Informatica® Informatica
10.0

New Features Guide

Informatica Informatica New Features Guide
10.0
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Preface

The *Informatica New Features and Enhancements Guide* is written for all Informatica software users. This guide lists the new features and enhancements in Informatica products.

Informatica Resources

Informatica My Support Portal

As an Informatica customer, the first step in reaching out to Informatica is through the Informatica My Support Portal at https://mysupport.informatica.com. The My Support Portal is the largest online data integration collaboration platform with over 100,000 Informatica customers and partners worldwide.

As a member, you can:

- Access all of your Informatica resources in one place.
- Review your support cases.
- Search the Knowledge Base, find product documentation, access how-to documents, and watch support videos.
- Find your local Informatica User Group Network and collaborate with your peers.

Informatica Documentation

The Informatica Documentation team makes every effort to create accurate, usable documentation. If you have questions, comments, or ideas about this documentation, contact the Informatica Documentation team through email at infa_documentation@informatica.com. We will use your feedback to improve our documentation. Let us know if we can contact you regarding your comments.

The Documentation team updates documentation as needed. To get the latest documentation for your product, navigate to Product Documentation from https://mysupport.informatica.com.

Informatica Product Availability Matrixes

Product Availability Matrixes (PAMs) indicate the versions of operating systems, databases, and other types of data sources and targets that a product release supports. You can access the PAMs on the Informatica My Support Portal at https://mysupport.informatica.com.

Informatica Web Site

You can access the Informatica corporate web site at https://www.informatica.com. The site contains information about Informatica, its background, upcoming events, and sales offices. You will also find product and partner information. The services area of the site includes important information about technical support, training and education, and implementation services.

Informatica How-To Library

As an Informatica customer, you can access the Informatica How-To Library at https://mysupport.informatica.com. The How-To Library is a collection of resources to help you learn more about Informatica products and features. It includes articles and interactive demonstrations that provide solutions to common problems, compare features and behaviors, and guide you through performing specific real-world tasks.

Informatica Knowledge Base

As an Informatica customer, you can access the Informatica Knowledge Base at https://mysupport.informatica.com. Use the Knowledge Base to search for documented solutions to known technical issues about Informatica products. You can also find answers to frequently asked questions, technical white papers, and technical tips. If you have questions, comments, or ideas about the Knowledge Base, contact the Informatica Knowledge Base team through email at KB_Feedback@informatica.com.

Informatica Support YouTube Channel

You can access the Informatica Support YouTube channel at http://www.youtube.com/user/INFASupport. The Informatica Support YouTube channel includes videos about solutions that guide you through performing specific tasks. If you have questions, comments, or ideas about the Informatica Support YouTube channel, contact the Support YouTube team through email at supportvideos@informatica.com or send a tweet to @INFASupport.

Informatica Marketplace

The Informatica Marketplace is a forum where developers and partners can share solutions that augment, extend, or enhance data integration implementations. By leveraging any of the hundreds of solutions available on the Marketplace, you can improve your productivity and speed up time to implementation on your projects. You can access Informatica Marketplace at http://www.informaticamarketplace.com.

Informatica Velocity

You can access Informatica Velocity at https://mysupport.informatica.com. Developed from the real-world experience of hundreds of data management projects, Informatica Velocity represents the collective knowledge of our consultants who have worked with organizations from around the world to plan, develop, deploy, and maintain successful data management solutions. If you have questions, comments, or ideas about Informatica Velocity, contact Informatica Professional Services at ips@informatica.com.

Informatica Global Customer Support

You can contact a Customer Support Center by telephone or through the Online Support.

Online Support requires a user name and password. You can request a user name and password at http://mysupport.informatica.com.

The telephone numbers for Informatica Global Customer Support are available from the Informatica web site at http://www.informatica.com/us/services-and-training/support-services/global-support-centers/.

