformation to return the locality information in Switzerland addresses in French, German, or Italian. To set the language, use the Preferred Language property.

  Previously, the Address Validator transformation returned all information in a Switzerland address in the main language of the region to which the address belonged.
- Effective in version 9.6.1 HotFix 3, the Address Validator transformation returns rooftop-level geocodes for addresses in the United Kingdom that do not include house numbers or building number.

  Previously, the transformation returned rooftop-level geocodes for United Kingdom addresses that include house numbers or building numbers.

Data Processor Transformation

This section describes the changes to the Data Processor transformation.

XmlToXlsx with Template

The **XmlToXlsx** document processor converts XML documents to Microsoft Excel .xlsx format. Effective in version 9.6.1 HotFix 3, the **XmlToXlsx** document processor can optionally use an .xlsx template with the XML document to generate the .xlsx document.

Previously, you could generate an .xlsx document based on an XML document.

Metadata Manager

This section describes changes to Metadata Manager in version 9.6.1 HotFix 3.

Business Glossary Resources

Effective in version 9.6.1 HotFix 3, Business Glossary resources have behavior changes.

Business Glossary resources have the following behavior changes:

Privileges required to load Business Glossary resources

Effective in 9.6.1 HotFix 3, to load Business Glossary resources, you need the Load Resource, Manage Resource, and View Model privileges.

Previously, to load Business Glossary resources, you needed the Load Resource and Manage Models privileges for the Metadata Manager Service.

Migrating related catalog objects after upgrade

Effective in version 9.6.1 HotFix 3, do not run the mmcmd migrateBGLinks command after you upgrade a business glossary from version 9.5.x. The migrateBGLinks command restores related catalog objects for upgraded business glossaries. The command now runs automatically the first time that you load a Business Glossary resource after upgrade.

Previously, you had to run the migrateBGLinks command as the last step in the upgrade process for business glossaries.

Related catalog objects for categories

Effective in version 9.6.1 HotFix 3, you cannot create related catalog objects for categories. You can still create related catalog objects for business terms.

Previously, you could relate categories to other categories or to business glossaries in Metadata Manager, but you could not relate categories to other metadata objects. If you did create category to category or category to glossary relationships in Metadata Manager, Metadata Manager did not update these relationships in the Analyst tool business glossary.

To create term to term, term to category, category to term, or category to category relationships, use the Analyst tool.

Property names that contain special characters

Effective in 9.6.1 HotFix 3, Metadata Manager can load Business Glossary resources that contain custom properties with special characters in the name. However, Metadata Manager does not extract custom properties that contain special characters in the name.

Specifically, Metadata Manager does not extract custom properties with names that contain any of the following special characters:

```
~ ' & * ( ) [ ] | \ : ; " ' < > , ? /
```

Previously, if you tried to load a Business Glossary resource that contained custom properties with any of these characters in the name, the load failed.

Microsoft SQL Server Integration Services Resources

Effective in version 9.6.1 HotFix 3, the property that controls how Metadata Manager displays lineage for Script components that are used as transformations is renamed to **Hide transformation scripts**.

Previously, the property was called **Transformation scripts**.

SAP PowerDesigner Resources

Effective in version 9.6.1 HotFix 3, Sybase PowerDesigner resources are called SAP PowerDesigner resources.

Permissions

Effective in version 9.6.1 HotFix 3, permissions control which resources that users can access on the **Load** tab as well as the **Browse** tab. To perform an action on a resource, a user needs both the appropriate privilege and the appropriate permission on the resource.

For example, to view a resource on the **Load** tab, a user needs the View Resource privilege and read permission on the resource. To load a resource, a user needs the Load Resource privilege and write permission on the resource. To edit a resource, a user needs the Manage Resource privilege and write permission on the resource.

Because of this change, the resources that a user sees on the **Load** tab match the resources that the user sees on the **Browse** tab. The user no longer sees all resources on the **Load** tab unless the user has at least read privilege on all resources.

Previously, permissions determined which resources and metadata objects that users could access on the **Browse** tab, but they did not affect the **Load** tab. Permissions for the **Browse** tab are not changed.

Metadata Manager Reports

Effective in version 9.6.1 HotFix 3, when you restart the domain, you no longer have to recycle the Metadata Manager Service to enable the **View Reports** button. If the domain contains a Reporting and Dashboards Service, the **View Reports** button is always enabled.

Previously, when you restarted the domain, you had to recycle the Metadata Manager Service to enable the **View Reports** button.

Security

This section describes changes to security in version 9.6.1 HotFix 3.

Effective in version 9.6.1 HotFix 3, Informatica dropped support for SSL keys that use fewer than 512 bits if they use RSA encryption. This change affects secure communication within the Informatica domain and secure connections to web application services.

If your SSL keys are affected by this change, you must generate new RSA encryption based SSL keys with more than 512 bits or use an alternative encryption algorithm. Then, use the new keys to create the files required for secure communication within the domain or for secure connections to web application services. For more information about the files required for secure communication within the Informatica domain or secure connections, see the *Informatica Security Guide*.

Previously, Informatica supported RSA encryption based SSL keys that use fewer than 512 bits.

Release Tasks (9.6.1 HotFix 3)

This section describes the release tasks in version 9.6.1 HotFix 3.

Metadata Manager

This section describes release tasks for Metadata Manager in version 9.6.1 HotFix 3.

Permissions Associated with Load Privileges

Effective in version 9.6.1 HotFix 3, permissions control which resources that users can access on the **Load** tab as well as the **Browse** tab. A user with any privilege in the Load privilege group requires permissions to perform actions on a particular resource. For example, to load a resource, a user needs Load Resource privilege and write permission on the resource.

After you upgrade to or apply 9.6.1 HotFix 3, you must verify permissions for each user that has privileges in the Load privilege group. If a user does not have the appropriate permissions on a resource, the user cannot view, load, or manage the resource.

The following table lists the privileges and permissions required to manage an instance of a resource in the Metadata Manager warehouse:

Privilege	Includes Privileges	Permission	Description
View Resource	-	Read	User is able to perform the following actions: - View resources and resource properties in the Metadata Manager warehouse. - Export resource configurations. - Download the Metadata Manager Agent installer.
Load Resource	View Resource	Write	User is able to perform the following actions: - Load metadata for a resource into the Metadata Manager warehouse.* - Create links between objects in connected resources for data lineage. - Configure search indexing for resources. - Import resource configurations.
Manage Schedules	View Resource	Write	User is able to perform the following actions: - Create and edit schedules. - Add schedules to resources.
Purge Metadata	View Resource	Write	User is able to remove metadata for a resource from the Metadata Manager warehouse.
Manage Resource	- Purge Metadata - View Resource	Write	User is able to create, edit, and delete resources.
* To load metadata for Business Glossary resources, the Load Resource, Manage Resource, and View Model privileges are required.			

Configure permissions on the **Security** tab of the Metadata Manager application. For more information about configuring permissions, see the *Informatica 9.6.1 HotFix 3 Metadata Manager Administrator Guide*.

CHAPTER 23

New Features, Changes, and Release Tasks (9.6.1 HotFix 2)

This chapter includes the following topics:

New Features (9.6.1 HotFix 2)

This section describes new features in version 9.6.1 HotFix 2.

Big Data

This section describes new big data features in version 9.6.1 HotFix 2.

Informatica Analyst

Big Data Edition has the following new features and enhancements for the Analyst tool:

Analyst tool integration with Hadoop

Effective in version 9.6.1 HotFix 2, you can enable the Analyst tool to communicate with a Hadoop cluster on a specific Hadoop distribution. You must configure the JVM Command Line Options for the Analyst Service.

For more information, see the *Informatica 9.6.1 HotFix 2 Application Services Guide*.

Analyst tool connections

Effective in version 9.6.1 HotFix 2, you can use the Analyst tool to connect to Hive or HDFS sources and targets.

For more information, see the *Informatica 9.6.1 HotFix 2 Analyst User Guide*.

Data Warehousing

Big Data Edition has the following new features and enhancements for data warehousing:

Binary Data Type

Effective in version 9.6.1 HotFix 2, a mapping in the Hive environment can process expression functions that use binary data.

For more information, see the *Informatica 9.6.1 HotFix 2 Big Data Edition User Guide*.

Timestamp and Date Data Type

Effective in version 9.6.1 HotFix 2, PowerExchange for Hive supports the Timestamp and Date data types.

For more information, see the *Informatica 9.6.1 HotFix 2 Big Data Edition User Guide*.

File Format

Effective in version 9.6.1 HotFix 2, you can use the Data Processor transformation to read Parquet input or output.

Apache Parquet is a columnar storage format that can be processed in a Hadoop environment. Parquet is implemented to address complex nested data structures, and uses a record shredding and assembly algorithm.

For more information, see the *Informatica 9.6.1 HotFix 2 Data Transformation User Guide*.

Data Lineage

Effective in version 9.6.1 HotFix 2, you can perform data lineage analysis on big data sources and targets. You can create a Cloudera Navigator resource to extract metadata for big data sources and targets and perform data lineage analysis on the metadata.

For more information, see the *Informatica 9.6.1 HotFix 2 Metadata Manager Administrator Guide*.

Hadoop Ecosystem

Big Data Edition has the following new features and enhancements for the Hadoop ecosystem:

Hadoop Distributions

Effective in version 9.6.1 HotFix 2, Big Data Edition added support for the following Hadoop distributions:

- Cloudera CDH 5.2
- Hortonworks HDP 2.2
- IBM BigInsights 3.0.0.0
- Pivotal HD 2.1

Big Data Edition dropped support for the following Hadoop distributions:

- Cloudera CDH 5.0
- Cloudera CDH 5.1
- Hortonworks HDP 2.1
- Pivotal HD 1.1

For more information, see the *Informatica 9.6.1 HotFix 2 Big Data Edition Installation and Configuration Guide*.

Effective in version 9.6.1 HotFix 2, Big Data Edition supports Cloudera CDH clusters on Amazon EC2.

Kerberos Authentication

Effective in version 9.6.1 HotFix 2, you can configure user impersonation for the native environment. Configure user impersonation to enable different users to run mappings or connect to big data sources and targets that use Kerberos authentication.

For more information, see the Informatica *9.6.1 Big Data Edition User Guide*.

Performance Optimization

Big Data Edition has the following new features for performance optimization:

Compress data on temporary staging tables

Effective in version 9.6.1 HotFix 2, you can enable data compression on temporary staging tables to optimize performance when you run a mapping in the Hive environment. When you enable data compression on temporary staging tables, mapping performance might increase.

To enable data compression on temporary staging tables, you must configure the Hive connection to use the codec class name that the Hadoop cluster uses. You must also configure the Hadoop cluster to enable compression on temporary staging tables.

For more information, see the *Informatica 9.6.1 HotFix 2 Big Data Edition User Guide*.

Parallel sort

Effective in version 9.6.1 HotFix 2, when you use a Sorter transformation in a mapping, the Data Integration Service enables parallel sorting by default when it pushes the mapping logic to the Hadoop cluster.

For more information, see the *Informatica 9.6.1 HotFix 2 Big Data Edition User Guide*.

Profile Run on Hadoop Sources in Informatica Analyst

Effective in version 9.6.1 HotFix 2, you can create and run a column profile, rule profile, and data domain discovery on Hive and HDFS sources in the Analyst tool.

For more information, see the *Informatica 9.6.1 HotFix 2 Big Data Edition User Guide*.

Business Glossary

This section describes new Business Glossary features in version 9.6.1 HotFix 2.

Refresh Asset

Effective in version 9.6.1 HotFix 2, you can refresh an asset in the Glossary workspace. Refresh the asset to view updates to the properties that content managers made after you opened the asset.

For more information, see the *Informatica 9.6.1 HotFix 2 Business Glossary Guide*.

Alert for Duplicate Asset Name

Effective in version 9.6.1 HotFix 2, the Analyst tool displays an alert when you try to create an asset with a name that already exists in the glossary. You can ignore the alert and create the asset with a duplicate name.

For more information, see the *Informatica 9.6.1 HotFix 2 Business Glossary Guide*.

LDAP Authentication in Business Glossary Desktop

Effective in version 9.6.1 HotFix 2, you can use an LDAP domain when you configure server settings to enable the Business Glossary Desktop client to reference the business glossary on a machine that hosts the Analyst Service.

For more information, see the *Informatica 9.6.1 HotFix 2 Business Glossary Desktop Installation and Configuration Guide*.

Command Line Programs

This section describes new and changed commands and options for the Informatica command line programs in version 9.6.1 HotFix 2.

isp Command

Effective in version 9.6.1 HotFix 2, the following table describes an updated isp command:

Command	Description
UpdateGrid	Contains the following new option: -ul. Optional. Updates the current node list with the values in the -nl option instead of replacing the list of nodes previously assigned to the grid. If true, infacmd updates the node list with the list of nodes specified using the -nl option along with the nodes previously assigned to the grid. If false, infacmd replaces the node list with the list of nodes specified using the -nl option. Default is false. Contains the following updated option: -nl. Required. Names of the nodes that you want to assign to the grid. This list of nodes replaces or updates the list of nodes previously assigned to the grid based on the -ul option defined. If you specify the -ul option, the -nl option updates the list of nodes previously assigned to the grid. If you do not specify the -ul option, the -nl option replaces the list of nodes previously assigned to the grid.

Data Quality Accelerators

This section describes new accelerator features in version 9.6.1 HotFix 2.

Updated reference data sets

Effective in version 9.6.1 HotFix 2, Informatica updates the reference data sets that the accelerator rules use to analyze and enhance data.

For more information, see the *Informatica Data Quality 9.6.1 HotFix 2 Accelerator Guide*.

Informatica Developer

This section describes new Informatica Developer features in version 9.6.1 HotFix 2.

Microsoft SQL Server Datetime2 Data Type

Effective in version 9.6.1 HotFix 2, Informatica Developer supports the Microsoft SQL Server Datetime2 data type. The Datetime2 data type can store a range of values from Jan 1, 0001 A.D. 00:00:00 to Dec 31, 9999 A.D. 23:59:59.9999999.

Informatica Domain

This section describes new Informatica domain features in version 9.6.1 HotFix 2.

Informatica on Amazon EC2

Effective in version 9.6.1 HotFix 2, you can setup and launch Informatica services with multiple nodes on Amazon EC2. You can launch an Informatica domain that contains up to four nodes.

Informatica DiscoveryIQ

Effective in version 9.6.1 HotFix 2, Informatica DiscoveryIQ, a product usage tool, sends routine reports on data usage and system statistics to Informatica. Data collection and upload is enabled by default. You can choose to not send any usage statistics to Informatica.

Informatica Transformations

This section describes new Informatica transformation features in version 9.6.1 HotFix 2.

Address Validator Transformation

This section describes the new features on the Address Validator transformation in version 9.6.1 HotFix 2.

Support for Taiwan addresses in the Mandarin Traditional Chinese script

Effective in version 9.6.1 HotFix 2, you can use the Address Validator transformation to validate Taiwan addresses in the Mandarin Traditional Chinese script. You can use ports from the Discrete or Multiline group to define the input address.

To enter a Mandarin Traditional Chinese address on single line, use the Formatted Address Line 1 port.

Enhancements to United States address validation

Effective in version 9.6.1 HotFix 2, the Address Validator transformation returns the county name when the address contains a valid ZIP code and locality. The transformation can add the county name regardless of an `Ix` match status for the address. The transformation adds the name to a Province output port. If the state identifier is absent from the address, the transformation adds the state identifier to a Province port.

When you validate an address that contains hyphenated house numbers, the transformation moves the second part of the house number to a Sub-building port.

Configurable output format for element descriptors

Effective in version 9.6.1 HotFix 2, you can configure the Address Validator transformation to specify the output format for the following elements:

- Street, building, and sub-building descriptors in Australia and New Zealand addresses
- Street descriptors in German addresses.

By default, the transformation returns the descriptor that the reference database specifies for the address. To specify the output format for the descriptors, configure the *Global Preferred Descriptor* property on the transformation.

Support for Address Key codes in United Kingdom Addresses

Effective in version 9.6.1 HotFix 2, you can return the address key for a United Kingdom address. The address key is an eight-digit numeric code identifies the address in the Postcode Address File from the Royal Mail. To add the address key to an address, select the Address Key port. To return the address key, the transformation reads supplementary reference data for the United Kingdom.

Extended data support for Japan

Effective in version 9.6.1 HotFix 2, the Address Validator transformation can validate *Ban* or block information in a Japan address. The Address Validator transformation writes the data to the Street Name 2 port or an equivalent port for dependent street data.

A Japanese address lists the address elements in order of size, from the largest or most general unit to the smallest or most specific unit. The *Ban* element follows the *Chome* element and precedes the *Go* element in the address.

Enhancements to Japan address validation

Effective in version 9.6.1 HotFix 2, you can configure the Address Validator transformation to add the Gaiku code to a Japanese address. To add the code to the address, select the Gaiku Code port.

You can combine the current Choumei Aza code and the Gaiku code in a single string and return the address that the codes identify. To return the complete address, select the Choumei Aza and Gaiku Code JP port and configure the transformation to run in address code lookup mode.

The Japanese reference data contains the Gaiku code, the current Choumei Aza code, and any earlier version of the Choumei Aza code for the address. When you set the *Matching Extended Archive* property to *ON*, the transformation writes all of the codes to the output address.

Support for seven-digit postal codes in Israel

Effective in version 9.6.1 HotFix 2, the Address Validator transformation supports the seven-digit postal codes that Israel Post defines for addresses in Israel. The seven-digit postal codes replace the five-digit postal codes that Israel post previously defined. For example, the seven-digit postal code for Nazareth in Israel is 1623726. Previously, the postal code for Nazareth was 16237.

Enhancement to address validation in Germany, Austria, and Switzerland

Effective in version 9.6.1 HotFix 2, the Address Validator transformation recognizes keywords, such as *Zimmer* and *App,* in the Street Number ports for addresses from Germany, Austria, and Switzerland. The Address Validator transformation writes the keywords to sub-building ports in the output address.

Support for the IRIS code in French addresses

Effective in version 9.6.1 HotFix 2, you can configure the Address Validator transformation to add the IRIS code to an address in France. To add the code to the address, select the INSEE-9 Code output port.

An IRIS code uniquely identifies a statistical unit in a commune in France. INSEE, or the National Institute for Statistics and Economic Research in France, defines the codes. France has approximately 16,000 IRIS units.

Support for rooftop geocoding in the United Kingdom

Effective in version 9.6.1 HotFix 2, you can configure the Address Validator transformation to return rooftop-level geocodes for United Kingdom addresses. Rooftop geocodes identify the center of the primary building on a site or a parcel of land.

To generate the rooftop geocodes, set the *Geocode Data Type* property on the transformation to *Arrival Point*. You must also install the Arrival Point reference data for the United Kingdom.

Improved address reference data for Spain

Effective in version 9.6.1 HotFix 2, Informatica updates the address reference data for Spain. The Address Validator transformation can use the address reference data to validate sub-building-level information in Spanish addresses.

Improved address validation and address reference data for Turkey

Effective in version 9.6.1 HotFix 2, Informatica updates the address reference data for Turkey.

The Address Validator transformation can also perform the following operations when it validates Turkish addresses:

- The transformation can identify a building name and a street name on the Delivery Address Line 1 port.

- The transformation adds a slash symbol (/) between a building element and a sub-building element when the sub-building element is a number.

Improved address validation for Brazil

Effective in version 9.6.1 HotFix 2, Informatica adds the following improvements to address validation for addresses in Brazil:

- The Address Validator transformation can add a third level of sub-building information to the Delivery Address Line and Formatted Address Line ports. The Brazil address system contains three levels of sub-building information.
- The Address Validator transformation validates kilometer information on the Street Additional Info port.

  Note: The Address Validator transformation uses a comma, and not a decimal point, in kilometer information for Brazil.

For more information, see the *Informatica 9.6.1 HotFix 2 Address Validator Port Reference* and the *Informatica 9.6.1 HotFix 2 Developer Transformation Guide*.

Data Processor Transformation

This section describes the new features in the Data Processor transformation in version 9.6.1 HotFix 2:

RunMapplet

The RunMapplet action calls and runs a mapplet as part of a Data Processor transformation. The output of RunMapplet is read into the data holder specified in the RunMapplet action. Use the RunMapplet action to perform tasks such as data masking, data quality, data lookup, and other activities usually related to relational transformations.

Validation Rules Editor

You can use the Validation Rules editor to create user-defined rules that validate XML data. If the data violates the rules, the action generates an XML validation report.

Parquet Input or Output

Use the New Transformation wizard to create a Data Processor transformation with Parquet input or output.

Create an XMap Variable for the XMap Source or Target

You can create an XMap variable to serve as the XMap source or target.

For more information, see the *Informatica 9.6.1 HotFix 2 Data Transformation User Guide*.

Metadata Manager

This section describes new Metadata Manager features in version 9.6.1 HotFix 2.

Cloudera Navigator Resources

Effective in version 9.6.1 HotFix 2, you can create and configure a Cloudera Navigator resource to extract metadata from the metadata component of Cloudera Navigator. You can create one Cloudera Navigator resource for each Hadoop cluster that is managed by Cloudera Manager.

For more information about creating and configuring Cloudera Navigator resources, see the *Informatica 9.6.1 HotFix 2 Metadata Manager Administrator Guide*.

For more information about supported metadata source versions, see the *PCAE Metadata Manager XConnect Support* Product Availability Matrix on Informatica

Network:https://network.informatica.com/community/informatica-network/product-availability-matrices/overview

Microsoft SQL Server Integration Services (SSIS) Resources

Effective in version 9.6.1 HotFix 2, you can create and configure a Microsoft SQL Server Integration Services resource to extract metadata from Microsoft SQL Server Integration Services packages. Metadata Manager can extract metadata from packages in the Microsoft SQL Server repository or from a package in a package (.dtsx) file.

For more information about creating and configuring Microsoft SQL Server Integration Services resources, see the *Informatica 9.6.1 HotFix 2 Metadata Manager Administrator Guide*.

For more information about supported metadata source versions, see the *PCAE Metadata Manager XConnect Support* Product Availability Matrix on Informatica Network:https://network.informatica.com/community/informatica-network/product-availability-matrices/overview

Embarcadero ERStudio Resources

Effective in version 9.6.1 HotFix 2, you can prevent Metadata Manager from importing attachments from Embarcadero ERStudio. Attachments are also called user-defined properties, or UDPs. To prevent Metadata Manager from importing UDPs, enable the **Skip UDP Extraction** property when you configure the resource.

For more information about configuring Embarcadero ERStudio resources, see the *Informatica 9.6.1 HotFix 2 Metadata Manager Administrator Guide*.

PowerCenter Resources

Effective in version 9.6.1 HotFix 2, you can create and load a PowerCenter resource when the PowerCenter repository database type is IBM DB2 for LUW and the database user name differs from the schema name. To specify a schema name that differs from the database user name, enter the schema name in the **Schema Name** property when you configure the PowerCenter resource.

For more information about configuring PowerCenter resources, see the *Informatica 9.6.1 HotFix 2 Metadata Manager Administrator Guide*.