CHAPTER 1

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

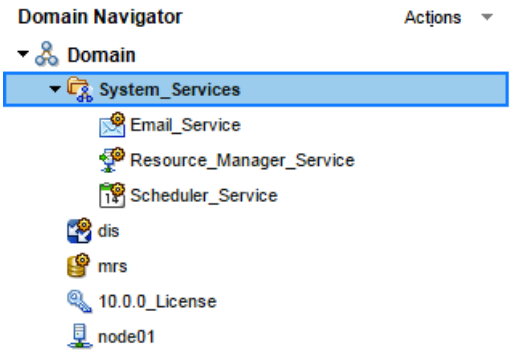
- Subversion

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

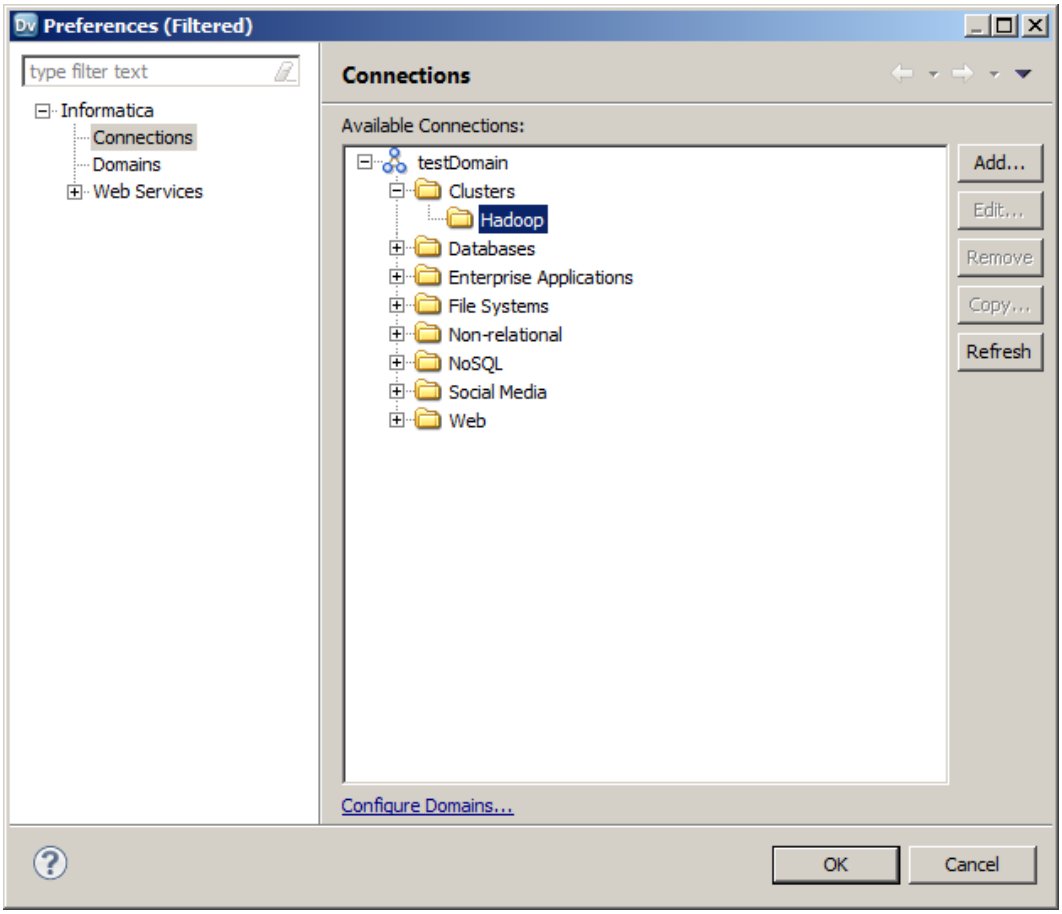
Effective in verison 10.0, you can use the Big Data Management Configuration Utility to automate part of the configuration process for Big Data Management.

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

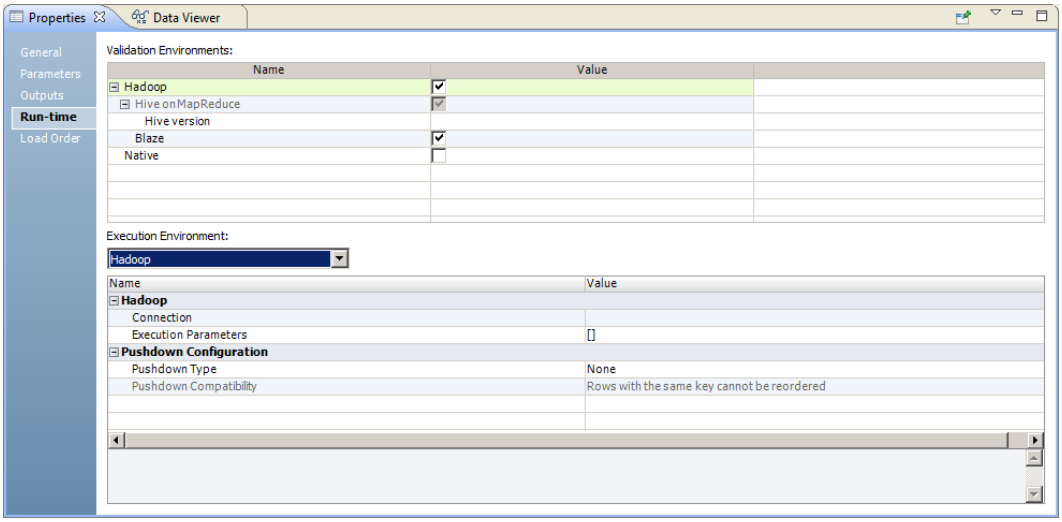
For more information, see the "Mappings in a Hadoop Environment" chapter in the *Informatica 10.0 Big Data Management User Guide*.

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*.

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*.

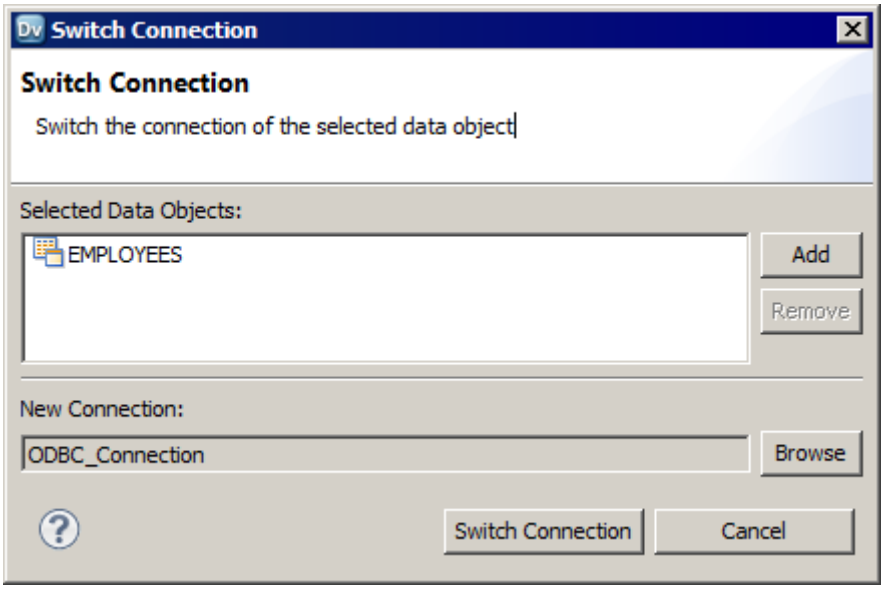
Connection Switching

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 guide is 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*.

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.