PowerCenter Flat Files in the Impact Summary

Effective in version 9.6.1 HotFix 2, the impact summary lists the flat files that are used in PowerCenter resources.

For more information about viewing the impact summary, see the *Informatica 9.6.1 HotFix 2 Metadata Manager User Guide*.

PowerCenter

This section describes new PowerCenter features in version 9.6.1 HotFix 2.

PowerCenter Upgrade

Effective in version 9.6.1 HotFix 2, PowerCenter preserves the AD50.cfg file when you upgrade from a hotfix or a base release of the same version. The upgrade operation preserves an AD50.cfg file in the server/bin directory and creates an empty configuration file named AD50.cfg.bak in the same directory.

When you upgrade from an earlier PowerCenter version, the upgrade operation writes an empty AD50.cfg file to the server/bin directory. The upgrade operation creates a backup copy of any AD50.cfg file that it finds in the directory.

For more information, see the *Informatica 9.6.1 HotFix 2 Upgrade Guides*.

PowerExchange

This section describes new PowerExchange features in version 9.6.1 HotFix 2.

PowerExchange infacmd pwx Commands

A new parameter is available for some PowerExchange Logger Service infacmd pwx commands.

The infacmd pwx CreateLoggerService and infacmd pwx UpdateLoggerService commands can now include the following optional startup parameter in the -StartParameters option:

encryptepwd=*encryption_password*

A password in encrypted format that enables the encryption of PowerExchange Logger log files. When this password is specified, the PowerExchange Logger can generate a unique encryption key for each Logger log file. The password is stored in the CDCT file in encrypted format. The password is not stored in CDCT backup files and is not displayed in CDCT reports that you generate with the PowerExchange PWXUCDCT utility. To use this encryption password, you must also specify coldstart=Y in the -StartParameters option.

For more information, see the *Informatica 9.6.1 HotFix 2 Command Reference*.

Encryption of PowerExchange Logger Log Files

You can now encrypt PowerExchange Logger Service log files to prevent unauthorized access to sensitive data that is stored in the log files.

To enable log-file encryption for a PowerExchange Logger Service, specify an encryption password in the startup parameters for a cold start of the PowerExchange Logger Service. You enter the encryption password in one of the following ways:

- In the infacmd pwx CreateListenerService or infacmd pwx UpdateListenerService command, add the encryptepwd parameter in the -StartParameters option.
- In the Informatica Administrator, edit the PowerExchange Logger Service configuration properties. In the **Start Parameters** property, add the encryptepwd parameter.

Note: The PowerExchange Logger uses AES encryption algorithms. You can set the type of AES algorithm in the ENCRYPTOPT statement of the PowerExchange Logger configuration file.

PowerExchange Adapters

This section describes new PowerExchange adapter features in version 9.6.1 HotFix 2.

PowerExchange Adapters for Informatica

This section describes new Informatica adapter features in version 9.6.1 HotFix 2.

PowerExchange for Cassandra

Effective in version 9.6.1 HotFix 2, you can tune consistency levels when you read data from or write data to a Cassandra database. Consistency level determines how data is synchronized on all replicas. Based on your requirement of data accuracy or response time, you can set the required consistency level.

For more information, see the *Informatica PowerExchange for Cassandra 9.6.1 HotFix 2 User Guide*.

PowerExchange for LinkedIn

Effective in version 9.6.1 HotFix 2, PowerExchange for LinkedIn secures all API calls to LinkedIn by using HTTPS URLs.

For more information, see the *Informatica PowerExchange for LinkedIn 9.6.1 HotFix 2 User Guide*.

PowerExchange for DataSift

Effective in version 9.6.1 HotFix 2, PowerExchange for DataSift has the following new features and enhancements:

- You can retrieve data from the DataSift buffer.
- You can pause and resume the Historics query.
- You can set the maximum number of attempts to re-establish a connection to DataSift if a connection fails.

For more information, see the *Informatica PowerExchange for DataSift 9.6.1 HotFix 2 User Guide*.

PowerExchange for Hive

Effective in version 9.6.1 HotFix 2, PowerExchange for Hive has the following new features and enhancements:

- You can use the user-defined functions in Informatica to transform the Binary data type in a Hive environment.
- PowerExchange for Hive processes sources and targets that contain the Timestamp data type. The Timestamp data type format is YYYY-MM-DD HH:MM:SS.fffffffff. The Timestamp data type has a precision of 29 and a scale of 9.
- PowerExchange for Hive processes sources and targets that contain the Date data type. The Date data type has a range of 0000-01-01 to 9999-12-31. The format is YYYY-MM-DD. The Date data type has a precision of 10 and a scale of 0.

For more information, see the *Informatica PowerExchange for Hive 9.6.1 HotFix 2 User Guide*.

PowerExchange for MongoDB

Effective in version 9.6.1 HotFix 2, the MongoDB ODBC driver creates a virtual table for each column that contain arrays and nested arrays. You can use the MongoDB ODBC driver to read up to five levels of nested columns and write up to three levels of nested columns.

For more information, see the *Informatica PowerExchange for MongoDB 9.6.1 HotFix 2 User Guide*.

PowerExchange for Salesforce

Effective in version 9.6.1 HotFix 2, PowerExchange for Salesforce has the following new features and enhancements:

- You can configure PowerExchange for Salesforce to capture changed data from a Salesforce object that is replicateable and contains the CreatedDate and SysModstamp fields.

- You can use PowerExchange for Salesforce to connect to Salesforce API v30 and v31.
- The Data Integration Service can push Filter transformation logic to Salesforce sources.

For more information, see the *Informatica PowerExchange for Salesforce 9.6.1 HotFix 2 User Guide*.

PowerExchange Adapters for PowerCenter

This section describes new PowerCenter adapter features in version 9.6.1 HotFix 2.

PowerExchange for Cassandra

Effective in version 9.6.1 HotFix 2, you can tune consistency levels when you read data from or write data to a Cassandra database. Consistency level determines how data is synchronized on all replicas. Based on your requirement of data accuracy or response time, you can set the required consistency level.

For more information, see the *Informatica PowerExchange for Cassandra 9.6.1 HotFix 2 User Guide for PowerCenter*.

PowerExchange for MongoDB

Effective in version 9.6.1 HotFix 2, the MongoDB ODBC driver creates a virtual table for each column that contain arrays and nested arrays. You can use the MongoDB ODBC driver to read up to five levels of nested columns and write up to three levels of nested columns.

For more information, see the *Informatica PowerExchange for MongoDB 9.6.1 HotFix 2 User Guide for PowerCenter*.

PowerExchange for Salesforce Analytics

Effective in version 9.6.1 HotFix 2, you can use PowerExchange for Salesforce Analytics to write data to Salesforce Analytics. You can then run queries on the Salesforce Analytics database to analyze the data.

For more information, see the *Informatica PowerExchange for Salesforce Analytics 9.6.1 HotFix 2 User Guide for PowerCenter*.

PowerExchange for Vertica

Effective in version 9.6.1 HotFix 2, you can perform the following tasks with PowerExchange for Vertica:

- You can create Vertica targets in the Target Designer.
- You can use relational mode to read large volumes of data from a Vertica source. To read data in relational mode, you must create a Vertica relational connection and configure the session to use a relational reader.
- You can use relational mode to update or delete data in a Vertica target. To write data in relational mode, you must create a Vertica relational connection and configure the session to use a relational writer.
- When you use bulk mode to write large volumes of data to a Vertica target, you can configure the session to create a staging file. On UNIX operating systems, when you enable file staging, you can also compress the data in a GZIP format. By compressing the data, you can reduce the size of data that is transferred over the network and improve session performance.
- You can run sessions on a grid to improve session performance.
- The PowerCenter Integration Service can push transformation logic to Vertica sources and targets that use native drivers. For more information, see the *Informatica PowerCenter 9.6.1 HotFix 2 Advanced Workflow Guide*.

For more information, see the *Informatica PowerExchange for Vertica 9.6.1 HotFix 2 User Guide for PowerCenter*.

Workflows

This section describes new workflow features in version 9.6.1 HotFix 2.

Pushdown Optimization for Amazon Redshift

Effective in version 9.6.1 HotFix 2, the PowerCenter Integration Service can push transformation logic to Amazon Redshift sources and targets when the connection type is ODBC.

For more information, see the *Informatica PowerCenter 9.6.1 HotFix 2 Advanced Workflow Guide*.

Support for Teradata Array Insert

Effective in version 9.6.1 HotFix 2, when you use an ODBC connection to connect to a Teradata target, you can insert arrays of data into the Teradata target instead of inserting data row by row. Inserting arrays of data results in higher session performance.

To insert arrays of data into a Teradata target by using an ODBC connection, configure the OptimizeTeradataWrite custom property at the session level or at the PowerCenter Integration Service level and set its value to 1.

For more information, see the *Informatica PowerCenter 9.6.1 HotFix 2 Workflow Basics Guide*.

Changes (9.6.1 HotFix 2)

This section describes changes in version 9.6.1 HotFix 2.

Connectivity

This section describes changes to connectivity in version 9.6.1 HotFix 2.

Sybase IQ External Loader Connection Attributes

Effective in version 9.6.1 HotFix 2, PowerCenter supports connectivity to Sybase IQ database version 16.0 by default. Informatica dropped support for the following Sybase IQ external loader connection attributes because Sybase IQ does not support these connection attributes from version 16.0:

- Block factor
- Block size

If you upgrade to version 9.6.1 HotFix 2 and want to use the block factor and block size connection attributes while connecting to a Sybase IQ database version that is earlier than 16.0, configure the SybaseIQPre16VersionSupport custom property and set its value to Yes.

Informatica Analyst

The following changes apply to Informatica Analyst:

- Effective in 9.6.1 HotFix 2, the Analyst tool displays the full name of the user who owns or most recently updated a Model repository object. The full name appears in any location that identifies the user, for example in the asset details in the library workspace.

  Previously, the Analyst tool displayed the login name of the user in the library workspace and in other locations.

  To view the full name, the login name, and any email address stored for the user, place the cursor on the full name.
- Effective in 9.6.1 HotFix 2, you can select the full name of the user in filter operations in the Analyst tool.

  Previously, you selected the login name of the user in filter operations in the Analyst tool.

Informatica Transformations

This section describes changes to Informatica transformations in version 9.6.1 HotFix 2.

Address Validator Transformation

The following changes apply to the Address Validator Transformation:

- Effective in version 9.6.1 HotFix 2, the Address Validator transformation uses version 5.6.0 of the Informatica Address Doctor software engine. The engine enables the new features that you can use in the Address Validator transformation in version 9.6.1 HotFix 2.

  Previously, the transformation used version 5.5.0 of the Informatica Address Doctor software engine.
- Effective in version 9.6.1 HotFix 2, the Address Validator transformation can return county information and sub-building information when you validate United States address data in suggestion list mode. The transformation returns the county information on a Province 2 port. The transformation returns the sub-building information on a sub-building port.

  The transformation continues to return county information and sub-building information when you validate the address data in batch mode, certified mode, and interactive mode.

  Previously, the transformation did not return the information for United States address data in suggestion list mode.
- Effective in version 9.6.1 HotFix 2, the *National Institute of Statistics and Economic Studies Code* port name changes to *INSEE 9-Code*. You do not need to update the configuration of an Address Validator transformation that uses the National Institute of Statistics and Economic Studies Code port.
- Effective in version 9.6.1 HotFix 2, all Locality Complete ports, Locality Name ports, and Locality Preferred Name ports have a precision of 100.

  Previously, the ports had a precision of 50.

Data Processor Transformation

Effective in version 9.6.1 HotFix 2, a Data Processor transformation that converts hierarchical input to relational output has significantly improved performance.

To further increase performance for XML input, you can clear the Normalize XML Input setting in the Settings tab when XML input is already normalized.

Decision Transformation

Effective in version 9.6.1 HotFix 2, you can set a maximum precision of 1024 on the REPLACESTR() function in the Decision transformation.

Previously, you set a maximum precision of 512 on the function.

Metadata Manager

This section describes changes to Metadata Manager in version 9.6.1 HotFix 2.

Business Glossary Resources

Effective in version 9.6.1 HotFix 2, business glossary resources have the following changes:

- When you load a business glossary resource, Metadata Manager extracts published business terms in unpublished categories. Previously, Metadata Manager did not extract a published business term when the category to which the term belongs was unpublished.
- Metadata Manager no longer displays audit trail information for business terms and categories. To view audit trail information for business terms or categories, view the object history in the Analyst tool.

Metadata Manager Command Line Programs

Effective in version 9.6.1 HotFix 2, Metadata Manager repository commands have behavior changes or changed command options. Additionally, some commands are moved from the mmcmd command line program to the mmRepoCmd command line program.

The following mmRepoCmd command has changed behavior:

restoreRepository

Restores Metadata Manager repository contents from a back-up file. You can restore repository contents to an empty repository. Previously, you had to create repository contents before you could run this command. The options for this command are not changed.

The following commands are moved from mmcmd to mmRepoCmd:

createRepository

Creates the Metadata Manager warehouse tables and imports models for metadata sources into the Metadata Manager repository. You must enable the Metadata Manager Service before you can run this command.

You can run this command from an mmRepoCmd instance that is installed with the Informatica services, Informatica client, or Informatica utilities. Previously, you could run this command from an mmRepoCmd instance that was installed with the Informatica services.

The options for this command are changed. You enter command options for the Metadata Manager user instead of for the domain user. Also, you no longer have to enter command options for the PowerCenter repository. The Metadata Manager Service process restores the PowerCenter repository content when you start the Metadata Manager service.

The following table describes new command options:

Option	Description
-url	Host name and port number of the Metadata Manager Service that runs the Metadata Manager application.
--user	Metadata Manager user name.
--encryptedPassword	Encrypted password flag for the Metadata Manager user password.
--password	Password for the Metadata Manager user.
--namespace	Name of the security domain to which the Metadata Manager user belongs.

The following table describes command options that are removed:

Option	Description
--securityDomain	Name of the security domain to which the Informatica domain user belongs.
--domainUser	User name used to connect to the Informatica domain.
--domainPassword	Password for the Informatica domain user.
-pcRepositoryName	Name of the PowerCenter repository that contains the metadata objects used to load metadata into the Metadata Manager warehouse.
-pcRepositoryUser	User account for the PowerCenter repository. Use the repository user account you configured for the Repository Service.
-pcRepositoryNamespace	Name of the security domain to which the PowerCenter repository user belongs.
-pcRepositoryPassword	Password for the PowerCenter repository user.
-restorePCRepository	Restore the repository back-up file for the PowerCenter repository to create the objects used by Metadata Manager in the PowerCenter repository database.

The following table describes changed command options:

Option	Description
--keyTab	This option specifies the path and file name of the keytab file for the Metadata Manager user instead of for the domain user.

deleteRepository

Deletes Metadata Manager repository content, including all metadata and repository database tables.

You can run this command from an mmRepoCmd instance that is installed with the Informatica services, Informatica client, or Informatica utilities. Previously, you could run this command from an mmRepoCmd instance that was installed with the Informatica services.

The options for this command are changed. You enter command options for the Metadata Manager user instead of for the domain user.

The following table describes new command options:

Option	Description
-url	Host name and port number of the Metadata Manager Service that runs the Metadata Manager application.
--user	Metadata Manager user name.
--encryptedPassword	Encrypted password flag for the Metadata Manager user password.
--password	Password for the Metadata Manager user.
--namespace	Name of the security domain to which the Metadata Manager user belongs.

The following table describes command options that are removed:

Option	Description
--securityDomain	Name of the security domain to which the Informatica domain user belongs.
--domainUser	User name used to connect to the Informatica domain.
--domainPassword	Password for the Informatica domain user.

The following table describes changed command options:

Option	Description
--keyTab	This option specifies the path and file name of the keytab file for the Metadata Manager user instead of for the domain user.

restorePCRepository

Restores a PowerCenter repository back-up file that contains Metadata Manager objects to the PowerCenter repository database. You must run this command from an mmRepoCmd instance that is installed with the Informatica services. The options for this command are not changed.

Metadata Manager Privileges

Effective in version 9.6.1 HotFix 2, the privileges that you need to create or restore the Metadata Manager repository are changed.

To create or restore the Metadata Manager repository, you must belong to the default Administrator group. Previously, you needed the Manage Services privilege with permission on the Metadata Manager Service.

Metadata Manager Product Name

Effective in version 9.6.1 HotFix 2, the product name that appears in the Metadata Manager web application is changed to Metadata Manager. Previously, the product name was Metadata Manager & Business Glossary.

PowerExchange Adapters

This section describes changes to PowerExchange Adapters in version 9.6.1 HotFix 2.

PowerExchange for Vertica

Effective in version 9.6.1 HotFix 2, the following changes apply to pushdown optimization with PowerExchange for Vertica:

- When you push the DATE_DIFF function to Vertica, Vertica rounds the date difference value to the nearest integer. However, the PowerCenter Integration Service returns a float value. If you want the date difference to be treated as a float value in the Vertica database, you can disable pushdown optimization.
- When you specify the format as Y and push the DATE_DIFF function to Vertica, Vertica calculates the difference in the dates in terms of number of days. However, the PowerCenter Integration Service calculates the difference in terms of number of years. If you want the difference value to be treated in terms of number of years, you can disable pushdown optimization.

Release Tasks (9.6.1 HotFix 2)

This section describes the release tasks in version 9.6.1 HotFix 2.

Metadata Manager

This section describes release tasks for Metadata Manager in version 9.6.1 HotFix 2.

HDFS Data Objects in Informatica Platform Resources

Effective in version 9.6.1 HotFix 2, Metadata Manager adds a class for HDFS data objects in Informatica Platform resources. Metadata Manager displays a new icon for objects of this class. The new class and icon differentiate HDFS data objects from flat file data objects.

To display the new class and icon, reload any Informatica Platform resource that includes HDFS data objects.

CHAPTER 24

New Features, Changes, and Release Tasks (9.6.1 HotFix 1)

This chapter includes the following topics:

New Features (9.6.1 HotFix 1)

This section describes new features in version 9.6.1 HotFix 1.

Big Data

This section describes new big data features in version 9.6.1 HotFix 1.

Data Warehousing

Big Data Edition has the following new features and enhancements for data warehousing:

Binary Data Type

Effective in version 9.6.1 HotFix 1, a mapping in the Hive environment can process binary data when it passes through the ports in a mapping. However, the mapping cannot process expression functions that use binary data.

For more information, see the *Informatica 9.6.1 HotFix 1 Big Data Edition User Guide*.

Truncate Partitions in a Hive Target

Effective in version 9.6.1 HotFix 1, the Data Integration Service can truncate the partition in the Hive target. You must choose to both truncate the partition in the Hive target and truncate the target table.

For more information, see the *Informatica 9.6.1 HotFix 1 Big Data Edition User Guide*.

Hadoop Distributions

Effective in version 9.6.1 HotFix 1, Big Data Edition added support for the following Hadoop distributions:

- Cloudera CDH 5.1
- Hortonworks HDP 2.1

Big Data Edition dropped support for Hortonworks HDP 2.0.

For more information, see the *Informatica 9.6.1 HotFix 1 Big Data Edition Installation and Configuration Guide*.

Hadoop Ecosystem

Big Data Edition has the following new features and enhancements for the Hadoop ecosystem:

Cloudera Manager

Effective in version 9.6.1 HotFix 1, you can use Cloudera Manager to distribute the Big Data Edition installation as parcels across the Hadoop cluster nodes for Cloudera CDH 5.1.

For more information, see the *Informatica 9.6.1 HotFix 1 Big Data Edition Installation and Configuration Guide*.

High Availability

Effective in version 9.6.1 HotFix 1, you can enable the Data Integration Service and the Developer tool to read from and write to a highly available Hadoop cluster. A highly available Hadoop cluster can provide uninterrupted access to the JobTracker, NameNode, and ResourceManager in the cluster. You must configure the Developer tool to communicate with a highly available Hadoop cluster on a Hadoop distribution.

For more information, see the *Informatica 9.6.1 HotFix 1 Big Data Edition Installation and Configuration Guide*.

Kerberos Authentication

Effective in version 9.6.1 HotFix 1, you can configure the Informatica domain that uses Kerberos authentication to run mappings in a Hadoop cluster that also uses Kerberos authentication. You must configure a one-way cross-realm trust to enable the Hadoop cluster to communicate with the Informatica domain.

Previously, you could run mappings in a Hadoop cluster that used Kerberos authentication if the Informatica domain did not use Kerberos authentication.

For more information, see the *Informatica 9.6.1 HotFix 1 Big Data Edition User Guide*.

Schedulers

Effective in version 9.6.1 HotFix 1, the following schedulers are valid for Hadoop distributions:

- Capacity scheduler
- Fair scheduler

For more information, see the *Informatica 9.6.1 HotFix 1 Big Data Edition Installation and Configuration Guide*.

Business Glossary

This section describes new Business Glossary features in version 9.6.1 HotFix 1.

Export Relationship View Diagram

Effective in version 9.6.1 HotFix 1, you can export the relationship view diagram after you open it. Export the relationship view diagram to access the diagram when you are not logged in to the Analyst tool or to share the diagram with users who cannot access Business Glossary.

For more information, see the *Informatica 9.6.1 HotFix 1 Business Glossary Guide*.

Multi-valued Attributes in Business Glossary Desktop

Effective in version 9.6.1 HotFix 1, you can view multi-valued attributes in Business Glossary Desktop. Previously, you could only view single-valued attributes. Properties such as Contains and See Also are examples of multi-valued attributes.

Command Line Programs

This section describes new and changed commands and options for the Informatica command line programs in version 9.6.1 HotFix 1.

pmrep Command

Effective in version 9.6.1 HotFix 1, the following table describes an updated pmrep command:

Command	Description
PurgeVersion	Contains the following new option: -k (log objects not purged). Optional. Lists all the object names and versions that do not purge although they match the purge criteria. The -k option also lists the reason that the object versions did not purge. For example, an object version does not purge if you do not have sufficient privileges to purge the object.

isp Commands

Effective in version 9.6.1 HotFix 1, the following table describes new isp commands:

Command	Description
convertUserActivityLog	Converts binary user activity logs to text or XML format.
getUserActivityLog	Retrieves user activity logs in binary, text, or XML format.
migrateUsers	Migrates the groups, roles, privileges and permissions of users in a native security domain to users in one or more LDAP security domains. Requires a user migration file.

Connectivity

This section describes new connectivity features in version 9.6.1 HotFix 1.

Netezza Connectivity

Effective in version 9.6.1 HotFix 1, you can use ODBC to read data from and write data to a Netezza database.

For more information, see the *Informatica 9.6.1 HotFix 1 Developer Tool Guide*.

Data Quality Accelerators

This section describes new Data Quality accelerator features in version 9.6.1 HotFix 1.

Data Cleansing Rules

Effective in version 9.6.1 HotFix 1, you can select the following rule when you add the Core accelerator to a Model repository project:

rule_GTIN_Validation

Validates a Global Trade Item Number (GTIN). The rule validates eight-dight, twelve-digit, thirteen-digit, and fourteen-digit numbers. The rule returns "Valid" if the check digit is correct for the number and "Invalid" if the check digit is incorrect.

Find the rule in the General_Data_Cleansing folder of the accelerator project in the Model repository.

For more information, see the *Informatica 9.6.1 HotFix 1 Accelerator Guide*.

Matching Rules

Effective in version 9.6.1 HotFix 1, all Data Quality accelerator rules that perform match analysis contain a pass-through input port and a pass-through output port. Use the ports to pass unique identifiers through a rule.

Find the rules in the Matching_Deduplication folder of the accelerator project in the Model repository.

For more information, see the *Informatica 9.6.1 HotFix 1 Accelerator Guide*.

Documentation

This section describes new or updated guides included with the Informatica documentation in version 9.6.1 HotFix 1.

The Informatica documentation contains the following changed guide:

Informatica Business Glossary Version 2.0 API Reference Guide

Effective in version 9.6.1 HotFix 1, a new version of the guide contains URLs and parameters of the Business Glossary REST APIs used to develop a client application.

Informatica Developer

This section describes new Informatica Developer features in version 9.6.1 HotFix 1.

Customized Data Object Write Properties

Effective in version 9.6.1 HotFix 1, the Truncate Hive Target Partition property is added to the customized data object write properties. This property overwrites the partition in the Hive target in which the data is being inserted. To enable this option, you must also select the option to truncate target tables.

For more information, see the *Informatica 9.6.1 HotFix 1 Developer Tool Guide*.

Netezza Pushdown Optimization

Effective in version 9.6.1 HotFix 1, the Data Integration Service can push transformation logic to Netezza sources that use native drivers.

For more information, see the *Informatica 9.6.1 HotFix 1 Mapping Guide*.

Secure Communication for SAP HANA

Effective in version 9.6.1 HotFix 1, you can configure secure communication to an SAP HANA database with the SSL protocol.

Informatica Domain

This section describes new Informatica domain features in version 9.6.1 HotFix 2.

Informatica on Amazon EC2

Effective in version 9.6.1 HotFix 2, you can setup and launch Informatica services with multiple nodes on Amazon EC2. You can launch an Informatica domain that contains up to four nodes.

Informatica DiscoveryIQ

Effective in version 9.6.1 HotFix 2, Informatica DiscoveryIQ, a product usage tool, sends routine reports on data usage and system statistics to Informatica. Data collection and upload is enabled by default. You can choose to not send any usage statistics to Informatica.

Informatica Transformations

This section describes new Informatica transformation features in version 9.6.1 HotFix 1.

Address Validator Transformation

Effective in version 9.6.1 HotFix 1, you can select the following ports on the Address Validator transformation:

Input Data

Output port that contains the data elements in an input address record in a structured XML format.

Result

Output port that contains data elements that represent the data in an output address in a structured XML format.

Find the Input Data port and the Result port in the XML port group on the transformation.

For more information, see the *Informatica 9.6.1 HotFix 1 Address Validator Port Reference*.

Mappings

This section describes new mapping features in version 9.6.1 HotFix 1.

Informatica Mappings

Branch Pruning Optimization Method

Effective in version 9.6.1 HotFix 1, the Data Integration Service can apply the branch pruning optimization method. When the Data Integration Service applies the branch pruning method, it removes transformations that do not contribute any rows to the target in a mapping.

The Developer tool enables the branch pruning optimization method by default when you choose the normal or full optimizer level. You can disable branch pruning if the optimization does not increase performance by setting the optimizer level to minimal or none.

For more information, see the *Informatica Data Services 9.6.1 HotFix 1 Performance Tuning Guide*.

Constraints

Effective in version 9.6.1 HotFix 1, the Data Integration Service can read constraints from relational sources, logical data objects, physical data objects, or virtual tables. A constraint is a conditional expression that the values on a data row must satisfy. When the Data Integration Service reads constraints, it might drop the rows that do not evaluate to TRUE for the data rows based on the optimization method applied.

For more information, see the *Informatica 9.6.1 HotFix 1 Mapping Guide*.

Metadata Manager

This section describes new Metadata Manager features in verison 9.6.1 HotFix 1.

Browser Support

Effective in version 9.6.1 HotFix 1, the Metadata Manager application can run in the following web browsers:

- Internet Explorer 11.0
- Google Chrome 35

For more information about product requirements and supported platforms, see the Product Availability Matrix on Informatica Network:https://network.informatica.com/community/informatica-network/product-availability-matrices

Microsoft SQL Server and Oracle Exadata Versions

Effective in version 9.6.1 HotFix 1, Metadata Manager supports the following database versions:

- Microsoft SQL Server 2014
- Oracle Exadata 11g

Therefore, you can perform the following actions:

- Create Microsoft SQL Server or Oracle resources that extract metadata from these database versions.
- Create Business Glossary, Informatica Platform, or PowerCenter resources when the Model repository or PowerCenter repository is in either of these database versions.
- Create the Metadata Manager repository in either of these database versions.

For more information about creating resources, see the *Informatica 9.6.1 HotFix 1 Metadata Manager Administrator Guide*. For more information about creating the Metadata Manager repository, see the *Informatica 9.6.1 HotFix 1 Installation and Configuration Guide*.

Security Enhancements

Effective in version 9.6.1 HotFix 1, when you create or edit a PowerCenter resource, you can prevent Metadata Manager from displaying secure JDBC parameters that are part of the JDBC URL for the PowerCenter repository database.

For more information, see the *Informatica 9.6.1 HotFix 1 Metadata Manager Administrator Guide*.

PowerCenter

This section describes new PowerCenter features in version 9.6.1 HotFix 1.

Secure Communication for SAP HANA

Effective in version 9.6.1 HotFix 1, you can configure secure communication to an SAP HANA database with the SSL protocol.

PowerExchange Adapters

This section describes new PowerExchange adapter features in version 9.6.1 HotFix 1.

PowerExchange Adapters for Informatica

This section describes new Informatica adapter features in version 9.6.1 HotFix 1.

PowerExchange for Cassandra

Effective in version 9.6.1 HotFix 1, you can use PowerExchange for Cassandra to read data from or write data to a Cassandra database. You can add a Cassandra data object as a source or a target in a mapping and run the mapping to read or write data. You can create virtual tables to use Cassandra collections in a mapping.

For more information, see the *Informatica PowerExchange for Cassandra 9.6.1 HotFix 1 User Guide*.

PowerExchange for Greenplum

Effective in version 9.6.1 HotFix 1, you can configure secure communication to a Greenplum database with the SSL protocol.

For more information, see the *Informatica PowerExchange for Greenplum 9.6.1 HotFix 1 User Guide*.

PowerExchange for HBase

Effective in version 9.6.1 HotFix 1, you can use PowerExchange for HBase to connect to an HBase data store that uses Kerberos authentication. You must enable Kerberos authentication and configure HBase connection properties to access an HBase data store that uses Kerberos authentication.

For more information, see the *Informatica PowerExchange for HBase 9.6.1 HotFix 1 User Guide*.

PowerExchange for HDFS

Effective in version 9.6.1 HotFix 1, when you read complex files, you can use the `com.informatica.adapter.hdfs.hadoop.io.InfaBatchTextInputFormat` input format to read text files in batches and increase performance.

For more information, see the *Informatica PowerExchange for HDFS 9.6.1 HotFix 1 User Guide*.

PowerExchange for Hive

Effective in version 9.6.1 HotFix 1, PowerExchange for Hive supports the Binary data type in a Hive environment. The Binary data type has a range of 1 to 104,857,600 bytes.

For more information, see the *Informatica PowerExchange for Hive 9.6.1 HotFix 1 User Guide*.

PowerExchange for Salesforce

Effective in version 9.6.1 HotFix 1, you can use the PowerExchange for Salesforce connection listed under the Cloud connection category to read data from and write data to Salesforce. You can add a Salesforce data object operation as a source or a target in a mapping and run the mapping to read or write data.

For more information, see the *Informatica PowerExchange for Salesforce 9.6.1 HotFix 1 User Guide*.

PowerExchange for SAS

Effective in version 9.6.1 HotFix 1, you can use PowerExchange for SAS to read data from SAS and write data to SAS.

For more information, see the *Informatica PowerExchange for SAS 9.6.1 HotFix 1 User Guide*.

PowerExchange for Tableau

Effective in version 9.6.1 HotFix 1, you can use PowerExchange for Tableau to generate the Tableau data extract file by reading data from multiple sources, such as flat files and SAP applications. Business users can open the extract file in Tableau Desktop to visualize the data and identify patterns and trends.

For more information, see the *Informatica PowerExchange for Tableau 9.6.1 HotFix 1 User Guide*.

PowerExchange Adapters for PowerCenter

This section describes new PowerCenter adapter features in version 9.6.1 HotFix 1.

PowerExchange for Cassandra

Effective in version 9.6.1 HotFix 1, you can use PowerExchange for Cassandra to extract data from and load data to a Cassandra database. You can create virtual tables to use Cassandra collections in a mapping.

For more information, see the *Informatica PowerExchange for Cassandra 9.6.1 HotFix 1 User Guide for PowerCenter*.

PowerExchange for Greenplum

Effective in version 9.6.1 HotFix 1, you can configure secure communication to a Greenplum database with the SSL protocol.

For more information, see the *Informatica PowerExchange for Greenplum 9.6.1 HotFix 1 User Guide for PowerCenter*.

PowerExchange for Vertica

Effective in version 9.6.1 HotFix 1, you can use PowerExchange for Vertica to write large volumes of data to a Vertica database.

For more information, see the *Informatica PowerExchange for Vertica 9.6.1 HotFix 1 User Guide for PowerCenter*.

Reference Data

This section describes new reference data features in version 9.6.1 HotFix 1.

Probabilistic Models

Effective in version 9.6.1 HotFix 1, you can view the total number of reference data values that you assigned to a label in a probabilistic model.

You can use wildcard characters to search for data values in a probabilistic model.

For more information, see the *Informatica 9.6.1 HotFix 1 Reference Data Guide*.

Rule Specifications

This section describes new rule specification features in version 9.6.1HotFix 1.

Date and Time Operations

Effective in version 9.6.1 HotFix 1, you can configure a rule statement to perform the following operations on date and time data:

- Return the date and time at which the Data Integration Service runs the mapping that contains the rule statement.
- Determine if a time stamp references a point in time before or after the Data Integration Service runs the mapping that contains the rule statement.
- Convert a string of date and time data to a date/time data type.

For more information, see the *Informatica 9.6.1 HotFix 1 Rule Specification Guide*.

Reference Table Operations

Effective in version 9.6.1 HotFix 1, you can configure a rule statement to return a value that you specify when an input value matches a reference table value.

For more information, see the *Informatica 9.6.1 HotFix 1 Rule Specification Guide*.

Changes (9.6.1 HotFix 1)

This section describes changes in version 9.6.1 HotFix 1.

Application Services

This section describes changes to application services in version 9.6.1 HotFix 1.

Content Management Service

Effective in version 9.6.1 HotFix 1, the Content Management Service sets default values for the following Address Validation process properties:

- No Pre-Load Countries
- No Pre-Load Geocoding Countries
- No Pre-Load Suggestion List Countries
- No Pre-Load Address Code Countries

The Content Management Service sets the default value for each property to ALL.

Previously, the Content Management Service did not set default values for the properties.

Note: The default properties do not affect the data output from any address validation mapping that you created in an earlier product version.

Business Glossary

This section describes changes to Business Glossary in version 9.6.1 HotFix 1.

Business Glossary API changes

The URLs and parameters of the Business Glossary REST APIs used to develop a client application have changed.

Informatica Transformations

This section describes changes to Informatica transformations in version 9.6.1 HotFix 1.

Address Validator Transformation

The following changes apply to the Address Validator transformation in version 9.6.1 HotFix 1:

- Effective in version 9.6.1 HotFix 1, the Address Validator transformation populates additional fields in a Software Evaluation and Recognition Program (SERP) report. The SERP report includes the following fields:
  - Processing Date
  - Date of CPC Address Data File

  Previously, the transformation did not populate the fields.
- Effective in version 9.6.1 HotFix 1, the Extended Element Status port name is Extended Element Result Status.

Data Processor Transformation

Effective in version 9.6.1 HotFix 1, you can export a Data Processor transformation with an XMap object and import it again into the Developer tool as a transformation with an XMap object.

Previously, when you exported a Data Processor transformation with an XMap object, it was re-imported into the Developer tool as a transformation with a Script object.

Metadata Manager

This section describes changes to Metadata Manager in version 9.6.1 HotFix 1.

Microsoft Analysis and Reporting Services Metadata Source Version

Effective in version 9.6.1 HotFix 1, you can create Microsoft Analysis and Reporting Services resources to extract metadata from Microsoft Analysis and Reporting Services version 10.5 (2008 R2).

Previously, you could extract metadata from Microsoft Analysis and Reporting Services version 9.0 (2005).

Search

Effective in version 9.6.1 HotFix 1, the behavior for customizing the list of words to ignore in searches is changed.

The behavior is changed in the following ways:

- You no longer need to create the stopwords.txt file manually. Instead, the Informatica services installer creates a default stopwords.txt file in the following directory:

  ```
  <Informatica installation directory>\services\shared\jars\pc\classes
  ```
- You must set the UseCustomStopWords property in the imm.properties file to true.

The stopwords.txt file created by the installer contains the default list of English words to ignore in searches. To customize the word list, update the stopwords.txt file, enable the UseCustomStopWords property, disable and enable the Metadata Manager Service, and then manually update the search index for all resources.

Previously, to customize the word list, you had to create the stopwords.txt file manually, disable and enable the Metadata Manager Service, and then manually update the search index for all resources.

PowerCenter Transformations

This section describes changes to PowerCenter transformations in version 9.6.1 HotFix 1.

Data Masking Transformation

Effective in version 9.6.1 HotFix 1, you set the substitution dictionary owner name and the storage owner name in the transaction environment properties.

Previously, you set the substitution dictionary owner name and the storage owner name in the Transformations view on the Mapping tab in the session properties.

PowerExchange

This section describes changes to PowerExchange functionality in the Informatica domain in version 9.6.1 HotFix 1.

infacmd pwx displayStatsListener Command

Effective in version 9.6.1 HotFix 1, the infacmd pwx displayStatsListener command can produce monitoring statistics for PowerExchange Listener processes on Linux, zLinux, and UNIX. Previously, the command produced statistics only for PowerExchange Listener processes on Windows.

PowerExchange Adapters

This section describes changes to PowerExchange adapters in version 9.6.1 HotFix 1.

PowerExchange Adapters for Informatica

This section describes changes to Informatica adapters in version 9.6.1 HotFix 1.

PowerExchange for Salesforce

Effective in version 9.6.1 HotFix 1, the PowerExchange for Salesforce connection listed under the Enterprise connection category is deprecated and Informatica will drop support in the next major release. Informatica recommends that you use the new PowerExchange for Salesforce connection listed under the Cloud connection category to read data from and write data to Salesforce.

PowerExchange for Mongo DB

Effective in version 9.6.1 HotFix 1, the name of the Informatica PowerExchange for Mongo DB ODBC driver file is `libinformaticamongodbodbc64.so`.

Previously, the name of the Informatica PowerExchange for Mongo DB ODBC driver file was `libsimbamongodbodbc64.so`.

PowerExchange Adapters for PowerCenter

This section describes changes to PowerCenter adapters in version 9.6.1 HotFix 1.

PowerExchange for Mongo DB

Effective in version 9.6.1 HotFix 1, the name of the Informatica PowerExchange for Mongo DB ODBC driver file is `libinformaticamongodbodbc64.so`.

Previously, the name of the Informatica PowerExchange for Mongo DB ODBC driver file was `libsimbamongodbodbc64.so`.

Reference Data

This section describes changes to reference data functionality in version 9.6.1 HotFix 1.

Probabilistic Models

Effective in version 9.6.1 HotFix 1, the Developer tool uses version 3.4 of the Stanford Named Entity Recognition API to compile a probabilistic model.

Previously, the Developer tool used version 1.2.6 of the API to compile a probabilistic model.

Release Tasks (9.6.1 HotFix 1)

This section describes the release tasks in version 9.6.1 HotFix 1.

PowerExchange Adapters

This section describes release tasks for PowerExchange adapters in version 9.6.1 HotFix 1.

PowerExchange Adapters for Informatica

This section describes release tasks for Informatica adapters in version 9.6.1 HotFix 1.

PowerExchange for Salesforce

Effective in version 9.6.1 HotFix 1, the PowerExchange for Salesforce connection listed under the Enterprise connection category is deprecated, and Informatica will drop support in the next major release. Informatica recommends that you use the new PowerExchange for Salesforce connection listed under the Cloud connection category to read data from and write data to Salesforce.

You can use existing mappings with the deprecated PowerExchange for Salesforce adapter. However, you cannot update the existing mappings or connections to use the PowerExchange for Salesforce connection listed under the Cloud connection category. You must create new mappings and connections to use the new PowerExchange for Salesforce adapter.

For more information, see the *Informatica PowerExchange for Salesforce 9.6.1 HotFix 1 User Guide*.

PowerExchange for Mongo DB

Before you upgrade from Informatica 9.6.1 to Informatica 9.6.1 HotFix 1, you must backup the odbc.ini file.

After you upgrade to Informatica 9.6.1 HotFix 1, replace the `odbc.ini` file with the back-up copy of the odbc.ini file, and change the MongoDB driver name in the `odbc.ini` file to `libinformaticamongodbodbc64.so`.

For more information, see the *Informatica PowerExchange for MongoDB 9.6.1 HotFix 1 User Guide*.

PowerExchange Adapters for PowerCenter

This section describes release tasks for PowerCenter adapters in version 9.6.1 HotFix 1.

PowerExchange for Mongo DB

Before you upgrade from Informatica 9.6.1 to Informatica 9.6.1 HotFix 1, you must backup the odbc.ini file.

After you upgrade to Informatica 9.6.1 HotFix 1, replace the `odbc.ini` file with the back-up copy of the odbc.ini file, and change the MongoDB driver name in the `odbc.ini` file to `libinformaticamongodbodbc64.so`.

For more information, see the *Informatica PowerExchange for MongoDB 9.6.1 HotFix 1 User Guide for PowerCenter*.

Informatica Web Client Applications

After you upgrade, you must clear your web browser cache before you access the Informatica web client applications.

Informatica supports Google Chrome and Microsoft Internet Explorer browsers. After you upgrade, clear the browser caches on the machines from which you access the Informatica web client applications. The Informatica web client applications include the Administrator tool, Analyst tool, Reporting Service, Reporting and Dashboards Service, and Metadata Manager.

CHAPTER 25

New Features (9.6.1)

This chapter includes the following topics:

Application Services

This section describes new application services features in version 9.6.1.

Content Management Service

This section describes new Content Management service features in version 9.6.1

The Content Management Service determines the preload behavior for address code lookup reference data and interactive reference data. Use the Address Validation process properties to set the preload behavior.

The following table describes the preload properties for address code lookup data:

Property	Description
Full Pre-Load Address Code Countries	Lists the countries for which the Data Integration Service loads all reference data into memory before address validation begins.
Partial Pre-Load Address Code Countries	Lists the countries for which the Data Integration Service loads address reference metadata and indexing structures into memory before address validation begins.
No Pre-Load Address Code Countries	Lists the countries for which the Data Integration Service loads no address reference data into memory before address validation begins.

The following table describes the preload properties for interactive reference data in addition to batch and certified reference data:

Property	Description
Full Pre-Load Countries	Lists the countries for which the Data Integration Service loads all batch, certified, and interactive reference data into memory before address validation begins.
Partial Pre-Load Countries	Lists the countries for which the Data Integration Service loads batch, certified, and interactive metadata and indexing structures into memory before address validation begins.
No Pre-Load Countries	Lists the countries for which the Data Integration Service does not load batch, certified, or interactive reference data into memory before address validation begins.

For more information, see the *Informatica 9.6.1 Application Service Guide*.

Big Data

This section describes new Big Data features in version 9.6.1.

Data Types in a Hive Environment

You can push high precision Decimal data types to a Hive environment that uses Hive 0.11 and above.

If the mapping is not enabled for high precision, the Data Integration Service converts all decimal values to double values.

If the mapping is enabled for high precision, the Data Integration Service converts decimal values with a precision greater than 28 to double values.

For more information, see the *Informatica 9.6.1 Big Data Edition User Guide*.

Hive Connection Properties

In the Hive connection, you specify the following properties:

- Enter advanced Hive or Hadoop properties to configure or override Hive or Hadoop cluster properties in `hive-site.xml` on the machine on which the Data Integration Service runs.
- Enter the user name of the user that the Data Integration Service impersonates to run mappings on the Hadoop cluster.

For more information, see the *Informatica 9.6.1 Big Data Edition User Guide*.

User Authentication

You can enable the Data Integration Service to run mapping and workflow jobs on a Hadoop cluster that uses Kerberos authentication. The Hadoop cluster authenticates the SPN of the Data Integration Service user account to run mapping and workflow jobs on the Hadoop cluster. To enable another user to run jobs on the Hadoop cluster, you can configure the SPN of the Data Integration Service user account to impersonate another user account.

For more information, see the *Informatica 9.6.1 Big Data Edition User Guide*.

Mappings on Hadoop Distributions

You can enable mappings to run on the following Hadoop distributions:

- Cloudera CDH 5.0
- Hortonworks HDP 2.0
- MapR 3.1
- Pivotal HD 1.1

For more information, see the *Informatica 9.6.1 Big Data Edition Installation and Configuration Guide*.

Business Glossary

This section describes new Business Glossary features in version 9.6.1.

Business Initiatives

A business initiative is a container of Glossary assets that you want to collectively approve and publish in business glossary. Use a business initiative to publish multiple business terms, categories, and policies at the same time. The business initiative goes through the same approval process as any other Glossary asset.

Customize Category and Business Initiative Templates

You can customize templates for categories and business initiatives.

Default Values for Custom Properties

You can add default values for custom properties that you create when you customize a Glossary asset template.

Asset Relationship Visualization

You can see a visual representation of the relationships that business terms and policies have with other assets in business glossary. The asset relationship visualization diagram is dynamic and interactive. You can rearrange the context of the diagram, filter the assets that display in the diagram, and change the number of levels.

Synonym Retirement

You can set a retirement date for synonyms in business glossary. The state of the synonym changes after the retirement date. Business glossary consumers view the state to identify the validity of the synonym.

For more information, see the *Informatica 9.6.1 Business Glossary Guide*.

Command Line Programs

This section describes new commands in version 9.6.1.

Environment Variables

The following table describes new environment variables that you can use with command line programs:

Environment Variable	Description
INFA_DEFAULT_DB_TRUSTSTORE_PASSWORD	Stores the database truststore password for infasetup commands.
INFA_NODE_KEYSTORE_PASSWORD	Stores the password for the infa_keystore.jks file for infasetup commands.
INFA_NODE_TRUSTSTORE_PASSWORD	Stores the password for the infa_truststore.jks file for infasetup commands.

infacmd dis Commands

The following table describes new infacmd dis commands:

Command	Description
ListSequenceObjectProperties	Lists the properties for a sequence data object.
ListSequenceObjects	Lists the sequence data objects deployed to an application.
SetSequenceState	Updates the current value of a sequence data object.

infacmd isp Commands

The following table describes a new infacmd isp command:

Command	Description
printSPNAndKeytabNames	Generates the list of SPN and keytab file names for the nodes and services in the domain.