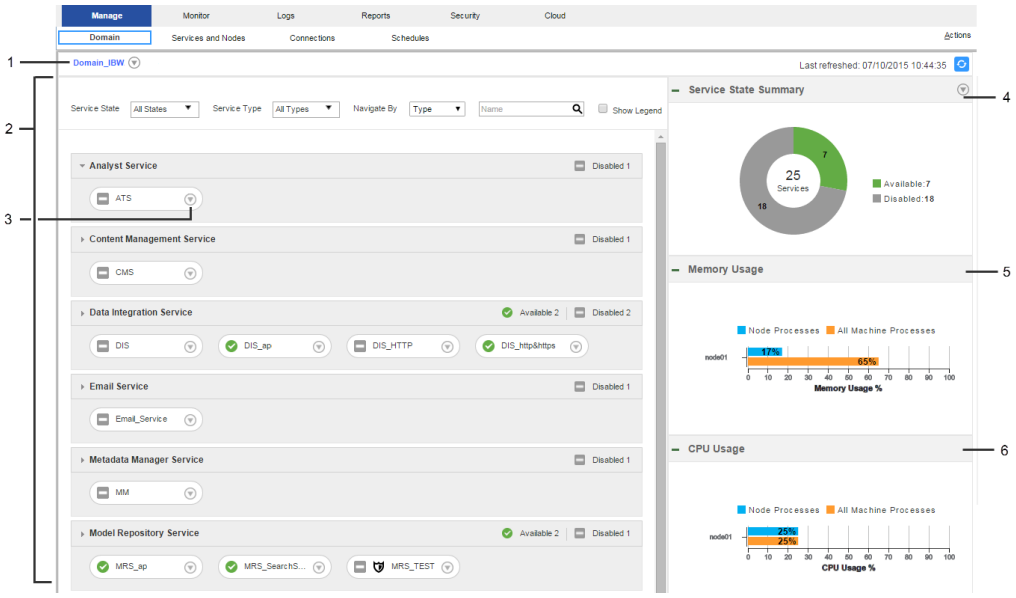
Manage Tab

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.

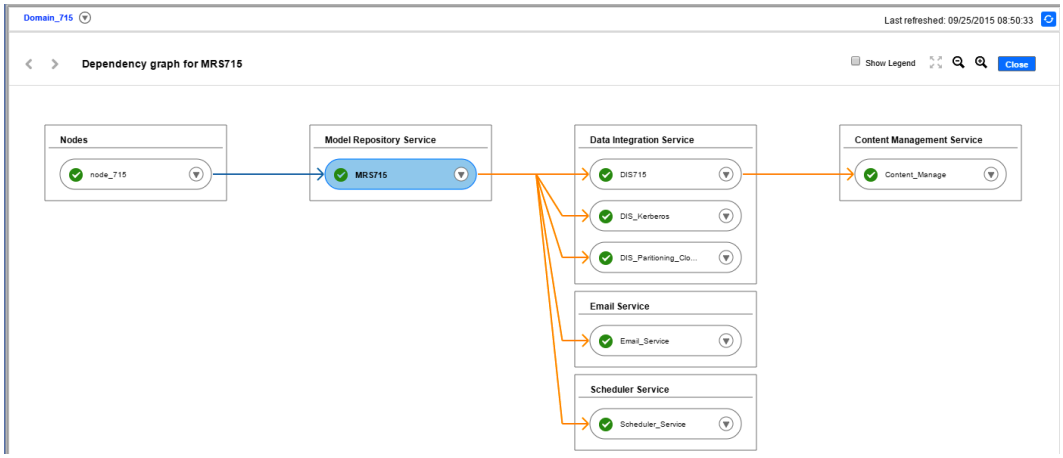
For more information, see the *Informatica 10.0 Administrator Guide*.