The following table describes an updated infacmd isp command:

Command	Description
switchToGatewayNode	The command contains an option for the database truststore file (-dbtl). Enter the path and file name of the truststore file for the secure domain configuration repository database. The option is required if you use a secure database for the domain configuration repository.

infacmd mrs Commands

The following table describes a new infacmd mrs command:

Command	Description
rebuildDependencyGraph	Rebuilds the object dependency graph so that you can view object dependencies after an upgrade.

infacmd rds Commands

Effective in version 9.6.1, the infacmd rds commands are obsolete. You can no longer use the infacmd rds commands to manage the Reporting and Dashboard Service. You need to use the Administrator tool.

The following table describes the obsolete infacmd rds commands:

Command	Description
CreateService	Creates a Reporting and Dashboards Service in a domain.
ListServiceProcessOptions	Lists the Reporting and Dashboards Service process options.

infasetup Command

The following table describes a new infasetup command:

Command	Description
updateKerberosConfig	Changes the realm name that the Informatica domain users belong to or changes the service realm name that the Informatica domain services belong to. This command does not change the Kerberos configuration.

The following table describes updated infasetup commands:

Command	Description
- BackupDomain - DefineDomain - DefineGatewayNode - DeleteDomain - RestoreDomain - updateGatewayNode - upgradeDomainMetadata	The command contains an option for the database truststore (-dbtl). Enter the path and file name of the truststore file for the secure domain repository database. The option is required if you configured a secure domain repository database for the domain.

mmcmd

Effective in version 9.6.1, the following mmcmd commands have changes:

Command	Description
createRepository	The --domainPassword option is required only when the domain uses Kerberos authentication and you do not specify the --keyTab option for the domain user. Previously, this option was always required.
createResource	The following options are added: - --resourcePassword. If the resource uses a password and the resource configuration file does not contain the resource password, use this option to specify the password. - --secureJDBCParameters. Use this option to specify secure JDBC parameters to append to the JDBC connection URL. Metadata Manager does not display secure parameters or parameter values in the resource configuration properties.
deleteRepository	The --domainPassword option is required only when the domain uses Kerberos authentication and you do not specify the --keyTab option for the domain user. Previously, this option was always required.
getResource	The -includePassword option is added. You can include or exclude the resource password in the resource configuration file. Previously, the command always included the password.
restorePCRepository	The --domainPassword option is required only when the domain uses Kerberos authentication and you do not specify the --keyTab option for the domain user. Previously, this option was always required.
updateResource	The following options are added: - --resourcePassword. If the resource uses a password and the resource configuration file does not contain the resource password, use this option to specify the password. - --secureJDBCParameters. Use this option to specify secure JDBC parameters to append to the JDBC connection URL. Metadata Manager does not display secure parameters or parameter values in the resource configuration properties.

mmRepoCmd

Effective in version 9.6.1, you use the mmRepoCmd command line program to back up and restore Metadata Manager repository database contents.

mmRepoCmd contains the following enhancements:

- When you restore repository contents, mmRepoCmd encrypts sensitive data in the Metadata Manager repository with the domain encryption key.
- mmRepoCmd gets repository database connection information from the Metadata Manager Service. When you run commands, you do not need to specify connection parameters as arguments.

mmRepoCmd contains the following commands:

Command	Description
backupRepository	Backs up the Metadata Manager repository to a backup file.
restoreRepository	Restores Metadata Manager repository contents from a backup file.

Previously, you used the backupCmdLine command line program to back up and restore Metadata Manager repository database contents. backupCmdLine is removed.

pmprep Command

The following table describes an updated pmrep command:

Command	Description
createConnection	The command contains the kerberized_connection (-K) option. Indicates that the database you are connecting to runs on a network that uses Kerberos authentication.

rcfmu

Effective in version 9.6.1, you can use rcfmu to migrate resource configuration files from Metadata Manager 9.1.0, 9.5.x, and 9.6.0 to the current version. rcfmu contains a new option, -smv, that specifies the original resource configuration file version.

Previously, you used rcfmu to migrate resource configuration files from Metadata Manager 9.1.0 to 9.5.x or 9.6.0.

rmu

Effective in version 9.6.1, you can use rmu to migrate resources from Metadata Manager 9.1.0, 9.5.x, and 9.6.0 to the current version. rmu detects the original resource version.

Previously, you used rmu to migrate resources from Metadata Manager 9.1.0 to 9.5.x or 9.6.0.

Documentation

This section describes new guides included with the Informatica documentation in version 9.6.1. Some new guides are organized based on shared functionality among multiple products and replace previous guides.

The Informatica documentation contains the following new guides:

Informatica Big Data Edition Installation and Configuration Guide

Contains information about installing Informatica Big Data Edition and configuring mappings to work with multiple Hadoop distributions. Previously, installation was documented in the PowerCenter Big Data Edition User Guide.

Informatica Installation and Configuration Guide

Contains information about planning the domain, preparing databases, installing Informatica services and clients, and creating application services for all Informatica platform products. Previously, installation was documented in guides specific to the Data Quality, Data Services, and PowerCenter products.

Informatica Upgrading from Version 9.6.0

Contains information about upgrading all Informatica platform products from version 9.6.0 to version 9.6.1. Previously, upgrade was documented in guides specific to the Data Quality, Data Services, and PowerCenter products.

Informatica Upgrading from Version 9.5.1

Contains information about upgrading all Informatica platform products from version 9.5.1 to version 9.6.1. Previously, upgrade was documented in guides specific to the Data Quality, Data Services, and PowerCenter products.

Informatica Upgrading from Version 9.5.0

Contains information about upgrading all Informatica platform products from version 9.5.0 to version 9.6.1. Previously, upgrade was documented in guides specific to the Data Quality, Data Services, and PowerCenter products.

Informatica Upgrading from Version 9.1.0

Contains information about upgrading all Informatica platform products from version 9.1.0 to version 9.6.1. Previously, upgrade was documented in guides specific to the Data Quality, Data Services, and PowerCenter products.

Informatica PowerExchange Adapters for Informatica Release Notes

Contains important information about installation, closed enhancements, fixed limitations, and known limitations for PowerExchange adapters for Informatica. Previously, this information was documented in the Informatica Release Notes.

Informatica PowerExchange Adapters for PowerCenter Release Notes

Contains important information about installation, closed enhancements, fixed limitations, and known limitations for PowerExchange adapters for Powercenter. Previously, this information was documented in the Informatica Release Notes.

Informatica Administrator

This section describes new Informatica Administrator features in version 9.6.1.

Informatica Cloud Administration

You can use the Administrator tool to view Informatica Cloud organizations. You can monitor the status of Secure Agents and view cloud connections used in an organization.

For more information, see the *Informatica 9.6.1 Administrator Guide*.

Informatica Developer

This section describes new Informatica Developer features in version 9.6.1.

Object Dependencies

In the Developer tool, you can view the object dependencies for an object in the **Object Dependencies** view to perform an impact analysis on affected objects before you modify or delete the object.

For more information, see the *Informatica 9.6.1 Developer Tool Guide*.

Informatica Development Platform

This section describes new Informatica Development Platform features in version 9.6.1.

Informatica Connector Toolkit

After you define the run-time components of the adapter, you can use the **Test Read** and **Test Write** wizards to test the read and write capability of the adapter. The test wizards display the test statistics, error messages, and log files. You can debug and fix issues before you deploy the adapter to the Informatica domain.

For more information, see the *Informatica Development Platform 9.6.1 Informatica Connector Toolkit Developer Guide*.

Informatica Transformations

This section describes new transformation features in version 9.6.1.

Address Validator Transformation

This section describes new features to the Address Validator transformation that you create in the Developer tool.

Modes

You can configure the Address Validator transformation to run in the following modes:

Address Code Lookup Mode

When you select address code lookup mode, the Data Integration Service reads an identification code and returns the corresponding address elements from the reference data. The identification code can refer to a locality, street, or mailbox. For example, you can enter the choumei aza code for a Japanese address and retrieve the complete address as output.

Interactive Mode

When you select interactive mode, address validation reads a partial address and returns all addresses from the reference data that match the input elements. Select interactive mode to add data to an incomplete address. You can enter the partial address on a single input port.

You also can enter a partial address on a single input port when you configure the transformation to run in suggestion list mode.

Ports

You can select the following ports for the Address Validator transformation:

Count

Output port that indicates the number of addresses in the address reference data sets that match the data in the input address.

Count Overflow

Output port that indicates whether the reference data contains addresses that address validation does not return to the transformation.

Gmina Code PL

Output port returns the identification code for the municipality or commune to which a Polish address belongs.

Institute of Geography and Statistics Code

Output port that contains a seven-digit identification code for the city or state to which a Brazilian address belongs.

Locality Identifier DE

Input and output ports that contain the identification code for a German locality.

National Address Database Identifier ZA

Input and output port that contains a seven-digit identification code for the street in a South African address.

National Institute of Statistics and Economic Studies Code

Input and output port that identifies the administrative regions to which a French address belongs. The National Institute of Statistics and Economic Studies code is also called the INSEE code.

New Choumei Aza Code JP

Output port that returns a unique delivery point code for a Japanese mailbox.

Official Municipality Key DE

Input and output ports that contain an identification code for a German municipality.

Postal Address Code AT

Output port that contains building-level post code data for an Austrian address.

Postal Address Code RS

Output port that returns a street-level post code for a Serbian address.

Postal Code Extension

Output port that contains a two-digit suffix for the post code of a Swiss address.

Street Identifier DE

Input and output ports that contain a street-level identification code for a German address.

Supplementary status ports

Output ports that indicate if address validation can return supplementary data for an address.

The transformation includes supplementary status ports for Austria, Brazil, France, Germany, Poland, South Africa, and Switzerland.

TERYT Locality Identifier PL

Output port that contains the identification code for the locality to which a Polish address belongs.

TERYT Street Identifier PL

Output port that contains the identification code for the street in a Polish address.

Unique Delivery Point Reference Number GB

Output port that returns a unique delivery point code for a United Kingdom mailbox.

For more information, see the *Informatica 9.6.1 Address Validator Port Reference* and the *Informatica 9.6.1 Developer Transformation Guide*.

Properties

You can configure the following advanced properties for the Address Validator transformation:

Alias Locality

The property determines whether address validation replaces a valid location alias with the official location name.

Matching Extended Archive

The property determines whether address validation returns a unique delivery point code for an out-of-date Japanese address.

Data Processor Transformation

This section describes new features to the Data Processor transformation that you create in the Developer tool.

File Input for Streamer

A Data Processor transformation Streamer can use a file as input. Previously, the streamer only used a buffer as input.

For more information, see the *Informatica Data Transformation 9.6.1 User Guide*.

Generate Data Transformation with AVRO or XML

You can auto-generate a Data Processor transformation with AVRO input and any format output, or Avro output and any format input, with the New Transformation wizard. Use an Avro schema file or sample file to define the AVRO file specification. You can also generate a transformation with both Avro input format and output format. In this case, use separate Avro schema files or sample files to define both the input and the output.

When you add a Data Processor transformation that reads Avro input to a mapping, you also add a complex file reader to pass the Avro input to the transformation. For a mapping with a Data Processor transformation that generates Avro output, you pass the output to a complex file writer.

You can also auto-generate a Data Processor transformation with XML input, output, or both, with the New Transformation wizard. Use an .xsd schema file or a sample file to define the expected XML hierarchy.

For more information, see the *Informatica Data Transformation 9.6.1 User Guide*.

Generate Schema from Sample File

When you add a sample file to define a hierarchy with the New Transformation wizard or the Schema wizard, the wizard creates an .xsd schema file to define the hierarchy. The wizard creates the schema in the Model repository. You can use the schema with other transformations.

For more information, see the *Informatica Data Transformation 9.6.1 User Guide*.

Relational Mapping Keys

Keys in a relational mapping can be of type xs:string and xs:integer.

For more information, see the *Informatica Data Transformation 9.6.1 User Guide*.

Unread XMap Elements

You can select to track XMap input elements that you do not map to output elements. The transformation reports unmapped elements to the Default Handler output port named **XMap_Unread_Input_Values** .

For more information, see the *Informatica Data Transformation 9.6.1 User Guide*.

Match Transformation

This section describes new features to the Match transformation that you create in the Developer tool.

You can specify whether the transformation updates a current identity index data store with index data from a mapping data source. Use the Persistence Method option to set the update policy. Set a policy to update the data store with any index data from the data source that the data store does not contain. Alternatively,

set a policy that does not update the data store with index data. By default, the transformation updates the data store.

For more information, see the *Informatica 9.6.1 Developer Transformation Guide*.

SQL Transformation

This section describes new features of the SQL transformation that you create in the Developer tool.

You can use the SQL transformation to invoke stored procedures from a Sybase database.

For more information, see the *Informatica 9.6.1 Developer Transformation Guide*.

Installer

This section describes new Informatica platform installer features in version 9.6.1.

Informatica Kerberos SPN Format Generator

You can run Informatica Kerberos SPN Format Generator independent of the Informatica installer. You can start the utility from the command line or start it from the Informatica installer. The Informatica Kerberos SPN Format Generator installs with the Informatica services. After installation you can start the utility from the Informatica directory.

For more information, see the *Informatica 9.6.1 Installation and Configuration Guide*.

Service Principal Level

When you install the Informatica services with Kerberos authentication, you can set the Service Principal Level option to specify whether nodes and services can share service principal names and keytab files. If the domain does not require a high level of security, you can use one SPN and keytab file for the node and all the service processes on the node. If the domain requires a high level of security, create a unique SPN and keytab file for each node and each process on the node.

For more information, see the *Informatica 9.6.1 Installation and Configuration Guide*.

Mappings

This section describes new mapping features in version 9.6.1

Informatica Mappings

This section describes new features of mappings that you create in the Developer tool.

IBM DB2 Partitioning

The Data Integration Service can use multiple partitions to write to an IBM DB2 target.

For more information, see the *Informatica 9.6.1 Big Data Edition User Guide*.

Metadata Manager

This section describes new Metadata Manager features in version 9.6.1.

Glossary View

When you view a category or business term in the **Glossary** view, you can open the category or term in the Analyst tool by clicking the **View in Informatica Analyst** toolbar icon.

For more information, see the *Informatica 9.6.1 Metadata Manager User Guide*.

Resource Properties

Effective in version 9.6.1, database management, JDBC, and Microstrategy resources have new resource configuration properties.

Database Management Resources

The following table describes the new resource configuration property for database management resources:

Property	Description
Secure JDBC Parameters	Secure JDBC parameters that you want to append to the JDBC connection URL.

JDBC Resources

The following table describes the new resource configuration property for JDBC resources:

Property	Description
Case sensitivity	Specifies the case sensitivity setting for the metadata source database. By default, the Metadata Manager Agent uses the JDBC driver to determine whether the database is case sensitive.

Microstrategy Resources

The following table describes the new resource configuration property for Microstrategy 7.0 - 9.x resources:

Property	Description
Import schema only	Imports the schemas for the selected projects without the reports and documents. By default, Metadata Manager imports the schemas, reports, and documents.

For more information, see the *Informatica 9.6.1 Metadata Manager Administrator Guide*.

Resource Versions

You can create resources of the following versions:

- Business Objects 14.1 (XI 4.1 SP2). Previously, you could create Business Objects resources up to version 14 (XI R4) SP6.
- Microstrategy 9.4.1. Previously, you could create Microstrategy resources up to version 9.3.1.
- Oracle 12c. Previously, you could create Oracle resources up to version 11g Release 2.

For information about creating resources, see the *Informatica 9.6.1 Metadata Manager Administrator Guide*.

Search

You can create a custom list of words and phrases to ignore in keyword and advanced searches.

For more information, see the *Informatica 9.6.1 Metadata Manager Administrator Guide*.

Security

Metadata Manager contains the following security enhancements:

Encryption Key Support

Metadata Manager uses the encryption key for the Informatica domain to encrypt sensitive data, such as passwords, in the Metadata Manager repository.

For more information about the encryption key for the Informatica domain, see the *Informatica 9.6.1 Security Guide*.

Secure JDBC Parameters

You can prevent the Administrator tool from displaying secure JDBC parameters that are part of the Metadata Manager repository database URL. You can also prevent Metadata Manager from displaying secure JDBC parameters that are part of the database connection URL for some database management resources.

You can prevent Metadata Manager from displaying secure JDBC parameters for the following database management resources:

- IBM DB2 for LUW
- IBM Informix
- Microsoft SQL Server
- Netezza
- Oracle
- Sybase ASE
- Teradata

For information about specifying secure JDBC parameters in the Metadata Manager repository database URL, see the *Informatica 9.6.1 Application Service Guide*. For information about specifying secure JDBC parameters in the database connection URL for database management resources, see the *Informatica 9.6.1 Metadata Manager Administrator Guide*.

Custom Metadata Configurator

To increase security for the PowerCenter repository, the Custom Metadata Configurator prompts you for the PowerCenter repository user name and password when you generate the mappings that extract metadata from custom metadata files.

For more information, see the *Informatica 9.6.1 Metadata Manager Custom Metadata Integration Guide*.

PowerExchange

This section describes new PowerExchange features in version 9.6.1.

Listener Service

When you configure the domain to use Kerberos authentication, you can configure Informatica clients, the Data Integration Service, and the PowerCenter Integration Service to find a PowerExchange Listener Service in the domain.

To do so, include the optional *service_name* parameter in the NODE statement in the DBMOVER configuration file on the client, Data Integration Service, or PowerCenter Integration Service machine.

For more information, see the *Informatica 9.6.1 Application Service Guide*.

Listener Service

This section describes new Listener Service features in version 9.6.1.

When you configure the domain to use Kerberos authentication, you can configure Informatica clients, the Data Integration Service, and the PowerCenter Integration Service to find a PowerExchange Listener Service in the domain.

To do so, include the optional *service_name* parameter in the NODE statement in the DBMOVER configuration file on the client, Data Integration Service, or PowerCenter Integration Service machine.

For more information, see the *Informatica 9.6.1 Application Service Guide*.

infacmd pwx Commands

The following table describes a new infacmd pwx command:

Command	Description
displayStatsListener	Displays monitoring statistics for a PowerExchange Listener on Windows or z/OS.

PowerExchange Adapters

This section describes new PowerExchange adapter features in version 9.6.1.

Informatica Adapters

This section describes new Informatica adapter features.

PowerExchange for DataSift

You can extract historical data from DataSift for Twitter sources.

For more information, see the *Informatica PowerExchange for DataSift 9.6.1 User Guide*.

PowerExchange for Greenplum

- You can use PowerExchange for Greenplum to load large volumes of data into Greenplum tables. You can run mappings developed in the Developer tool. You can run the mappings in native or Hive run-time environments.
- You can also use PowerExchange for Greenplum to load data to a HAWQ database in bulk.

For more information, see the *Informatica PowerExchange for Greenplum 9.6.1 User Guide*.

PowerExchange for LinkedIn

You can extract information about a group, information about posts of a group, comments about a group post, and comments about specific posts from LinkedIn. You can also extract a list of groups suggested for the user and a list of groups in which the user is a member from LinkedIn.

For more information, see the *Informatica PowerExchange for LinkedIn 9.6.1 User Guide*.

PowerExchange for HBase

You can use PowerExchange for HBase to read data in parallel from HBase. The Data Integration Service creates multiple Map jobs to read data in parallel.

For more information, see the *Informatica PowerExchange for HBase 9.6.1 User Guide*.

PowerExchange for Hive

You can create a Hive connection that connects to HiveServer or HiveServer2. Previously, you could create a Hive connection that connects to HiveServer. HiveServer2 supports Kerberos authentication and concurrent connections.

For more information, see the *Informatica PowerExchange for Hive 9.6.1 User Guide*.

PowerExchange for MongoDB

You can use the Schema Editor to change the schema of MongoDB collections. You can also use virtual tables for MongoDB collections that have nested columns.

For more information, see the *Informatica PowerExchange for MongoDB 9.6.1 User Guide*.

PowerExchange for Teradata Parallel Transporter API

When you load data to a Teradata table in a Hive run-time environment, you can use the Teradata Connector for Hadoop (TDCH) to increase performance. To use TDCH to load data, add the EnableTdch custom property at the Data Integration Service level and set its value to true.

For more information, see the *Informatica PowerExchange for Teradata Parallel Transporter API 9.6.1 User Guide*.

PowerCenter Adapters

This section describes new PowerCenter adapter features.

PowerExchange for LDAP

In the session properties, you can specify the path and name of the file that contains multiple filter conditions to query the LDAP entries.

For more information, see the *Informatica PowerExchange for LDAP 9.6.1 User Guide for PowerCenter*.

PowerExchange for MongoDB

You can use the Schema Editor to change the schema of MongoDB collections. You can also use virtual tables for MongoDB collections that have nested columns.

For more information, see the *Informatica PowerExchange for MongoDB 9.6.1 User Guide for PowerCenter*.

PowerExchange for Netezza

- When you use bulk mode to read data from or write data to Netezza, you can override the table name and schema name in the session properties.
- You can specify a table name prefix when you configure a session to load data to a Netezza target. The table name prefix overrides the schema for the Netezza table.

For more information, see the *Informatica PowerExchange for Netezza 9.6.1 User Guide for PowerCenter*.

PowerExchange for Salesforce

- You can configure a session to use the Salesforce Bulk API to read data in bulk from a Salesforce source.
- You can dissociate a custom child object from a standard parent object.

For more information, see the *Informatica PowerExchange for Salesforce 9.6.1.0.1 User Guide for PowerCenter*.

PowerExchange for SAP NetWeaver

- When you run a file mode session to read data from SAP through ABAP, you can configure the FileCompressEnable custom property to enable compressed data transfer. When you compress data, you can increase the session performance and decrease the disk storage that the staging file needs.
- The Source_For_BCI relational target in the BCI listener mapping that Informatica ships contains a new column called DataSourceName. You can use this field to partition the data that the Source_For_BCI relational target receives from SAP.
- Informatica ships an activation mapping along with the `BCI_Mappings.xml` file. You can use the activation mapping to activate multiple DataSources in SAP simultaneously.
- When you use numeric delta pointers to extract business content data, you can extract the changed data alone without doing a full transfer of the entire data.

For more information, see the *Informatica PowerExchange for SAP NetWeaver 9.6.1 User Guide for PowerCenter*.

Profiles and Scorecards

This section describes new profiles and scorecards features in version 9.6.1.

Column Profile Results

When you run a column profile in the Analyst tool, you can view the following visual charts in the column profile results:

- Pie charts that represent the value frequencies and column patterns for a column.
- A bar chart that represents the percentage of rows with null values, unique values, and non-unique values in a column.

Drill-down Filters

In the Analyst tool, you can right-click a column value in the drill-down results and add the column value as a filter condition.

Value of Data Quality

You can measure the value of data quality using scorecards in the Analyst tool. Define a cost unit for a scorecard metric, assign a variable or fixed cost, and view the cost trend chart along with the score trend chart. You can then monitor the value of data that you selected at the metric and scorecard levels.

For more information, see the *Informatica 9.6.1 Profile Guide*.

Reference Data

This section describes new reference data features in version 9.6.1.

Probabilistic Models

You can perform the following tasks when you create or edit a probabilistic model in the Developer tool:

- You can assign a color to each label that you add to a probabilistic model.
- You can view the total number of labels that you assign to the data values in a row.
- You can view the total number of data values that the probabilistic model associates with a label.

For more information, see the *Informatica 9.6.1 Reference Data Guide*.

Rule Specifications

This section describes new rule specifications features in version 9.6.1.

You can perform the following tasks when you work with rule specifications in the Analyst tool:

- You can change the order of the rule statements in a rule set.
- You can test the operations of a single rule set.
- You can save the data that you use to test a rule set or a rule specification, and you can delete the data.
- You can specify a null value in a condition or an action in a rule statement.
- You can use data that you copy from Microsoft Excel to test a rule set or a rule specification.

For more information, see the *Informatica 9.6.1 Rule Specification Guide*.

Sources and Targets

This section describes new sources and targets features in version 9.6.1.

Informatica Sources and Targets

This section describes new features of sources and targets in Informatica.

HAWQ Connectivity

You can use ODBC to read data from and write data to a HAWQ database.

For more information, see the *Informatica 9.6.1 Developer Tool Guide*.

Data Types

Microsoft SQL Server Uniqueidentifier Data Type

Informatica Developer supports the Microsoft SQL Server Uniqueidentifier data type. The Uniqueidentifier data type has a precision of 38 and a scale of 0.

For more information, see the *Informatica 9.6.1 Developer Tool Guide*.

Oracle Float Data Type

Informatica Developer supports the Oracle float data type. The float data type has a precision of 1 to 15 and a scale of 0.

For more information, see the *Informatica 9.6.1 Developer Tool Guide*.

PowerCenter Sources and Targets

This section describes new features of sources and targets in PowerCenter.

Oracle Sources and Targets

You can import Oracle sources and targets that use basic compression and OLTP compression. You can also manually create source and target definitions for Oracle tables that use basic compression and OLTP compression.

For more information, see the PowerCenter 9.6.1 Designer Guide.

Transformation Language Functions

This section describes new features of transformation language functions in version 9.6.1.

Informatica Functions

This section describes new features of Informatica functions.

ANY Function

You can use the ANY function to return any row in the selected port.

For more information, see the *Informatica 9.6.1 Transformation Language Reference*.

CHAPTER 26

Changes (9.6.1)

This chapter includes the following topics:

Big Data

This section describes changes to Big Data in version 9.6.1.

Effective in version 9.6.1, you can choose not to select a Hive version for the validation environment when you configure a mapping to run in the Hive environment.

The Data Integration Service evaluates a valid Hive version for the Hadoop cluster and validates the mapping.

Previously, you had to select a Hive version for the validation environment.

Domain

This section describes changes to the Informatica domain in version 9.6.1.

Effective in version 9.6.1, Informatica dropped support for SUSE Linux Enterprise Server 10. If any node in the domain is on SUSE Linux Enterprise Server 10, you must migrate the node to a supported operating system before upgrading the node to 9.6.1. For more information, see the Informatica upgrade guides.

Informatica Transformations

This section describes changes to Informatica transformations in version 9.6.1.

Address Validator Transformation

This section describes changes to the Address Validator transformation that you create in the Developer tool.

Effective in version 9.6.1, the Address Validator transformation uses version 5.5.0 of the Address Doctor software engine.

Previously, the transformation used version 5.4.1 of the Address Doctor software engine.

Effective in version 9.6.1, the transformation adds a two-character country code to the following port names:

- Choumei Aza Code JP.

  Previously, the port name was Choumei Aza Code.
- New Choumei Aza Code JP.

  Previously, the port name was New Choumei Aza Code.
- Postal Address Code RS.

  Previously, the port name was Postal Address Code.
- Unique Delivery Point Reference Number GB.

  Previously, the port name was Unique Delivery Point Reference Number.

Effective in version 9.6.1, you can disable the Alias Street property on the transformation. The property determines whether address validation replaces a street alias with the official street name.

Previously, you configured the property to replace all street aliases or to replace any term that is not a valid street alias.

Data Masking Transformation

This section describes changes to the Data Masking transformation that you create in the Developer tool.

Key Masking Technique

Effective in version 9.6.1, the key masking algorithm is changed. A mapping created in an earlier version that uses the key masking technique might create different masked output after upgrade to 9.6.1.

Previously, a mapping that used the key masking technique would create the same masked output when run after upgrade.

Data Processor Transformation

This section describes changes to the Data Processor transformation that you create in the Developer tool.

Effective in version 9.6.1, you can export a Data Processor transformation to PowerCenter with pass-through ports or a relational to hierarchical transformation. Previously, you could only export Data Processor transformations to PowerCenter if they did not have relational input or output.

Mappings

This section describes changes to mappings in version 9.6.1.

Informatica Mappings

This section describes changes to mappings that you create in the Developer tool.

Partitioned Mappings in the Native Environment

Effective in version 9.6.1, partitioned mappings in the native environment include the following changes:

IBM DB2 for LUW Relational Targets

The Data Integration Service can create partitions for a mapping when the mapping contains a DB2 for LUW target that has more database partitions than the parallelism value. If the DB2 for LUW target has more database partitions than the parallelism value, the Data Integration Service uses all of the writer threads defined by the parallelism value. The Data Integration Service distributes multiple database partitions to some of the writer threads.

Previously, if the DB2 for LUW target had more database partitions than the parallelism value, the Data Integration Service did not create partitions for the entire mapping. The Data Integration Service used one thread to process each mapping pipeline stage.

Mapping Maximum Parallelism

When the maximum parallelism for a mapping is Auto, the actual parallelism value equals the minimum of the following values:

- Maximum parallelism value set for the Data Integration Service process.
- Maximum number of partitions for all flat file, IBM DB2 for LUW, and Oracle sources in the mapping. The Data Integration Service determines the number of partitions based on the source type. The number of partitions for a flat file source equals the maximum parallelism value set for the Data Integration Service process. The number of partitions for a DB2 for LUW or Oracle relational source equals the number of database partitions in the relational source.

Previously, when the maximum parallelism for a mapping was Auto, the actual parallelism value equaled the maximum parallelism value set for the Data Integration Service process.

Metadata Manager

This section describes changes to Metadata Manager in version 9.6.1.

Resource Configuration Import and Export

Effective in version 9.6.1, there are behavior changes related to resource configuration import and export.

Password Import and Export

Effective in version 9.6.1, when you export a resource configuration through Metadata Manager or mmcmd, you can include or exclude the encrypted resource password in the resource configuration file. If you exclude the password, and the resource uses a password, you must enter it when you import the resource configuration.

Previously, Metadata Manager always included the encrypted resource password in the resource configuration file.

Privilege Changes

Effective in version 9.6.1, you can export a resource configuration if you have the View Resource privilege. You can import a resource configuration if you have the Load Resource privilege.

Previously, to export or import a resource configuration, you needed the Load Resource privilege.

Resource Property Changes

Effective in version 9.6.1, Microstrategy 7.0 - 9.x resources have resource property changes.

The following table describes the deleted resource configuration properties for Microstrategy 7.0 - 9.x resources:

Property	Description
Data model reverse engineer joins	Optionally, transforms SQL joins of a model into foreign key relationships.
Dimensional model reverse engineering	Optionally, reverse engineers the following dimensional objects into relational objects when there is a direct match between the dimensional object and the relational object: - The dimension name, description, and role to the underlying table - The attribute or measure name, description, and datatype to the underlying column

PowerCenter Transformations

This section describes changes to PowerCenter transformations in version 9.6.1.

Data Masking Transformation

This section describes changes to the Data Masking transformation that you create in the PowerCenter Client.

Key Masking Technique

Effective in version 9.6.1, the key masking algorithm is changed. A mapping created in an earlier version that uses the key masking technique might create different masked output after upgrade to 9.6.1.

Previously, a mapping that used the key masking technique would create the same masked output when run after upgrade.

PowerExchange Adapters

This section describes changes to PowerExchange adapters in version 9.6.1.

PowerExchange Adapters for PowerCenter

This section describes changes to PowerCenter adapters in version 9.6.1.

PowerExchange for Salesforce

Effective in version 9.6.1.0.1, PowerExchange for Salesforce includes the following changes:

End of Life for Salesforce API Versions

PowerExchange for Salesforce does not support the following Salesforce API versions:

- 7.0
- 8.0
- 16.0

Previously, PowerExchange for Salesforce supported these Salesforce API versions.

Error Logging

The PowerCenter Integration Service writes error messages to the error log for the session.

Previously, the PowerCenter Integration Service wrote error messages to both the error log and the session log.

Java Requirements for Bulk API Target Sessions

For Bulk API target sessions, configure at least 10 to 50 MB of space for the Java temporary directory on the PowerCenter Integration Service machine.

Previously, the Bulk API did not use the Java temporary directory when writing to Salesforce targets.

Related Object Fields No Longer Available for Import

You can no longer import fields from objects related to the following Salesforce objects:

- ActivityHistory
- EmailStatus
- Name
- OpenActivity
- OwnedContentDocument

Previously, you could import fields from objects related to these objects.

Salesforce API Version

PowerExchange for Salesforce uses version 31.0 of the Salesforce API.

Use the Salesforce service URL to configure connections to Salesforce. To use the latest version of the Salesforce API, create an application connection or update the service URL in an existing application connection.

Use the following version of the Salesforce service URL:

```
https://www.salesforce.com/services/Soap/u/31.0
```

If the new version of a Salesforce object has a different structure than the previous version of the object, re-import the Salesforce object. After you re-import the object, analyze the associated mapping to determine if you need to update the mapping.

Previously, PowerExchange for Salesforce used version 27.0 of the Salesforce API.

SOAP Request Logging

For sessions that read from Salesforce with the standard API, the PowerCenter Integration Service no longer includes SOAP requests in the session log.

Previously, you could view SOAP requests in session logs when you configured the session for verbose tracing.

Profiles and Scorecards

This section describes changes to profiles and scorecards in version 9.6.1.

Effective in version 9.6.1, the total count of unique values in column profile results does not include the null column values.

Previously, null column values were included in the total count of unique values.

Rule Specifications

This section describes changes to rule specifications in version 9.6.1.

Effective in version 9.6.1, you can use the rule statement options to specify a data value or a null value for a condition or action.

Previously, you opened a configuration dialog box to in the rule statement to specify a data value or a null value.

Effective in version 9.6.1, you do not need the Informatica domain access permission to perform the following operations:

- Test a rule set or a rule specification.
- Compile a rule specification.

Previously, you needed the Informatica domain access permission to test a rule set or a rule specification and to compile a rule specification.

Security

This section describes changes to security in version 9.6.1.

Encryption Key Directory

Effective in version 9.6.1, the directory where the domain encryption key is stored has changed. The new encryption key directory is `<INFA_HOME>/isp/config/keys`.

Previously, the encryption key directory was `<INFA_HOME>/isp/config/secret`.

Service Principal Requirements for Kerberos Authentication

Effective in 9.6.1, when you configure the domain to use Kerberos authentication, you can specify whether nodes and services can share service principal names (SPN) and keytab files.

You can select one of the following service principal levels:

Node Level

If the domain is used for testing or development and does not require a high level of security, you can set the service principal at the node level. You can use one SPN and keytab file for the node and all the service processes on the node. When you create additional services on a node, you do not need to create additional keytab files.

Process Level

If the domain is used for production and requires a high level of security, you can set the service principal at the process level. Create a unique SPN and keytab file for each node and each process on the node. The number of SPNs and keytab files required for each node depends on the number of service processes that run on the node.

Previously, the Informatica domain required a unique SPN and keytab file for each node and each process on the node.

Part VI: Version 9.6.0

This part contains the following chapters:

CHAPTER 27

New Features and Enhancements (9.6.0)

This chapter includes the following topic:

Version 9.6.0

This section describes new features and enhancements in version 9.6.0.

Informatica Analyst

This section describes new features and enhancements to Informatica Analyst.

Informatica Analyst Interface

The Analyst tool interface has new headers and workspaces. A workspace is a web page where you perform tasks based on licensed functionality that you access through tabs in the Analyst tool.

The Analyst tool has the following workspaces:

- Start. Access other workspaces that you have the license to access through access panels on this workspace. If you have the license to perform exception management, your tasks appear in this workspace.
- Glossary. Define and describe business concepts that are important to your organization.
- Discovery. Analyze the quality of data and metadata in source systems.
- Design. Design business logic that helps analysts and developers collaborate.
- Scorecards. Open, edit, and run scorecards that you created from profile results.
- Library. Search for assets in the Model repository. You can also view metadata in the Library workspace.
- Exceptions. View and manage exception record data for a task. View duplicate record clusters or exception records based on the type of task you are working on. View an audit trail of the changes you make to records in a task.
- Connections. Create and manage connections to import relational data objects, preview data, run a profile, and run mapping specifications.
- Data Domains. Create, manage, and remove data domains and data domain groups.

- Job Status. Monitor the status of Analyst tool jobs such as data preview for all objects and drilldown operations on profiles.
- Projects. Create and manage folders and projects and assign permissions on projects.
- Glossary Security. Manage permissions, privileges, and roles for business glossary users.

Informatica Analyst Tasks

The Analyst tool is available to multiple Informatica products and is used by business users to collaborate on projects within an organization.

The tasks that you can perform in the Analyst tool depend on the license for Informatica products and the privileges to perform tasks. Based on the license that your organization has, you can use the Analyst tool to perform the following tasks:

- Define business glossaries, terms, and policies to maintain standardized definitions of data assets in the organization.
- Perform data discovery to find the content, quality, and structure of data sources, and monitor data quality trends.
- Define data integration logic and collaborate on projects to accelerate project delivery.
- Define and manage rules to verify data conformance to business policies.
- Review and resolve data quality issues to find and fix data quality issues in the organization.

Flat File Delimiters

When you import a delimited flat file, you can input the following non-printing multibyte characters as delimiters: `/01`, `/01`, and `/001`.

For more information, see the *Informatica 9.6.0 Analyst Tool Guide*.

Informatica Installer

This section describes new features and enhancements to the Informatica platform installer.

Accessibility and Section 508 Compliance

The Informatica platform installer conforms to Section 508 of the Rehabilitation Act and is accessible to people with disabilities.

Authentication

You can configure the Informatica domain to use Kerberos authentication. When you install the Informatica services, you can enable Kerberos authentication for the domain. A page titled **Domain - Network Authentication Protocol** appears in the Informatica services installer. To install the domain with Kerberos authentication, select the option to enable Kerberos authentication and enter the required parameters.

Encryption Key

Informatica encrypts sensitive data such as passwords when it stores data in the domain. Informatica uses a keyword to generate a unique encryption key with which to encrypt sensitive data stored in the domain.

A page titled **Domain - Encryption Key** appears in the Informatica services installer. If you create a node and a domain during installation, you must specify a keyword for Informatica to use to generate a unique encryption key for the node and domain. If you create a node and join a domain, Informatica uses the same encryption key for the new node.

Secure Communication

You can provide an SSL certificate or use the default Informatica SSL certificate to secure communication between services in the domain. To use your SSL certificate, specify a keystore and truststore file and password during installation.

For more information, see the *Informatica 9.6.0 installation and upgrade guides*.

Informatica Data Explorer

This section describes new features and enhancements to Informatica Data Explorer.

Column Profile Results

The column profile results include the sum of all values in columns with a numeric datatype.

For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

Use the TOTAL_SUM column in the following relational database views to access the profiling warehouse for information about the sum of values in numeric columns:

- IDPV_COL_PROFILE_RESULTS
- IDPV_PROFILE_RESULTS_TRENDING

For more information, see the *Informatica 9.6.0 Database View Reference*.

Curation

You can curate inferred profile results in both Analyst and Developer tools. Curation is the process of validating and managing discovered metadata of a data source so that the metadata is fit for use and reporting. You can approve, reject, and restore datatypes. You can also approve, reject, and restore data domains, primary keys, and foreign keys. You can hide or show rows containing rejected datatypes or data domains. You can exclude approved datatypes, data domains, and primary keys from column profile inference and data domain discovery inference when yo run the profile again.

For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

Use the following relational database views to access profiling warehouse for information about curated profile results:

- IDPV_CURATED_DATATYPES
- IDPV_CURATED_DATADOMAINS
- IDPV_CURATED_PRIMARYKEYS
- IDPV_CURATED_FOREIGNKEYS

For more information, see the *Informatica 9.6.0 Database View Reference*.

Data Domain Discovery

You can run data domain discovery on all rows of the source data to verify the inference results for multiple columns at the same time.

For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

Datatype Inference

You can infer multiple datatypes that match the inference criteria when you run a column profile. You can drill down based on a column datatype in column profile results.

For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

Use the following relational database views to access profiling warehouse for information on inferred datatypes:

- IDPV_DATATYPES_INF_RESULTS
- IDPV_DATATYPE_FREQ_TRENDING

For more information, see the *Informatica 9.6.0 Database View Reference*.

Discovery Search

Discovery search finds assets and identifies relationships to other assets in the databases and schemas of the enterprise. You can use discovery search to find where the data and metadata exists in the enterprise. You can find physical data sources and data object relationships or you can identify the lack of documented data object relationships. You can view the direct matches, indirect matches, and related assets from the discovery search results.

If you perform a global search, the Analyst tool performs a text-based search for data objects, datatypes, and folders. If you perform discovery search, in addition to the text matches, search results include objects with relationships to the objects that match the search criteria.

For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

Enterprise Discovery

You can perform enterprise discovery in Informatica Analyst. The enterprise discovery includes column profile and data domain discovery.

For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

Profile Results Verification

You can verify multiple inferred primary key and functional dependency results for a single data object in the Developer tool. When you verify the profile results, the Developer tool runs the profile on all rows of the source data. You can also verify multiple data object relationships and data domains in the enterprise discovery results.

For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

Scorecards

You can export scorecard results to a Microsoft Excel file. The exported file contains scorecard summary, trend charts, rows that are not valid, and scorecard properties.

For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

Support for bigint Datatype

You can run a profile on a data source with a large number of rows, such as many billions of rows. The profiling warehouse uses the bigint column to handle large volumes of source data.

For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

Informatica Data Quality

This section describes new features and enhancements to Informatica Data Quality.

Accelerators

The set of Informatica accelerators has the following additions:

- Informatica Data Quality Accelerator for Spain. Contains rules, reference tables, demonstration mappings, and demonstration data objects that solve common data quality issues in Spanish data.

- Informatica Data Quality Accelerator for Data Discovery. Contains rules, reference tables, demonstration mappings, and demonstration data objects that you can use to perform data discovery operations.

For more information, see the *Informatica Data Quality 9.6.0 Accelerator Guide*.

Address Validation

You can configure the following advanced properties on the Address Validator transformation:

Dual Address Priority

Determines the type of address to validate. Set the property when input address records contain more than one type of valid address data.

Flexible Range Expansion

Imposes a practical limit on the number of suggested addresses that the transformation returns when there are multiple valid addresses on a street. Set the property when you set the Ranges to Expand property.

Geocode Data Type

Determines how the transformation calculates geocode data for an address. Geocodes are latitude and longitude coordinates. Set the property to return the following types of geocode data:

- The latitude and longitude coordinates of the entrance to a building or a plot of land.
- The latitude and longitude coordinates of the geographic center of a plot of land.

The transformation can also estimate the latitude and longitude coordinates for an address. Estimated geocodes are called interpolated geocodes.

Global Max Field Length

Determines the maximum number of characters on any line in the address. Set the property to verify that the line length in an address does not exceed the requirements of the local mail carrier.

Ranges To Expand

Determines how the transformation returns suggested addresses for a street address that does not specify a house number. Set the property to increase or decrease the range of suggested addresses for the street.

Standardize Invalid Addresses

Determines if the transformation standardizes data values in an undeliverable address. Set the property to simplify the terminology in the address record so that downstream data processes can run more efficiently.

You can configure the following address validation process property in the Administrator tool:

SendRight Report Location

The location to which address validation writes a SendRight report and any log file that relates to the creation of the report. Generate a SendRight report to verify that a set of New Zealand address records meets the certification standards of New Zealand Post.

Note: You configure the Address Validator transformation to create a SendRight report file.

For more information, see the *Informatica 9.6.0 Developer Transformation Guide*.

Automatic Workflow Recovery

You can configure automatic recovery of aborted workflow instances due to an unexpected shutdown of the Data Integration Service process. When you configure automatic recovery, the Data Integration Service process recovers aborted workflow instances due to a service process shutdown when the service process restarts.

For more information, see the *Informatica 9.6.0 Developer Workflow Guide*.

Business Glossary

Business Glossary comprises online glossaries of business terms and policies that define important concepts within an organization. Data stewards create and publish terms that include information such as descriptions, relationships to other terms, and associated categories. Glossaries are stored in a central location for easy lookup by end-users.

Business Glossary is made up of glossaries, business terms, policies, and categories. A glossary is the high-level container that stores other glossary content. A business term defines relevant concepts within the organization, and a policy defines the business purpose that governs practises related to the term. Business terms and policies can be associated with categories, which are descriptive classifications. You can access Business Glossary through Informatica Analyst (the Analyst tool).

For more information, see the *Informatica 9.6.0 Business Glossary Guide*.

Column Profile Results

The column profile results include the sum of all values in columns with a numeric datatype.

For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

Use the TOTAL_SUM column in the following relational database views to access the profiling warehouse for information about the sum of values in numeric columns:

- IDPV_COL_PROFILE_RESULTS
- IDPV_PROFILE_RESULTS_TRENDING

For more information, see the *Informatica 9.6.0 Database View Reference*.

Curation

You can curate inferred profile results in both Analyst and Developer tools. Curation is the process of validating and managing discovered metadata of a data source so that the metadata is fit for use and reporting. You can approve, reject, and restore datatypes. You can also approve, reject, and restore data domains, primary keys, and foreign keys. You can hide or show rows containing rejected datatypes or data domains. You can exclude approved datatypes, data domains, and primary keys from column profile inference and data domain discovery inference when yo run the profile again.

For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

Use the following relational database views to access profiling warehouse for information about curated profile results:

- IDPV_CURATED_DATATYPES
- IDPV_CURATED_DATADOMAINS
- IDPV_CURATED_PRIMARYKEYS
- IDPV_CURATED_FOREIGNKEYS

For more information, see the *Informatica 9.6.0 Database View Reference*.

Datatype Inference

You can infer multiple datatypes that match the inference criteria when you run a column profile. You can drill down based on a column datatype in column profile results.

For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

Use the following relational database views to access profiling warehouse for information on inferred datatypes:

- IDPV_DATATYPES_INF_RESULTS
- IDPV_DATATYPE_FREQ_TRENDING

For more information, see the *Informatica 9.6.0 Database View Reference*.