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

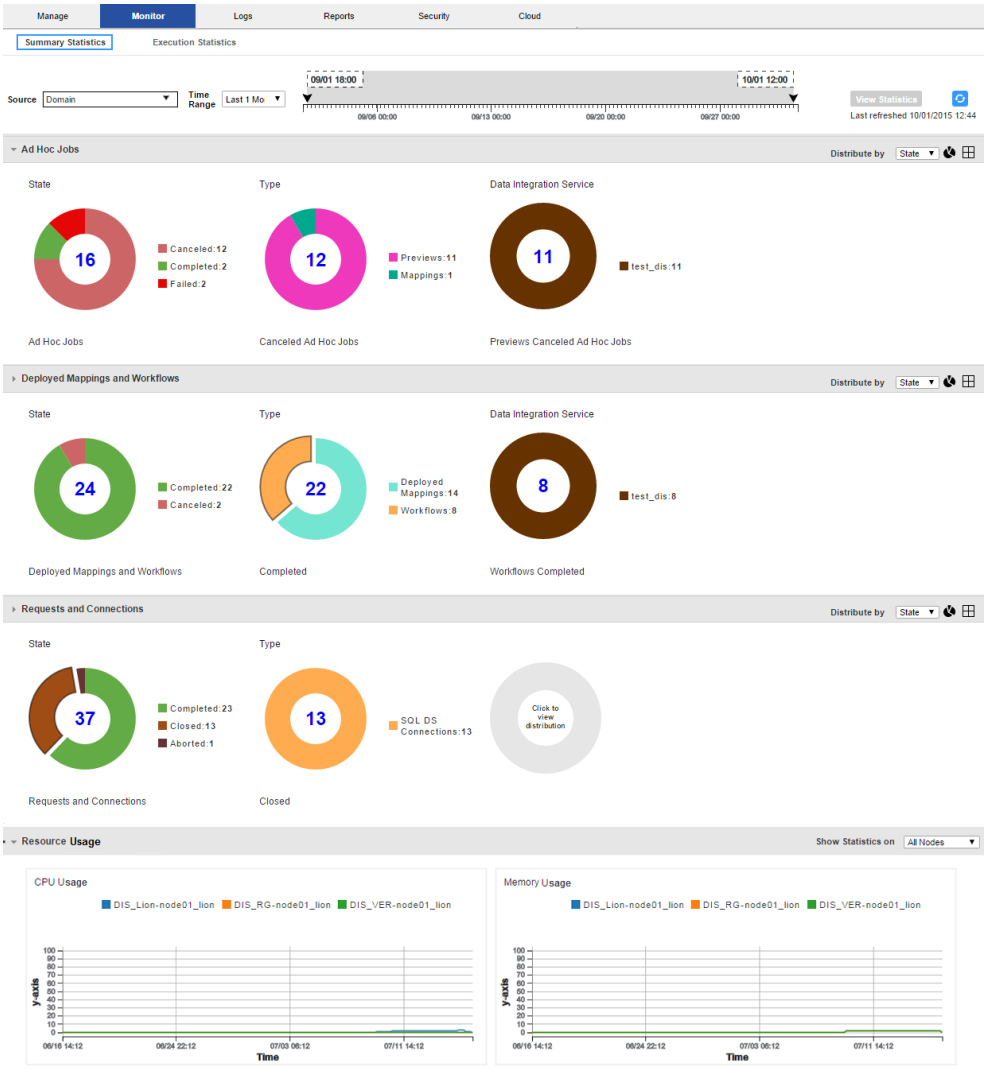
Effective in version 10.0, the **Monitoring** tab in the Administrator tool is renamed the **Monitor** tab.

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:



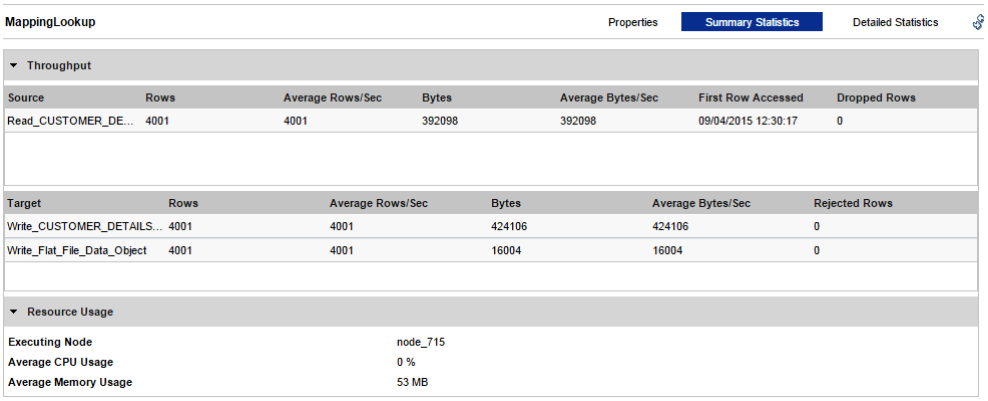
- **Execution Statistics** view. Contains the Navigator and views that were on the **Monitoring** tab in previous versions.