Identity Index Data Persistence

You can configure a Match transformation to write the identity index data for a data source to database tables. You can configure a Match transformation to compare a data source to the identity index data in the database tables. The stored index data for one of the two data sources means that the identity match mappings take less time to run.

When you configure a Match transformation to read index tables, you control the types of record that the transformation analyzes and the types of output that the transformation generates. You can configure the transformation to analyze all the records in the data sources or a subset of the records. You can configure the transformation to write all records as output or a subset of the records.

For more information, see the *Informatica 9.6.0 Developer Transformation Guide*.

Java Transformation

In a Java transformation, you can configure an input port as a partition key, a sort key, and assign a sort direction. The partition key and sort key are valid when you process the transformation in a mapping that runs in a Hive environment.

For more information, see the *Informatica 9.6.0 Developer Transformation Guide*.

Lookup Transformation

If you cache the lookup source for a Lookup transformation, you can use a dynamic cache to update the lookup cache based on changes to the target. The Data Integration Service updates the cache before it passes each row to the target.

For more information, see the *Informatica 9.6.0 Developer Transformation Guide*.

Normalizer Transformation

The Normalizer transformation is an active transformation that transforms one source row into multiple output rows. When a Normalizer transformation receives a row that contains repeated fields, it generates an output row for each instance of the repeated data.

Use the Normalizer transformation when you want to organize repeated data from a relational or flat file source before you load the data to a target.

For more information, see the *Informatica 9.6.0 Developer Transformation Guide*.

Performance

In the Developer tool you can enable a mapping to perform the following optimizations:

- Push a Union transformation to a relational data object.
- Push Filter, Expression, Union, Sorter, and Aggregator transformations to a Hive relational object.

For more information, see the *Informatica 9.6.0 Mapping Guide*.

Profile Results Verification

You can verify multiple inferred primary key and functional dependency results for a single data object in the Developer tool. When you verify the profile results, the Developer tool runs the profile on all rows of the source data. You can also verify multiple data object relationships and data domains in the enterprise discovery results.

For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

Pushdown Optimization

The Data Integration Service can push expression, aggregator, operator, union, sorter, and filter functions to Greenplum sources when the connection type is ODBC.

For more information, see the *Informatica 9.6.0 Mapping Guide*.

Rule Builder

Rule Builder is an Informatica Analyst feature that converts business rule requirements to transformation logic. You save the business rule requirements in a rule specification. When you compile the rule specification, the Analyst tool creates transformations that can analyze the business data according to the requirements that you defined. The Analyst tool saves the transformations to one or more mapplets in the Model repository.

A rule specification contains one or more IF-THEN statements. The IF-THEN statements use logical operators to determine if the input data satisfies the conditions that you specify. You can use AND operators to link IF statements and verify that a data value satisfies multiple conditions concurrently. You can define statements that compare data from different inputs and test the inputs under different mathematical conditions. You can also link statements so that the output from one statement becomes the input to another.

Rule Builder represents a link between business users and the Informatica development environment. Business users can log in to the Analyst tool to create mapplets. Developer tool users add the mapplets to mappings and verify that the business data conforms to the business rules.

For more information, see the *Informatica 9.6.0 Rule Builder Guide*.

Scorecards

You can export scorecard results to a Microsoft Excel file. The exported file contains scorecard summary, trend charts, rows that are not valid, and scorecard properties.

For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

Sequence Generator Transformation

Effective in 9.6.0, you can use the Sequence Generator transformation to add a sequence of values to your mappings.

For more information, see the *Informatica 9.6.0 Developer Transformation Guide*.

Informatica Data Services

This section describes new features and enhancements to Informatica Data Services.

Column Profile Results

The column profile results include the sum of all values in columns with a numeric datatype.

For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

Use the TOTAL_SUM column in the following relational database views to access the profiling warehouse for information about the sum of values in numeric columns:

- IDPV_COL_PROFILE_RESULTS
- IDPV_PROFILE_RESULTS_TRENDING

For more information, see the *Informatica 9.6.0 Database View Reference*.

Curation

You can curate inferred profile results in both Analyst and Developer tools. Curation is the process of validating and managing discovered metadata of a data source so that the metadata is fit for use and reporting. You can approve, reject, and restore datatypes. You can also approve, reject, and restore data domains, primary keys, and foreign keys. You can hide or show rows containing rejected datatypes or data domains. You can exclude approved datatypes, data domains, and primary keys from column profile inference and data domain discovery inference when yo run the profile again.

For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

Use the following relational database views to access profiling warehouse for information about curated profile results:

- IDPV_CURATED_DATATYPES
- IDPV_CURATED_DATADOMAINS
- IDPV_CURATED_PRIMARYKEYS
- IDPV_CURATED_FOREIGNKEYS

For more information, see the *Informatica 9.6.0 Database View Reference*.

Datatype Inference

You can infer multiple datatypes that match the inference criteria when you run a column profile. You can drill down based on a column datatype in column profile results.

For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

Use the following relational database views to access profiling warehouse for information on inferred datatypes:

- IDPV_DATATYPES_INF_RESULTS
- IDPV_DATATYPE_FREQ_TRENDING

For more information, see the *Informatica 9.6.0 Database View Reference*.

Data Masking Transformation

The Data Masking transformation has the following new features in this release:

- The Data Masking transformation is supported on Hadoop clusters. You can run the transformation in a Hive environment.
- Tokenization is a masking technique in which you can provide JAR files with your own algorithm or logic to mask string data.
- You can use the Phone masking technique to mask fields with numeric integer and numeric bigint datatypes.

For more information, see the *Informatica 9.6.0 Developer Transformation Guide*.

Java Transformation

In a Java transformation, you can configure an input port as a partition key, a sort key, and assign a sort direction. The Partition key and Sort key are valid when you process the transformation in a mapping that runs in a Hive environment.

For more information, see the *Informatica 9.6.0 Developer Transformation Guide*.

Normalizer Transformation

The Normalizer transformation is an active transformation that transforms one source row into multiple output rows. When a Normalizer transformation receives a row that contains repeated fields, it generates an output row for each instance of the repeated data.

Use the Normalizer transformation when you want to organize repeated data from a relational or flat file source before you load the data to a target.

For more information, see the *Informatica 9.6.0 Developer Transformation Guide*.

Performance

In the Developer tool you can enable a mapping to perform the following optimizations:

- Push a custom SQL query to a relational data object.
- Push operations such as Union, Union All, Intersect, Intersect All, Minus, Minus All, and Distinct to a relational data object.
- Perform early selection and push queries that contain the SQL keyword LIMIT to a relational data object.
- Push a Union transformation to a relational data object.
- Push Filter, Expression, Union, Sorter, and Aggregator transformations to a Hive relational object.

For more information, see the *Informatica 9.6.0 Developer User Guide, Informatica 9.6.0 SQL Data Service Guide, and Informatica 9.6.0 Mapping Guide*.

Profile Results Verification

You can verify multiple inferred primary key and functional dependency results for a single data object in the Developer tool. When you verify the profile results, the Developer tool runs the profile on all rows of the source data. You can also verify multiple data object relationships and data domains in the enterprise discovery results.

For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

Pushdown Optimization for Greenplum

The Data Integration Service can push expression, aggregator, operator, union, sorter, and filter functions to Greenplum sources when the connection type is ODBC.

For more information, see the *Informatica 9.6.0 Mapping Guide*.

Pushdown Optimization for SAP HANA

The Data Integration Service can push transformation logic to SAP HANA sources when the connection type is ODBC.

For more information, see the *Informatica 9.6.0 Mapping Guide*.

Pushdown Optimization for Teradata

The Data Integration Service can push transformation logic to Teradata sources when the connection type is ODBC.

For more information, see the *Informatica 9.6.0 Mapping Guide*.

REST Web Service Consumer Transformation

The REST Web Service Consumer transformation consumes REST web services in a mapping. The transformation can use GET, PUT, POST, and DELETE HTTP operations.

You can create a REST Web Service Consumer transformation from a Schema object or add elements to an empty transformation.

For more information, see the *Informatica 9.6.0 Developer Transformation Guide*.

Scorecards

You can export scorecard results to a Microsoft Excel file. The exported file contains scorecard summary, trend charts, rows that are not valid, and scorecard properties.

For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

Sequence Generator Transformation

You can now use the Sequence Generator transformation to add a sequence of values to your mappings.

For more information, see the *Informatica 9.6.0 Developer Transformation Guide*.

Stored Procedures

You can use the SQL transformation to invoke stored procedures from a relational database. You can create the SQL transformation in the Developer tool by importing a stored procedure. The Developer tool adds the ports and the stored procedure call. You can manually add more stored procedure calls in the SQL transformation. Return zero rows, one row, or result sets from the stored procedure.

For more information, see the *Informatica 9.6.0 Developer Transformation Guide*.

Tableau

You can query a deployed SQL data service with Tableau through the Informatica Data Services ODBC driver.

For more information, see the *Informatica 9.6.0 Data Services Guide*.

Web Service Consumer Transformation

The Web Service Consumer transformation has the following new features in this release:

- The external web service provider can authenticate the Integration Service using NTLMv2.
- In a Web Service Consumer transformation, you can use WSDL with one-way message pattern.
  For more information, see the *Informatica 9.6.0 Developer Transformation Guide*.

Informatica Data Transformation

This section describes new features and enhancements to Informatica Data Transformation.

Data Processor Transformation Wizard

You can use a wizard to create a Data Processor transformation in the Developer with COBOL, ASN.1, relational or JSON input or output.

For more information about the wizard, see the *Informatica 9.6.0 Data Transformation User Guide*.

Relational Input

A Data Processor transformation can transform relational input into hierarchical output.

For more information about relational input, see the *Informatica 9.6.0 Data Transformation User Guide*.

XMap with JSON

You create an XMap that reads or writes directly to JSON.

For more information about XMap or JSON, see the *Informatica 9.6.0 Data Transformation User Guide*.

XMap with Transformers

In an XMap mapping statement, you can include any user-defined transformer with the dp:transform function. Use the XPath Editor to add the dp:transform function to the input, output, or condition fields.

For more information about XPath and the XPath editor, see the *Informatica 9.6.0 Data Transformation User Guide*.

Informatica Developer

This section describes new features and enhancements to Informatica Developer.

Alerts

In the Developer tool, you can view connection status alerts in the **Alerts** view.

For more information, see the *Informatica 9.6.0 Developer Tool Guide*.

Functions

In the Developer tool, you can use the following functions in the transformation language:

- UUID4(). Returns a randomly generated 16-byte binary value.
- UUID_UNPARSE(binary). Takes a 16-byte binary argument and returns a 36-character string.

For more information, see the *Informatica 9.6.0 Developer Transformation Language Reference.*

JDBC Connectivity

You can use the Data Integration Service to read from relational database sources and write to relational database targets through JDBC. JDBC drivers are installed with the Informatica services and the Informatica clients. You can also download the JDBC driver that is JDBC 3.0 compliant from third party vendor websites. You can use the JDBC driver to import database objects, such as views and tables, preview data for a transformation, and run mappings.

For more information, see the *Informatica 9.6.0 Developer Tool Guide*.

Keyboard Accessibility

In the Developer tool, you can use keyboard shortcuts to work with objects and ports in the editor. You can also use keyboard shortcuts to navigate the **Transformation** palette and the workbench.

For more information, see the *Informatica 9.6.0 Developer Tool Guide*.

Model Repository Service Refresh

In the Developer tool, you can refresh the Model Repository Service to see new and updated objects in the Model repository.

For more information, see the *Informatica 9.6.0 Developer Tool Guide*.

Passphrases

In the Developer tool, you can enter a passphrase instead of a password for following connection types:

- Adabas
- DB2 for i5/OS
- DB2 for z/OS
- IMS
- Sequential
- VSAM

A valid passphrase for accessing databases and data sets on z/OS can be up to 128 characters in length. A valid passphrase for accessing i5/OS can be up to 31 characters in length. Passphrases can contain the following characters:

- Uppercase and lowercase letters

- The numbers 0 to 9
- Spaces
- The following special characters:

  ```
  ' - ; # \ , . / ! % & * ( ) _ + { } : @ | < > ?
  ```

  Note: The first character is an apostrophe.

For more information, see the *Informatica 9.6.0 Developer Tool Guide*.

Informatica Development Platform

This section describes new features and enhancements to Informatica Development Platform.

Design API

Version 9.6.0 includes the following enhancements for the Design API:

- You can use the Design API to fetch an XML source or XML target from the PowerCenter repository.
- You can use Design API to connect to a hierarchical VSAM data source or target through PowerExchange.
- You can use the Design API to perform repository functions in a domain that uses Kerberos authentication. You can enable Kerberos authentication through the pcconfig.properties file or when you create a Repository object.

For more information, see the *Informatica Development Platform 9.6.0 Developer Guide*.

Informatica Connector Toolkit

You can use the Informatica Connector Toolkit to build an adapter to provide connectivity between a data source and the Informatica platform. The Informatica Connector Toolkit consists of libraries, plug-ins, and sample codes to develop an adapter in an Eclipse environment.

For more information, see the *Informatica Development Platform 9.6.0 Informatica Connector Toolkit Developer Guide*.

Informatica Domain

This section describes new features and enhancements to the Informatica domain.

Analyst Service

Version 9.6.0 includes the following enhancements to the Analyst Service:

- You can select a Data Integration Service configured to run Human tasks. If the Data Integration Service associated with the Analyst Service is not configured to run Human tasks, choose a different Data Integration Service.
- You can select a Search Service to enable searches in the Analyst tool.
- You can set the location of the export file directory to export a business glossary.

For more information, see the *Informatica 9.6.0 Application Service Guide*.

Content Management Service

You can set the location of the SendRight report file on the Content Management Service. Generate a SendRight report when you run an address validation mapping in certified mode on New Zealand address records. The report verifies that the address records meet the certification standards of New Zealand Post.

For more information, see the *Informatica 9.6.0 Application Service Guide*.

The Content Management Service manages the compilation of rule specifications into mapplets. When you compile a rule specification in the Analyst tool, the Analyst Service selects a Content Management Service to generate the mapplet. The Analyst tool uses the Model Repository Service configuration to select the Content Management Service.

For more information, see the *Informatica 9.6.1 Application Service Guide*.

High Availability

Version 9.6.0 includes the following enhancements to high availability for services:

- When the Model Repository Service becomes unavailable, the Service Manager can restart the service on the same node or a backup node. You can configure the Model Repository Service to run on one or more backup nodes.
- When the Data Integration Service becomes unavailable, the Service Manager can restart the service on the same node or a backup node. You can configure the Data Integration Service to run on one or more backup nodes.
- When the Data Integration Service fails over or restarts unexpectedly, you can enable automatic recovery of aborted workflows.
- You can enable the PowerCenter Integration Service to store high availability persistence information in database tables. The PowerCenter Integration Service stores the information in the associated repository database.

For more information, see the *Informatica 9.6.0 Administrator Guide*.

Log Management

You can aggregate logs at the domain level or service level based on scenarios with the Administrator tool. You can also compress the log files that you aggregate to save disk space.

For more information, see the *Informatica 9.6.0 Administrator Guide*.

Passphrases

You can enter a passphrase instead of a password at the following locations:

- In the -ConnectionPassword option of the infacmd isp CreateConnection and UpdateConnection commands for ADABAS, DB2I, DB2Z, IMS, SEQ, or VSAM connections.
- In the -pwxPassword option of the infacmd pwx createdatamaps command for IMS, SEQ, and VSAM data sources.
- In the Administrator tool, for DB2 for i5/OS and DB2 for z/OS connections.

A valid passphrase for accessing databases and data sets on z/OS can be up to 128 characters in length. A valid passphrase for accessing i5/OS can be up to 31 characters in length. Passphrases can contain the following characters:

- Uppercase and lowercase letters
- The numbers 0 to 9
- Spaces
- The following special characters:

  ```
  ' - ; # \ , . / ! % & * ( ) _ + { } : @ | < > ?
  ```

  Note: The first character is an apostrophe.

For more information, see the *Informatica 9.6.0 Administrator Guide* and *Informatica 9.6.0 Command Reference*.

Search Service

Create a Search Service to enable search in the Analyst tool and Business Glossary Desktop.

For more information, see the *Informatica 9.6.0 Application Service Guide*.

Workflow Graph

You can view the graphical representation of a workflow that you run in the Administrator tool. You can view the details of the tasks within the workflow and the failure points.

For more information, see the *Informatica 9.6.0 Administrator Guide*.

Informatica Domain Security

This section describes security enhancements to the Informatica domain.

Authentication

You can run Informatica with Kerberos authentication and Microsoft Active Directory (AD) directory service. Kerberos authentication provides single sign-on capability to Informatica domain client applications. The Informatica domain supports Active Directory 2008 R2.

Two-Factor Authentication (TFA)

Informatica clients can run on a Windows network that uses two-factor authentication.

Encryption Key

You can specify a keyword to generate a unique encryption key for encrypting sensitive data such as passwords that are stored in the domain.

Workflow Security

You can configure the PowerCenter Integration Service to run PowerCenter workflows securely. The **Enable Data Encryption** option enables secure communication between the PowerCenter Integration Service and the Data Transformation Manager (DTM) process and between DTM processes.

Administrator Group

The Informatica domain includes an Administrator group with default administrator privileges. You can add users to or remove users from the Administrator group. You cannot delete the Administrator group.

Administrator Account Lockout

When you configure account lockout in the Administrator tool, you can enforce account lockout for administrator user accounts. The **Admin Account Lockout** option enables lockout for administrator user accounts. When you enable the **Account Lockout** option, you can also enable the **Admin Account Lockout** option.

Connection to Secure Relational Databases

You can use the Informatica relational database drivers to connect to a secure Oracle, Microsoft SQL Server, or IBM DB2 database. You can create repositories, sources, and targets on databases secured with SSL certificates.

Audit Reports

In the Administrator tool, you can generate audit reports to get information on users and groups in the Informatica domain. For example, you can get information about a user account, such as the privileges and permissions assigned to the user and the groups associated with the user.

Analyst Service Privileges

The following table describes new privileges for the Analyst Service:

Privilege	Description
Manage Glossaries	User is able to manage business glossaries.
Workspace Access	User is able to access the following workspaces in the Analyst tool: - **Design** workspace. - **Discovery** workspace. - **Glossary** workspace. - **Scorecards** workspace.
Design Workspace	User is able to access the **Design** workspace.
Discovery Workspace	User is able to access the **Discovery** workspace.
Glossary Workspace	User is able to access the **Glossary** workspace.
Scorecards Workspace	User is able to access the **Scorecards** workspace.

Model Repository Service Privileges

The following table describes new privileges for the Model Repository Service:

Privilege	Description
Access Analyst	User is able to access the Model repository from the Analyst tool.
Access Developer	User is able to access the Model repository from the Developer tool.

For more information, see the *Informatica 9.6.0 Security Guide*.

Command Line Programs

This section describes new and changed commands and options for the Informatica command line programs.

infacmd as Commands

The following table describes an updated infacmd as command:

Command	Description
CreateService	Contains the following new options: - -HumanTaskDataIntegrationService(-htds). Optional. Name of the Data Integration Service that runs Human tasks. - -BusinessGlossaryExportFileDirectory(-bgefd). Optional. Location of the directory to export business glossary files. Contains the following obsolete option: - -StagingDatabase(-sd). Required. Database connection name for a staging database

UpdateServiceOptions	Updates Analyst Service options. In version 9.6.0 you can run the command to specify a Data Integration Service to run Human tasks.
	For example, the following command configures the Analyst Service to specify DIS_ID_100 as the Data Integration Service name:
	`infacmd as UpdateServiceOptions`
	`-dn InfaDomain -sn AS_ID_100`
	`-un Username -pd Password`
	`HumanTaskDataIntegrationService.humanTaskDsServiceName=DS_ID_100`

The following table describes obsolete infacmd as commands:

Command	Description
CreateAuditTables	Creates audit tables that contain audit trail log events for bad record tables and duplicate tables in a staging database. Update any script that uses infacmd as CreateAuditTables.
DeleteAuditTables	Creates audit tables that contain audit trail log events for bad record tables and duplicate tables in a staging database. Update any script that uses infacmd as DeleteAuditTables.

infacmd dis Commands

The following table describes updated infacmd dis commands:

Command	Description
CreateService	Contains the following new option: - -BackupNodes(-bn). Optional. Name of the backup nodes.
UpdateService	Contains the following new option: - -BackupNodes(-bn). Optional. Name of the backup nodes.

infacmd idd Commands

The infacmd idd commands are obsolete. Update any script that refers to an infacmd idd command.

The following table describes the obsolete infacmd idd commands:

Command	Description
CreateService	Creates a Data Director Service.
ListServiceOptions	Lists the Data Director Service options.
ListServiceProcessOptions	Lists the Data Director Service process options.
RemoveService	Removes the Data Director Service.
UpdateServiceOptions	Updates the Data Director Service options.
UpdateServiceProcessOptions	Updates the Data Director Service process options.

infacmd isp Commands

The following table describes updated infacmd isp commands:

Command	Description
AssignISToMMService	Contains the following new option: - -RepositoryUserSecurityDomain(-rsdn).Optional. Name of the security domain to which the PowerCenter repository user belongs.
CreateConnection	Contains the following updated option: - -ConnectionPassword. You can enter a passphrase for ADABAS, DB2I, DB2Z, IMS, SEQ, or VSAM connections. A passphrase can be up to 128 characters in length for z/OS connections and up to 31 characters in length for DB2 for i5/OS connections. A passphrase can contain letters, numbers, spaces, and some special characters.
CreateIntegrationService	Contains the following service option (-so): - StoreHAPersistenceInDB. Optional. Stores process state information in high availability persistence tables in the associated PowerCenter repository database. Default is no.
EnableService	Can enable the Search Service.
GetLog	Contains the argument SEARCH for the ServiceType option. Use the argument to get the log events for the Search Service.
ListServices	Contains the argument SEARCH for the ServiceType option. Use the argument to get a list of all Search Services running in the domain.
UpdateConnection	Contains the following updated option: - -ConnectionPassword. You can enter a passphrase for ADABAS, DB2I, DB2Z, IMS, SEQ, or VSAM connections. A passphrase can be up to 128 characters in length for z/OS connections and up to 31 characters in length for DB2 for i5/OS connections. A passphrase can contain letters, numbers, spaces, and some special characters.
UpdateDomainOptions	Contains the following domain option (-do): - ServiceResilTimeout. Amount of time in seconds that a service tries to establish or reestablish a connection to another service.

Command	Description
UpdateGatewayInfo	Contains the following new option: - -Force(-f). Optional. Updates or creates the domains.infa file even when the connection to the domain fails. The -Force option sets the Kerberos and TLS enabled options as false in the domains.infa file if the connection to domain fails. If you do not specify the -Force option, the command does not update the domains.infa file if the connection to the domain fails. Previously, the command could not check for any error message when updating the gateway node with the connectivity information that you specified.
UpdateIntegrationService	Contains the following service option (-so): - StoreHAPersistenceInDB. Optional. Stores process state information in high availability persistence tables in the associated PowerCenter repository database. Default is no.

infacmd mrs Commands

The following table describes updated infacmd mrs commands:

Command	Description
CreateService	Contains the following new option: - -BackupNodes(-bn). Optional. Name of the backup nodes.
UpdateService	Contains the following new option: - -PrimaryNode(-nn). Optional. Name of the primary node. - -BackupNodes(-bn). Optional. Name of the backup nodes.

infacmd ps Commands

The following table describes new infacmd ps commands:

Command	Description
migrateProfileResults	Migrates column profile results and data domain discovery results from versions 9.1.0, 9.5.0, or 9.5.1.
synchronizeProfile	Migrates documented keys, user-defined keys, committed keys, primary keys, and foreign keys for all the profiles in a specific project from versions 9.1.0, 9.5.0, or 9.5.1.

infacmd pwx Commands

The following table describes a new infacmd pwx command:

Command	Description
createdatamaps	Creates PowerExchange data maps for IMS, SEQ, or VSAM data sources for bulk data movement.

infacmd search Commands

The following table describes the new infacmd search commands:

Command	Description
createService	Creates a Search Service.
listServiceOptions	Lists the properties for a Search Service.
listServiceProcessOptions	Lists the properties for a Search Service process.
updateServiceOptions	Configures properties for a Search Service.
updateServiceProcessOptions	Configures properties for a Search Service process.

For more information, see the *Informatica 9.6.0 Command Reference*.

PowerCenter

This section describes new features and enhancements to PowerCenter.

Pushdown Optimization for SAP HANA

The PowerCenter Integration Service can push transformation logic to SAP HANA sources and targets when the connection type is ODBC.

For more information, see the *Informatica PowerCenter 9.6.0 Advanced Workflow Guide*.

High Availability Persistence in a Database

You can enable the PowerCenter Integration Service to store high availability persistence information in database tables. The PowerCenter Integration Service stores the information in the associated repository database.

For more information, see the *Informatica 9.6.0 Administrator Guide*.

Transformations

You can use a parameter file to provide cache size values in the following transformations:

- Aggregator
- Joiner
- Rank
- Sorter

For more information, see the *Informatica PowerCenter 9.6.1 Transformation Guide*.

PowerCenter Big Data Edition

This section describes new features and enhancements to PowerCenter Big Data Edition.

Automatic Workflow Recovery

You can configure automatic recovery of aborted workflow instances due to an unexpected shutdown of the Data Integration Service process. When you configure automatic recovery, the Data Integration Service process recovers aborted workflow instances due to a service process shutdown when the service process restarts.

For more information, see the *Informatica 9.6.0 Developer Workflow Guide*.

Mappings in the Hive Environment

- You can run mappings with Cloudera 4.2, Hortonworks 1.3.2, MapR 2.1.3, and MapR 3.0.1 distributions.
- When you choose Hive as the validation environment for the mapping, you can now choose a Hive version.
- You can append to a Hive target table with Hive version 0.9 and later.
- In a Java transformation, you can configure an input port as a partition key, a sort key, and assign a sort direction to get sorted output data.
- To modify the Hadoop distribution directory on the Hadoop data nodes and the Data Integration Service node use the Hadoop resource descriptor configuration file hadoopRes.properties.

For more information, see the *Informatica PowerCenter Big Data Edition 9.6.0 User Guide*.

Partitioned Mappings in the Native Environment

If you have the Partitioning option, you can enable the Data Integration Service process to maximize parallelism when it runs mappings in the native environment. The Data Integration Service process must run on a node that has multiple CPUs. When you maximize parallelism, the Data Integration Service dynamically divides the underlying data into partitions and processes all of the partitions concurrently. When the Data Integration Service adds partitions, it increases the number of processing threads, which can increase mapping performance.

For more information, see the *Informatica 9.6.0 Mapping Guide*.

PowerCenter Advanced Edition

This section describes new features and enhancements to PowerCenter Advanced Edition.

Business Glossary

Business Glossary comprises online glossaries of business terms and policies that define important concepts within an organization. Data stewards create and publish terms that include information such as descriptions, relationships to other terms, and associated categories. Glossaries are stored in a central location for easy lookup by end-users.

Business Glossary is made up of glossaries, business terms, policies, and categories. A glossary is the high-level container that stores other glossary content. A business term defines relevant concepts within the organization, and a policy defines the business purpose that governs practises related to the term. Business terms and policies can be associated with categories, which are descriptive classifications. You can access Business Glossary through Informatica Analyst (the Analyst tool).

For more information, see the *Informatica 9.6.0 Business Glossary Guide.*

Metadata Manager

This section describes new features and enhancements to Metadata Manager.

Security Enhancements

Metadata Manager contains the following security enhancements:

Connection to secure relational databases

Metadata Manager can communicate with secure IBM DB2, Microsoft SQL Server, and Oracle databases. Metadata Manager can communicate with these databases when they are used for the Metadata Manager repository, for the PowerCenter repository, or as metadata sources.

For more information, see the *Informatica PowerCenter 9.6.0 Metadata Manager Administrator Guide*.

Kerberos authentication

Metadata Manager can run on a domain that is configured with Kerberos authentication.

For information about configuring the domain to use Kerberos authentication, see the *Informatica 9.6.0 Security Guide*. For information about running Metadata Manager and mmcmd when the domain uses Kerberos authentication, see the *Informatica PowerCenter 9.6.0 Metadata Manager Administrator Guide*.

Two-factor authentication

Metadata Manager can run on a Windows network that uses two factor authentication.

For more information, see the *Informatica 9.6.0 Security Guide*.

Business Glossary Resources

You can create Business Glossary resources that are based on Informatica Analyst business glossaries. Create a Business Glossary resource to extract metadata from an Informatica Analyst business glossary.

For information about creating resources, see the *Informatica PowerCenter 9.6.0 Metadata Manager Administrator Guide*. For information about viewing resources, see the *Informatica PowerCenter 9.6.0 Metadata Manager User Guide*.

Resource Versions

You can create resources of the following versions:

- Microstrategy 9.3.1 and 9.4.1. Previously, you could create Microstrategy resources up to version 9.2.1.
- Netezza 7.0. Previously, you could create Netezza resources up to version 6.0.

For information about creating resources, see the *Informatica PowerCenter 9.6.0 Metadata Manager Administrator Guide*.

Browser Support

You can run the Metadata Manager application in the Google Chrome web browser.

PowerExchange Adapters for PowerCenter

This section describes new features and enhancements to PowerExchange adapters for PowerCenter.

PowerExchange for Greenplum

You can configure a session to override the schema that is specified in the Greenplum connection object.

For more information, see the *Informatica PowerExchange for Greenplum 9.6.0 User Guide for PowerCenter*.

PowerExchange for Hadoop

PowerExchange for Hadoop supports following updated versions of Hadoop distributions to access Hadoop sources and targets:

- Cloudera CDH 4.2
- Hortonworks 1.3.2
- MapR 2.1.3 and 3.0.1
- Pivotal HD 1.1
- IBM BigInsights-2.1

For more information, see the *Informatica PowerExchange for Hadoop 9.6.0 User Guide for PowerCenter*.

PowerExchange for Microsoft Dynamics CRM

- You can use Microsoft Dynamics CRM Online version 2013 for online deployment.
- You can configure the number of rows that you want to retrieve from Microsoft Dynamics CRM.
- You can join two related entities that have one to many or many to one relationships.
- PowerExchange for Microsoft Dynamics CRM uses HTTP compression to extract data if HTTP compression is enabled in the Internet Information Services (IIS) where Microsoft Dynamics CRM is installed.
- You can configure the PowerCenter Integration Service to write records in bulk mode.
- You can change the location of the krb5.conf file and the login.conf files at run time.

For more information, see the *Informatica PowerExchange for Microsoft Dynamics CRM 9.6.0 User Guide for PowerCenter*.

PowerExchange for SAP NetWeaver

- PowerExchange for SAP NetWeaver uses SAP NetWeaver RFC SDK 7.20 libraries.
- You can enable partitioning for SAP BW sessions that load data to 7.x DataSources. When you enable partitioning, the PowerCenter Integration Service performs the extract, transform, and load for each partition in parallel.
- You can run ABAP stream mode sessions with the Remote Function Call communication protocol.
- You can install secure transports to enforce security authorizations when you use ABAP to read data from SAP.
- When you extract business content data from SAP Business Suite applications, you can use data sources that belong to a custom namespace.
- When you use timestamp-based delta pointers to extract business content data, you can extract the changed data alone without doing a full transfer of the entire data.

For more information, see the *Informatica PowerExchange for SAP User Guide for PowerCenter*.

PowerExchange for SAS

You can read data directly from a SAS data file.

For more information, see the *Informatica PowerExchange for SAS 9.6.0 User Guide for PowerCenter*.

PowerExchange for Siebel

When you import Siebel business components, you can specify the name of the Siebel repository if multiple Siebel repositories are available. You can create and configure the `connection.properties` file to add the **Repository Name** field to the **Import from Siebel** wizard in PowerExchange for Siebel.

For more information, see the *Informatica PowerExchange for Siebel 9.6.0 User Guide for PowerCenter*.

PowerExchange for Teradata Parallel Transporter API

- You can configure a session so that Teradata PT API uses one of the spool modes to extract data from Teradata.
- You can configure a session to use a character in place of an unsupported Teradata unicode character while loading data to targets.

For more information, see the *Informatica PowerExchange for Teradata Parallel Transporter API 9.6.0 User Guide for PowerCenter*.

PowerExchange for Web Services

- The PowerCenter Integration Service can process SOAP 1.2 messages with RPC/encoded and document/literal encoding styles. Each web service can have an operation that uses a SOAP 1.2 binding. You can create a Web Service Consumer transformation with a SOAP 1.2 binding.
- You can use PowerExchange for Web Services with SharePoint 2010 and 2013 as a web service provider.

For more information, see the *Informatica PowerExchange for Web Services 9.6.0 User Guide for PowerCenter*.

PowerExchange Adapters for Informatica

This section describes new features and enhancements to PowerExchange adapters for Informatica.

PowerExchane for HBase

PowerExchange for HBase provides connectivity to an HBase data store. Use PowerExchange for HBase to read data from the HBase columns families or write data to the columns families in an HBase table. You can read or write data to a column family or a single binary column.

You can add an HBase data object operation as a source or as a target in a mapping and run the mappings in the native or a Hive environment.

For more information, see the *PowerExchange for HBase 9.6.0 User Guide*.

PowerExchange for DataSift

You can configure the HTTP proxy server authentication settings at design time.

For more information, see the *Informatica PowerExchange for DataSift 9.6.0 User Guide*.

PowerExchange for Facebook

- You can extract information about a group, news feed of a group, list of members in a group, basic information about a page, and news feed from a page from Facebook.
- You can configure the HTTP proxy server authentication settings at design time.

For more information, see the *Informatica PowerExchange for Facebook 9.6.0 User Guide*.

PowerExchange for HDFS

- PowerExchange for HDFS supports the following Hadoop distributions to access HDFS sources and targets:
  - CDH Version 4 Update 2
  - HortonWorks 1.3.2
  - MapR 2.1.3
  - MapR 3.0.1
- You can write text files and binary file formats, such as sequence files, to HDFS with a complex file data object.
- You can write compressed complex files, specify compression formats, and decompress files.
- The Data Integration Service creates partitions to read data from sequence files and custom input format files that can be split.

For more information, see the *Informatica PowerExchange for HDFS 9.6.0 User Guide*.

PowerExchange for Hive

- PowerExchange for Hive supports the following Hive distributions to access Hive sources and targets:
  - Cloudera CDH Version 4 Update 2
  - HortonWorks 1.3.2
  - MapR 2.1.3
  - MapR 3.0.1
- You can write to Hive partitioned tables when you run mappings in a Hive environment.

PowerExchange for LinkedIn

- You can specify the full name of a person when you look up company information in LinkedIn.
- You can configure the HTTP proxy server authentication settings at design time.

For more information, see the *Informatica PowerExchange for LinkedIn 9.6.0 User Guide*.

PowerExchange for Salesforce

- You can select specific records from Salesforce by using the filter from the query property of the Salesforce data object read operation.
- You can use a Salesforce data object read operation to look up data in a Salesforce object.
- You can configure the HTTP proxy server authentication settings at design time.

For more information, see the *Informatica PowerExchange for Salesforce 9.6.0 User Guide*.

PowerExchange for SAP NetWeaver

- PowerExchange for SAP NetWeaver uses SAP NetWeaver RFC SDK 7.20 libraries.
- You can install secure transports to enforce security authorizations when you use ABAP to read data from SAP.

For more information, see the *Informatica PowerExchange for SAP 9.6.0 User Guide*.

PowerExchange for Twitter

- You can specify a list of user IDs or screen names in a .txt or .csv format to extract the profiles of users. You can specify a valid user ID or a screen name to extract the profile of a user.
- You can configure the HTTP proxy server authentication settings at design time.

For more information, see the *Informatica PowerExchange for Twitter 9.6.0 User Guide*.

PowerExchange for Web Content-Kapow Katalyst

You can configure the HTTP proxy server authentication settings at design time.

For more information, see the *Informatica PowerExchange for LinkedIn 9.6.0 User Guide*.

Informatica Documentation

This section describes new guides included with the Informatica documentation. Some new guides are organized based on shared functionality among multiple products and replace previous guides.

The Informatica documentation contains the following new guides:

Informatica Analyst Tool Guide

Contains general information about Informatica Analyst (the Analyst tool). Previously, the Analyst tool was documented in the *Informatica Data Integration Analyst User Guide*.

Informatica Application Service Guide

Contains information about application services. Previously, the application services were documented in the *Informatica Administrator Guide*.

Informatica Connector Toolkit Developer Guide

Contains information about the Informatica Connector Toolkit and how to develop an adapter for the Informatica platform. You can find information on components that you define to develop an adapter such as connection attributes, type system, metadata objects, and run-time behavior.

Informatica Connector Toolkit Getting Started Guide

Contains a tutorial on how to use the Informatica Connector Toolkit to develop a sample MySQL adapter for the Informatica platform. You can find information on how to install Informatica Connector Toolkit and on how to create and publish a sample MySQL adapter with the Informatica Connector Toolkit.

Informatica Data Explorer Data Discovery Guide

Contains information about discovering the metadata of source systems that include content and structure. You can find information on column profiles, data domain discovery, primary key and foreign key discovery, functional dependency discovery, Join analysis, and enterprise discovery. Previously, data discovery was documented in the *Informatica Data Explorer User Guide*.

Informatica Business Glossary Guide

Contains information about Business Glossary. You can find information about how to manage and look up glossary content in the Analyst Tool. Glossary content includes terms, policies, and categories. Previously, information about Metadata Manager Business Glossary was documented in the *Informatica PowerCenter Metadata Manager Business Glossary Guide*.

Informatica Data Quality Exception Management Guide

Contains information about exception management for Data Quality. You can find information about managing exception record tasks in the Analyst tool. Previously, exception management was documented in the *Informatica Data Director for Data Quality Guide*, *Data Quality User Guide*, and *Data Services User Guide*.

Informatica Database View Reference

Contains information about Model Repository views, Profile Warehouse views, and Business Glossary views. Previously, this book was called the *Informatica Data Services Model Repository Views* and the profile views were documented in an H2L article. The Business Glossary views is the new content added in this book.

Informatica Developer Tool Guide

Contains information about Informatica Developer. You can find information on common functionality in the Developer tool. Previously, the Developer tool was documented in the *Informatica Developer User Guide*.

Informatica Mapping Guide

Contains information about configuring Model repository mappings. Previously, the mapping configuration was documented in the *Informatica Developer User Guide*.

Informatica Mapping Specifications Getting Started Guide

Contains getting started information for mapping specifications.

Informatica Mapping Specifications Guide

Contains information about mapping specifications. Previously, the mapping specifications were documented in the *Informatica Data Integration Analyst User Guide*.

Informatica Profile Guide

Contains information about profiles. The guide contains basic information about running column profiles, creating rules, and creating scorecards. Previously, profiling was documented in the *Data Quality User Guide* and *Informatica Data Explorer User Guide*.

Informatica Reference Data Guide

Contains information about reference data objects. A reference data object contains a set of data values that you can use to perform search operations in source data. You can create reference data objects in the Developer tool and Analyst tool, and you can import reference data objects to the Model repository. Previously, reference data objects were documented in the *Informatica Data Quality User Guide*.

Informatica Rule Builder Guide

Contains information about the Rule Builder feature in the Analyst tool. Use Rule Builder to describe business rule requirements as a series of logical statements. You compile the logical statements into a rule specification. The Analyst tool saves a copy of the rule specification as a mapplet in the Model repository.

Informatica Security Guide

Contains information about security for the Informatica domain. Previously, Informatica security was documented in the *Informatica Administrator Guide*.

Informatica SQL Data Service Guide

This manual contains information about creating SQL data services, populating virtual data and connecting to an SQL data service with third party tools. Previously, this book was called the *Informatica Data Services User Guide*.

CHAPTER 28

Changes to Informatica Data Explorer (9.6.0)

This chapter includes the following topics:

Enterprise Discovery

Effective in version 9.6.0, enterprise discovery includes the following changes:

- You can refresh the Model Repository Service to view the enterprise discovery results for data sources from external connections.
  Previously, after you ran an enterprise discovery profile, you had to reconnect to the Model Repository Service.
- The **Profile Model** option in the profile wizard that you open by selecting **File** > **New** > **Profile** is renamed to **Enterprise Discovery Profile**.
- The graphical view of the enterprise discovery results displays the data domains overlap in entities for those data domains that you choose to include in the graphical view.

Profile Results Verification

Effective in version 9.6.0, you can verify the data domain discovery results on multiple columns in the Developer tool. When you verify the profile results, the Developer tool runs the profile on all rows of the data source.

Previously, you verified the data domain discovery results for a single column.

Rules

Effective in version 9.6.0, you can select multiple input columns when you apply a rule to a profile in Informatica Analyst.

Previously, you selected one input column when you applied a rule.

Scorecards

Effective in version 9.6.0, scorecards include the following changes:

- When you select the valid values for a metric, you can view the percentage of selected valid values and count of total valid values.
  Previously, you could view the count of total valid values in the column.
- When you view the source data for a metric, by default, the **Drilldown** section displays the rows of source data that are not valid.
  Previously, the default value was to display rows that are valid.
- In the scorecard results, you can select a score and click the trend chart arrow to view the trend chart.
  Previously, you right-clicked the score and selected the **Show Trend Chart** option.

CHAPTER 29

Changes to Informatica Data Quality (9.6.0)

This chapter includes the following topics:

Address Validator Transformation

Effective in version 9.6.0, the Address Validator transformation uses version 5.4.1 of the Address Doctor software engine.

Previously, the transformation used version 5.3.1 of the Address Doctor software engine.

Exception Record Management

Effective in version 9.6.0, the Analyst tool reads exception records from the database tables that a Human task identifies.

Previously, the Analyst tool read exception records from a staging database that the Analyst Service identified.

To continue to analyze the records in the staging database after you upgrade, perform the following steps:

1. Create a mapping that reads the staging database tables.
   Use an Exception transformation to identify the exception records.
2. Configure a workflow with a Mapping task and a Human task.
   Configure the Mapping task to run the exception mapping. Configure the Human task to read the output of the Mapping task.
3. Run the workflow.
4. Log in to the Analyst tool to review and update the exception records.

Informatica Data Director for Data Quality

Effective in version 9.6.0, the Informatica Data Director for Data Quality web application is obsolete. To review and update Human task data in version 9.6.0, log in to the Analyst tool.

Previously, users logged in to Informatica Data Director for Data Quality to review and update the records that a Human task specified.

Java Transformation

Effective in version 9.6.0, the **Stateless** advanced property for the Java transformation is valid in both the native and Hive environments. In the native environment, Java transformations must have the **Stateless** property enabled so that the Data Integration Service can use multiple partitions to process the mapping.

Previously, the **Stateless** property was valid only in the Hive environment. The Data Integration Service ignored the Stateless property when a mapping ran in the native environment.

Mapping Parameters

Effective in version 9.6.0, the user-defined parameter that represents a long value is named Bigint. Previously, this user-defined parameter was named Long.

Effective in version 9.6.0, parameter names that are defined in reusable transformations, relational, PowerExchange, and flat file data objects, and that begin with the dollar sign ($) are renamed to a unique name in the Model repository. However, the parameter name is not changed in the parameter file. Previously, you could use the dollar sign ($) as the first character in mapping parameter names.

Match Transformation

Effective in version 9.6.0, a Match transformation that performs identity match analysis treats null data values and empty data fields differently. Identity match analysis and field match analysis treat null data values and empty data fields in the same manner in version 9.6.0.

Previously, a Match transformation treated null data values and empty data fields as identical data elements in identity match analysis.

Native Connectivity to Microsoft SQL Server

Effective in version 9.6.0, you must install the Microsoft SQL Server 2012 Native Client to configure native connectivity to Microsoft SQL Server databases from Windows machines.

Previously, you did not have to install an SQL client because Informatica used the Microsoft OLE DB provider for native connectivity.

If you upgrade from an earlier version, you must install the Microsoft SQL Server 2012 Native Client for the existing mappings to work.

Port-to-Port Data Conversion

Effective in version 9.6.0, the Data Integration Service uses the conversion functions in the transformation language to perform port-to-port conversions between transformations. The Data Integration Service performs port-to-port conversions when you pass data between ports with different datatypes. If the data that you pass is not valid for the conversion datatype, a transformation row error occurs.

Previously, the Data Integration Service did not use the transformation functions for port-to-port conversions. The Data Integration Service used a separate algorithm. If the data that you passed contained data that was not valid for the conversion datatype, the Data Integration Service dropped the value and used a substitute value.

Upgraded mappings that use port-to-port data conversion might produce different output data. For example, a mapping in a previous version produced the following output:

```
"0.377777","0.527777","0.000000","0.250000","0.000000","0.377777","0.250000"
```

After you upgrade, the same mapping might produce the following output:

```
"0.377777","0.527777","0","0.25","0","0.377777","0.25"
```

Profile Results Verification

Effective in version 9.6.0, you can verify the data domain discovery results on multiple columns in the Developer tool. When you verify the profile results, the Developer tool runs the profile on all rows of the data source.

Previously, you verified the data domain discovery results for a single column.

Reference Tables

The following changes apply to reference tables in version 9.6.0:

- Effective in version 9.6.0, you can use wildcards when you search a reference table for data values in the Developer tool. When you search a reference table for data values, the search is not case-sensitive in the Developer tool.

  Previously, you performed wildcard searches and searches that are not case-sensitive in the Analyst tool.
- Effective in version 9.6.0, the Data Integration Service stores a single instance of a reference table in memory when multiple mappings in a process read the reference table.

  Previously, the Data Integration Service stored an instance of the reference table in memory for each mapping.

Rules

Effective in version 9.6.0, you can select multiple input columns when you apply a rule to a profile in Informatica Analyst.

Previously, you selected one input column when you applied a rule.