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.

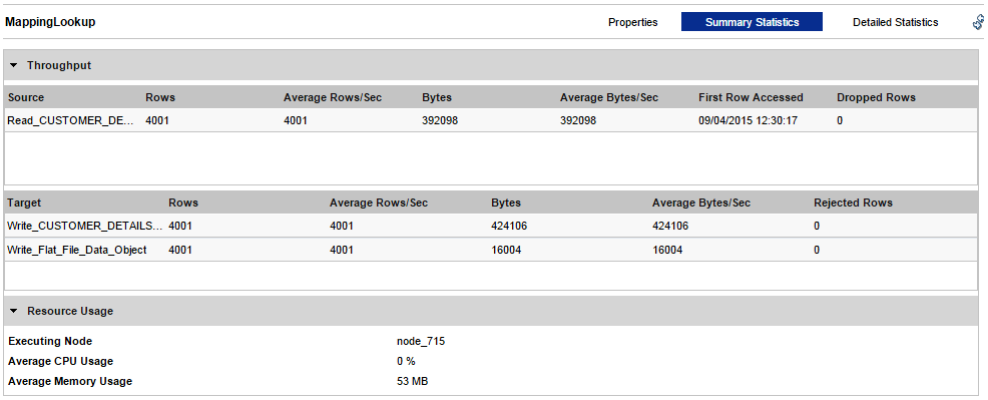
Summary Statistics view

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:

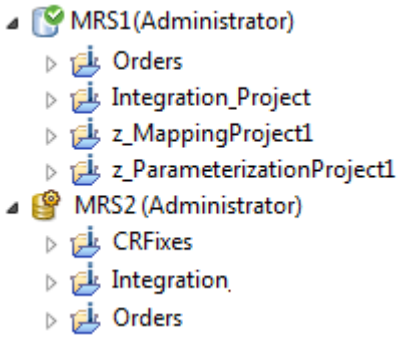
For more information, see the "Viewing Data" chapter in the *Informatica 10.0 Developer Tool Guide*.

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 the Informatica My Support Portal:
https://mysupport.informatica.com/community/my-support/product-availability-matrices

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*

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 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 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 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*.

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*.

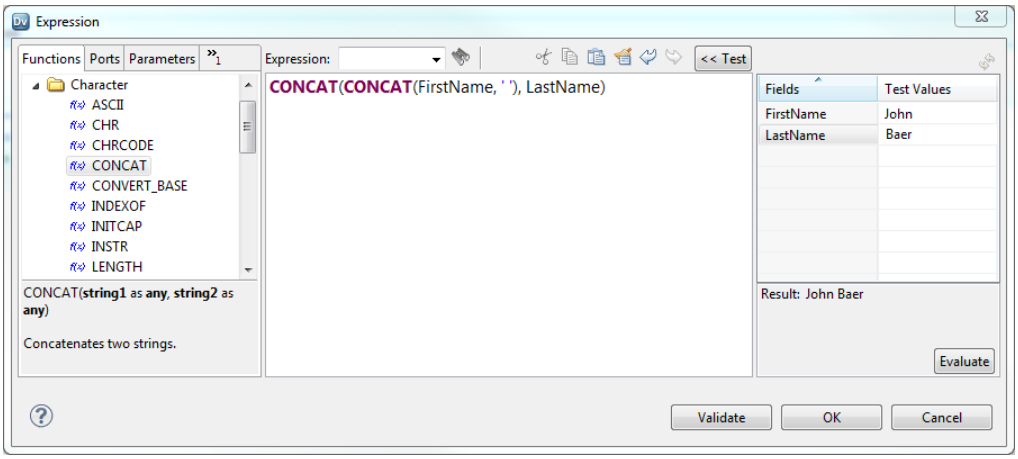
Test Expressions

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.

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*.