Scorecards

Effective in version 9.6.0, scorecards include the following changes:

- When you select the valid values for a metric, you can view the percentage of selected valid values and count of total valid values.
  Previously, you could view the count of total valid values in the column.
- When you view the source data for a metric, by default, the **Drilldown** section displays the rows of source data that are not valid.
  Previously, the default value was to display rows that are valid.
- In the scorecard results, you can select a score and click the trend chart arrow to view the trend chart.
  Previously, you right-clicked the score and selected the **Show Trend Chart** option.

CHAPTER 30

Changes to Informatica Data Services (9.6.0)

This chapter includes the following topics:

Java Transformation

Effective in version 9.6.0, the **Stateless** advanced property for the Java transformation is valid in both the native and Hive environments. In the native environment, Java transformations must have the **Stateless** property enabled so that the Data Integration Service can use multiple partitions to process the mapping.

Previously, the **Stateless** property was valid only in the Hive environment. The Data Integration Service ignored the Stateless property when a mapping ran in the native environment.

Native Connectivity to Microsoft SQL Server

Effective in version 9.6.0, you must install the Microsoft SQL Server 2012 Native Client to configure native connectivity to Microsoft SQL Server databases from Windows machines.

Previously, you did not have to install an SQL client because Informatica used the Microsoft OLE DB provider for native connectivity.

If you upgrade from an earlier version, you must install the Microsoft SQL Server 2012 Native Client for the existing mappings to work.

Port-to-Port Data Conversion

Effective in version 9.6.0, the Data Integration Service uses the conversion functions in the transformation language to perform port-to-port conversions between transformations. The Data Integration Service performs port-to-port conversions when you pass data between ports with different datatypes. If the data that you pass is not valid for the conversion datatype, a transformation row error occurs.

Previously, the Data Integration Service did not use the transformation functions for port-to-port conversions. The Data Integration Service used a separate algorithm. If the data that you passed contained data that was not valid for the conversion datatype, the Data Integration Service dropped the value and used a substitute value.

Upgraded mappings that use port-to-port data conversion might produce different output data. For example, a mapping in a previous version produced the following output:

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After you upgrade, the same mapping might produce the following output:

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Profile Results Verification

Effective in version 9.6.0, you can verify the data domain discovery results on multiple columns in the Developer tool. When you verify the profile results, the Developer tool runs the profile on all rows of the data source.

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  Previously, the default value was to display rows that are valid.

- In the scorecard results, you can select a score and click the trend chart arrow to view the trend chart. Previously, you right-clicked the score and selected the **Show Trend Chart** option.

CHAPTER 31

Changes to Informatica Data Transformation (9.6.0)

This chapter includes the following topics:

Export Mapping to PowerCenter

You can export a mapping with a Data Processor transformation to PowerCenter.

Invalid CMConfig File

Effective in 9.6.0, a Data Processor transformation cannot run when the `CMConfig.xml` file is an invalid XML file.

CHAPTER 32

Changes to Informatica Domain (9.6.0)

This chapter includes the following topics:

Informatica Services

Effective in version 9.6.0, the Informatica Services include the following changes:

- On Windows, when you run the command `infaservice.bat startup` to start the Informatica services, the **ISP** console window runs in the background.

  Previously, the window appeared in the foreground when you ran `infaservice.bat startup` to start the Informatica services. Also, if you encounter error messages during the Service Manager startup, the installer saves the error messages to the `catalina.out` and `node.log` log files.
- On Windows, you must be a user with administrative privileges to start the Informatica services from the command line and the Windows Start menu.

  Previously, the user did not need administrative privileges to start the Informatica services.

Analyst Service

The following changes apply to the Analyst Service in version 9.6.0:

- Effective in version 9.6.0, the Analyst Service identifies the Data Integration Service that runs Human tasks.

  Previously, the Data Director Service identified the Data Integration Service that runs Human tasks.
- Effective in version 9.6.0, the Staging Database property is obsolete.

  Previously, the Analyst Service used the Staging Database property to identify the database that contained exception record tables.

Content Management Service

Effective in version 9.6.0, you can set the Max Result Count property on the Content Management Service and on the Address Validator transformation. The property determines the maximum number of address suggestions that the Address Validator transformation can generate for a single address.

Previously, you set the Max Result Count property on the Address Validator transformation.

Data Integration Service

Effective in version 9.6.0, when you run Data Integration Service jobs in separate operating system processes, the Data Integration Service maintains a pool of reusable DTM processes. Each job runs in a DTM process selected from the pool. One DTM process can run multiple DTM instances for related jobs. If you configure connection pooling, each DTM process maintains its own connection pool library that it can reuse for related jobs that run in the same DTM process.

Previously when you ran Data Integration Service jobs in separate operating system processes, each job ran in a separate DTM process. One DTM process ran a single DTM instance. When you ran jobs in separate operating system processes, the Data Integration Service ignored the connection pooling properties.

Data Director Service

Effective in version 9.6.0, the Data Director Service is obsolete.

Previously, you configured a Data Director Service to identify the Data Integration Service that runs Human tasks. To identify the Data Integration Service that runs Human tasks in version 9.6.0, configure the Human Task Properties on the Analyst Service.

The Informatica 9.6.0 upgrade process upgrades a Data Director Service to an Analyst Service. If you upgrade an Informatica domain that includes a Data Director Service and an Analyst Service, the upgrade process creates a separate Analyst Service for each service. After you upgrade, you can keep the Analyst Services in the domain. Optionally, you can merge the services.

Test Data Manager Service

Effective in version 9.6.0, Test Data Management (TDM) is available as a service on the Informatica domain. Create and configure a Test Data Manager Service (TDM Service) in the Informatica domain from the Administrator tool. Define roles and privileges to perform Test Data Management tasks as custom roles for the TDM Service. The web-based user interface of Test Data Management uses database content from the repository associated with the TDM Service. You must have installed TDM to be able to create the TDM Service. You also define security preferences for the TDM service from the Administrator tool.

Previously, TDM was independent of the Informatica domain and not a service on the domain.

Model Repository Service Privileges

Effective in version 9.6.0, the Create Projects privilege for the Model Repository Service is renamed to the Create, Edit, and Delete Projects privilege. Users must have the Create, Edit, and Delete Projects privilege to complete the following tasks in the Analyst tool and the Developer tool:

- Create projects.
- Edit projects. Users must also have Write permission on the project.
- Delete projects that the user created. Users must also have Write permission on the project.

Previously, when users had the Create Projects privilege for the Model Repository Service, they could create projects. When users had Write permission on the project, they could edit and delete the project.

Domain Security

Effective in version 9.6.0, the **Enable Transport Layer Security (TLS) for the domain** option in the Administrator tool is renamed **Enable Secure Communication**. The **Enable Secure Communication** option secures the communication between the Service Manager and all services in the Informatica domain. You can specify a keystore and truststore file for the SSL certificate.

Previously, the **Enable Transport Layer Security (TLS) for the domain** option in the Administrator tool did not enable secure communication for the PowerCenter services. The option used the default Informatica SSL certificate.

Changes to Supported Platforms

Effective in version 9.6.0, Informatica dropped support for 32-bit Linux and for Solaris on x64. Before you upgrade to Informatica 9.6.0 on a supported 64-bit server, back up the installation and restore it on the 64-bit server. When you select the Informatica product to upgrade, enter the path to the restored installation. For more information, see the Informatica upgrade guide.

CHAPTER 33

Changes to PowerCenter (9.6.0)

This chapter includes the following topics:

Native Connectivity to Microsoft SQL Server

Effective in version 9.6.0, you must install the Microsoft SQL Server 2012 Native Client to configure native connectivity to Microsoft SQL Server databases from Windows machines.

Previously, you did not have to install an SQL client because Informatica used the Microsoft OLE DB provider for native connectivity.

If you upgrade from an earlier version, you must install the Microsoft SQL Server 2012 Native Client for the existing mappings to work.

Pushdown Optimization for ODBC Sources and Targets

Effective in version 9.6.0, Informatica dropped support for pushdown optimization to ODBC sources and targets.

Repository Connection File Default Location

Effective in version 9.6.0, *pmrep* stores connection information in pmrep.cnx in the home directory by default. You can store the connection information in a different location when you set the INFA_REPCNX_INFO environment variable.

Previously, *pmrep* stored the connection information in pmrep.cnx in the directory where you started *pmrep*.

Repository Connection File

Effective in version 9.6.0, each time you run *pmrep connect*, the command deletes the pmrep.cnx file. If the pmrep connect command succeeds, the command replaces the pmrep.cnx file with the repository connection information.

Previously, the pmrep connect command would not delete the pmrep.cnx file each time you ran *pmrep connect*.

Umask Configuration for Operating System Profiles

Effective in version 9.6.0, you do not have to set umask to 000 when you configure operating system profiles.

Previously, you had to set umask to 000 to enable operating system profiles to access files written by the DTM.

If you upgrade from an earlier version, the umask setting is not changed. You can change the umask setting before or after you upgrade. For example, you can change umask to 077 for maximum security. If you change the umask setting after you upgrade, you must restart the Informatica services.

CHAPTER 34

Changes to PowerCenter Big Data Edition (9.6.0)

This chapter includes the following topics:

Hadoop Environment Properties File

Effective in 9.6.0, the Hadoop environment properties file hadoopEnv.properties is available at the following path: `<InformaticaInstallationDir>/services/shared/hadoop/<Hadoop_distribution_name>/infaConf`

Mappings in the Native Environment

Effective in version 9.6.0, you can enable the Data Integration Service to maximize parallelism when it runs mappings in the native environment. When you maximize parallelism, the Data Integration Service can use multiple partitions to process a mapping. By default, each mapping has a maximum parallelism value of Auto. As a result, each mapping uses the maximum parallelism value set for the Data Integration Service process.

Previously, you could not enable the Data Integration Service to use multiple partitions to process a mapping in the native environment. By default, each upgraded mapping has a maximum parallelism value of one. As a result, partitioning is disabled for upgraded mappings.

CHAPTER 35

Changes to Metadata Manager (9.6.0)

This chapter includes the following topics:

Browser Support

Effective in version 9.6.0, the Metadata Manager application can run in the following web browsers:

- Google Chrome
- Microsoft Internet Explorer

Previously, the Metadata Manager application could run in the following web browsers:

- Microsoft Internet Explorer
- Mozilla Firefox

Metadata Manager Agent

Effective in version 9.6.0, you no longer have to install the Metadata Manager Agent separately for the following metadata source types:

- Cognos
- Oracle Business Intelligence Enterprise Edition
- Sybase PowerDesigner

Previously, you had to install the Metadata Manager Agent separately to extract metadata from these sources.

Metadata Manager Business Glossaries

Effective in version 9.6.0, Metadata Manager business glossaries are deprecated and replaced with Informatica Analyst business glossaries.

If you have a Metadata Manager business glossary that you created in a previous version of Metadata Manager, you must export the glossary from the previous version of Metadata Manager before you upgrade to version 9.6.0. After you upgrade, you can import the glossary into Informatica Analyst. To view the Informatica Analyst business glossary in Metadata Manager, create a Business Glossary resource in Metadata Manager 9.6.0.

Metadata Manager Documentation

Effective in version 9.6.0, the *Informatica PowerCenter Metadata Manager Business Glossary Guide* is obsolete.

For information about creating and configuring Business Glossary resources in Metadata Manager, see *Informatica PowerCenter 9.6.0 Metadata Manager Administrator Guide*. For information about viewing Business Glossary resources in Metadata Manager, see *Informatica PowerCenter 9.6.0 Metadata Manager User Guide*.

mmcmd Changes

Domain Security Changes

Effective in version 9.6.0, mmcmd has the following changes related to domain security:

Environment Variables

You might have to configure environment variables to run mmcmd. If the domain uses Kerberos authentication, you must set the KRB5_CONFIG environment variable on your system or in the mmcmd batch file. If secure communication is enabled for the domain, you must set the INFA_TRUSTSTORE and INFA_TRUSTSTORE_PASSWORD environment variables in the mmcmd batch file.

Previously, you did not have to configure environment variables for mmcmd.

Command Options

All mmcmd commands that authenticate with the domain contain options related to Kerberos authentication. You must specify the options if the domain uses Kerberos authentication.

The following table describes the command options:

Option	Description
--domainName (-dn)	Required if you use Kerberos authentication and you do not specify the --gateway option. Name of the Informatica domain.
--gateway (-hp)	Required if you use Kerberos authentication and you do not specify the --domainName option. Host names and port numbers of the gateway nodes in the domain.
--keyTab (-kt)	Required if you use Kerberos authentication and you do not specify a password. Path and file name of the keytab file for the Metadata Manager user.
--mmServiceName (-mm)	Required if you use Kerberos authentication. Name of the Metadata Manager Service.
--namespace (-n)	Required if the domain uses LDAP authentication or Kerberos authentication. Optional if the domain uses native authentication. Name of the security domain to which the Metadata Manager user belongs.
--password (-pw)	Required if you do not use Kerberos authentication. Also required if you use Kerberos authentication and you do not specify the --keyTab option. Password for the Metadata Manager user.
-pcRepositoryNamespace	Required if the domain uses LDAP authentication or Kerberos authentication. Optional if the domain uses native authentication. Name of the security domain to which the PowerCenter repository user belongs.
--securityDomain (-sdn)	Required if the domain uses LDAP authentication or Kerberos authentication. Optional if the domain uses native authentication. Name of the security domain to which the Informatica domain user belongs.

Business Glossary Upgrade Changes

Effective in version 9.6.0, mmcmd includes the following command related to upgrading business glossaries:

Command	Description
migrateBGLinks	Restores the related catalog objects for a business glossary after you upgrade from version 9.5.x.

Native Connectivity to Microsoft SQL Server

Effective in version 9.6.0, you must install the Microsoft SQL Server 2012 Native Client to configure native connectivity to Microsoft SQL Server databases from Windows machines.

Previously, you did not have to install an SQL client because Informatica used the Microsoft OLE DB provider for native connectivity.

If you upgrade from an earlier version, you must install the Microsoft SQL Server 2012 Native Client. Install the client so that the Metadata Manager Service can connect to Microsoft SQL Server databases.

Password Modification for Resources

Effective in version 9.6.0, to change the password for a resource, you edit the resource, enable the **Modify Password** option, and enter the new password in the **Password** field. This change prevents users from viewing the password with a password revelation tool.

Previously, you edited the resource, selected the string of dots in the **Password** field, and entered the new password.

CHAPTER 36

Changes to Adapters for PowerCenter (9.6.0)

This chapter includes the following topics:

PowerExchange for Facebook

Effective in version 9.6.0, Informatica is not shipping PowerExchange for Facebook for PowerCenter. Informatica dropped support for versions 9.1.0, 9.5.0, and 9.5.1. You cannot upgrade from versions 9.1.0, 9.5.0, 9.5.1, and the hotfix versions. Sessions will fail in versions 9.1.0, 9.5.0, and 9.5.1, and the hotfix versions.

You can use PowerExchange for Facebook in the Developer tool.

For more information, see the End of Life (EOL) document at the following location: https://mysupport.informatica.com/docs/DOC-10512.

PowerExchange for Hadoop

Effective in version 9.6.0, you must re-create HDFS connections using the NameNode URI property. Previously, HDFS connection properties Host Name and HDFS port was used to create HDFS connections. If you are upgrading from a previous release, you must re-create HDFS connections.

When you configure an HDFS connection, the default Hadoop distribution is Cloudera distribution. Previously, the default was Apache distribution.

PowerExchange for LinkedIn

Effective in version 9.6.0, Informatica is not shipping PowerExchange for LinkedIn for PowerCenter. Informatica dropped support for versions 9.1.0, 9.5.0, and 9.5.1. You cannot upgrade from versions 9.1.0, 9.5.0, 9.5.1, and the hotfix versions. Sessions will fail in versions 9.1.0, 9.5.0, and 9.5.1, and the hotfix versions.

You can use PowerExchange for LinkedIn in the Developer tool.

For more information, see the End of Life (EOL) document at the following location: https://mysupport.informatica.com/docs/DOC-10512.

PowerExchange for Microsoft Dynamics CRM

Effective in version 9.6.0, download and use version 7 of the Java Cryptography Extension (JCE) Unlimited Strength Jurisdiction Policy Files.

Previously, you had to download and use version 6 of the Java Cryptography Extension (JCE) Unlimited Strength Jurisdiction Policy Files.

PowerExchange for SAP NetWeaver

Effective in version 9.6.0, PowerExchange for SAP NetWeaver includes the following changes:

SAP SDK libraries

PowerExchange for SAP NetWeaver uses SAP NetWeaver RFC SDK 7.20 libraries. You must install SAP NetWeaver RFC SDK 7.20 libraries to run PowerExchange for SAP sessions.

Previously, you installed SAP RFC SDK classic libraries to run sessions.

SAP configuration file

You use the `sapnwrfc.ini` file to configure RFC-specific parameters and connection information.

Previously, you used the `saprfc.ini` file to configure RFC-specific parameters and connection information.

If you upgrade from an earlier version, you must create a `sapnwrfc.ini` file to enable communication between PowerCenter and SAP. You cannot use the `saprfc.ini` file to enable communication between PowerCenter and SAP.

For more information, see the *Informatica PowerExchange for SAP 9.6.0 User Guide for PowerCenter*.

SAP connection type parameter

You need not use the SAP connection parameter TYPE in the `sapnwrfc.ini` file to configure the connection type. The PowerCenter Client and PowerCenter Integration Service use the connection parameters that you define in the `sapnwrfc.ini` file to infer the connection type.

For example, if you set the ASHOST parameter, the PowerCenter Client and PowerCenter Integration Service create a connection to a specific SAP application server. If you set the MSHOST and GROUP parameters, the PowerCenter Client and PowerCenter Integration Service create an SAP load balancing

connection. If you set the PROGRAM_ID, GWHOST, and GWSERV parameters, the PowerCenter Client and PowerCenter Integration Service create a connection to an RFC server program registered at an SAP gateway.

Previously, you used the parameter TYPE to configure the connection type. For example, you set TYPE=A to create a connection to a specific application server. You set TYPE=B to create an SAP load balancing connection and you set TYPE=R to create a connection to an RFC server program registered at an SAP gateway.

If you upgrade from an earlier version, you must create a new `sapnwrfc.ini` file and configure the connection parameters based on the type of connection that you want to create.

For more information, see the *Informatica PowerExchange for SAP 9.6.0 User Guide for PowerCenter*.

ABAP stream mode sessions

PowerExchange for SAP NetWeaver uses the RFC protocol to generate and install an ABAP program in stream mode.

Previously, PowerExchange for SAP NetWeaver used the CPI-C protocol to generate and install an ABAP program in stream mode.

Effective in version 9.6.0, the CPI-C protocol is deprecated and Informatica will drop support in a future release. You can run existing ABAP programs that use the CPI-C protocol. However, you cannot generate and install new ABAP programs that use the CPI-C protocol.

When you install an existing ABAP program that uses the CPI-C protocol, you are prompted to overwrite the program to use the RFC protocol. Informatica recommends overwriting the program to use the RFC protocol.

BAPI and IDoc mappings

Effective in version 9.6.0, Informatica dropped support for deprecated BAPI mappings created in versions earlier than 8.5 and deprecated IDOC mappings created in versions earlier than 7.1. If you upgrade the deprecated mappings to version 9.6.0, the sessions will fail.

Upgrade PowerExchange for SAP NetWeaver and create new BAPI and IDoc mappings with custom transformations.

PowerExchange for Twitter

Effective in version 9.6.0, Informatica is not shipping PowerExchange for Twitter for PowerCenter. Informatica dropped support for versions 9.1.0, 9.5.0, and 9.5.1. You cannot upgrade from versions 9.1.0, 9.5.0, 9.5.1, and the hotfix versions. Sessions will fail in versions 9.1.0, 9.5.0, and 9.5.1, and the hotfix versions.

You can use PowerExchange for Twitter in the Developer tool.

For more information, see the End of Life (EOL) document at the following location: https://mysupport.informatica.com/docs/DOC-10512.

PowerExchange for Web Services

SOAP 1.2

Effective in version 9.6.0, each web service can have one or more operations that use either a SOAP 1.1 binding or a SOAP 1.2 binding or both a SOAP 1.1 and a SOAP 1.2 binding. You can create a Web Service Consumer transformation with a SOAP 1.1 and SOAP 1.2 binding. The SOAP request can be of SOAP 1.1 or SOAP 1.2 format.

Previously, you could only create an operation with a SOAP 1.1 binding. You could only create a Web Service Consumer transformation with a SOAP 1.1 binding.

NTLMv2

Effective in version 9.6.0, the external web service provider authenticates the PowerCenter Integration Service by using NTLM v1 or NTLM v2.

Previously, the external web service provider used only NTLM v1 to authenticate the PowerCenter Integration Service.

CHAPTER 37

Changes to Adapters for Informatica (9.6.0)

This chapter includes the following topics:

PowerExchange for DataSift

Effective in version 9.6.0, PowerExchange for DataSift installs with Informatica 9.6.0.

Previously, PowerExchange for DataSift had a separate installer.

PowerExchange for Facebook

- Effective in version 9.6.0, PowerExchange for Facebook installs with Informatica 9.6.0.
  Previously, PowerExchange for Facebook had a separate installer.
- Effective in version 9.6.0, when you use the Self resource, you can specify the user name and a list of user IDs or user names to extract the profile of the user.
  Previously, when you used the Self resource, you could only specify the user ID or the Facebook operator `me` to extract the profile of the current user.
- Effective in version 9.6.0, when you use the Profile Feed resource, you can specify the user name to extract the news feeds or Facebook posts of the user.
  Previously, when you used the Profile Feed resource, you could only specify the user ID or the Facebook operator `me` to extract the news feeds of the current user.

PowerExchange for LinkedIn

Effective in version 9.6.0, PowerExchange for LinkedIn installs with Informatica 9.6.0.

Previously, PowerExchange for LinkedIn had a separate installer.

PowerExchange for Salesforce

Effective in version 9.6.0, PowerExchange for Salesforce installs with Informatica 9.6.0.

Previously, PowerExchange for Salesforce had a separate installer.

PowerExchange for SAP NetWeaver

Effective in version 9.6.0, PowerExchange for SAP NetWeaver uses SAP NetWeaver RFC SDK 7.20 libraries. You must install SAP NetWeaver RFC SDK 7.20 libraries to run PowerExchange for SAP sessions.

Previously, you installed SAP RFC SDK classic libraries to run sessions.

PowerExchange for Twitter

- Effective in version 9.6.0, you cannot use basic authentication while creating a Twitter streaming connection.
  Previously, you could use basic authentication while creating a Twitter streaming connection.
- Effective in version 9.6.0, PowerExchange for Twitter installs with Informatica 9.6.0.
  Previously, PowerExchange for Twitter had a separate installer.

PowerExchange for Web Content-Kapow Katalyst

Effective in version 9.6.0, PowerExchange for Web Content-Kapow Katalyst installs with Informatica 9.6.0.

Previously, PowerExchange for Web Content-Kapow Katalyst had a separate installer.