



Informatica™

Informatica® Fast Clone
10.0

Release Guide

Informatica Fast Clone Release Guide
10.0
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Table of Contents

Preface	6
Informatica Resources.	6
Informatica My Support Portal.	6
Informatica Documentation.	6
Informatica Product Availability Matrixes.	6
Informatica Web Site.	7
Informatica How-To Library.	7
Informatica Knowledge Base.	7
Informatica Support YouTube Channel.	7
Informatica Marketplace.	7
Informatica Velocity.	7
Informatica Global Customer Support.	7
Chapter 1: Version 10.0	9
New Features.	9
Support for Oracle Index-Organized Tables.	9
Support for Extended Oracle Datatypes.	9
Support for Direct Path Unloads of Oracle SecureFile LOBs.	10
DataStreamer for Vertica Targets.	10
Support for Amazon Redshift Targets.	10
Parameter and Option Changes.	11
Configuration File Parameter Changes.	11
Command Line Parameter Changes.	13
Changes to Supported Operating Systems and Databases.	13
Chapter 2: Version 9.7.0	15
New Features.	15
Enhanced Support for Hadoop Distribution Targets.	15
New 64-bit Installation for Windows.	15
Changes to Supported Operating Systems and Databases.	16
Chapter 3: Version 9.6.0	18
New Features.	18
Secure Sockets Layer (SSL) Connections to Oracle Sources and Targets.	18
Enhanced Support for Generating Target Tables.	18
DataStreamer for Netezza Targets.	18
New License Key Format.	19
Integration with Informatica Data Replication for Initial Synchronization of Source and Target Databases.	20
Improved Patterns for Naming Output Files.	20

Support for Hive Data Warehouse Targets.	20
Support for Internet Protocol version 6.	20
Behavior Changes.	20
Data Inconsistency Warnings.	20
Parameter Changes.	21
Configuration File Parameter Changes.	21
Command Line Parameter Changes.	24
Changes to Supported Operating Systems and Databases.	25
Index.	27

Preface

The *Informatica Fast Clone Release Guide* summarizes cumulative changes for supported Fast Clone releases, beginning with version 9.6. Use this guide to get an overview of the changes in each release. This guide lists new features and enhancements, behavior changes, new and changed commands and parameters, and any newly supported versions of operating systems and databases. This guide also covers any removed functionality and deprecated versions of databases or operating systems.

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CHAPTER 1

Version 10.0

This chapter includes the following topics:

- [New Features, 9](#)
- [Parameter and Option Changes, 11](#)
- [Changes to Supported Operating Systems and Databases, 13](#)

New Features

Fast Clone 10.0 contains the following new features and enhancements.

Support for Oracle Index-Organized Tables

Previous versions of Fast Clone could use only the conventional path unload method to unload source data from Oracle index-organized tables (IOTs).

Fast Clone 10.0 can use either the direct path unload or conventional path unload method to unload data from IOTs.

For more information, see the *Informatica Fast Clone User Guide*.

Support for Extended Oracle Datatypes

Previous versions of Fast Clone did not support the extended NVARCHAR2, RAW, and VARCHAR2 datatypes introduced in Oracle 12c.

Fast Clone 10.0 supports the extended NVARCHAR2, RAW, and VARCHAR2 datatypes for Oracle 12c sources. By default, Fast Clone unloads data from columns with these extended datatypes by using the direct path unload method. To use the conventional path unload method, change the value of the new `read_securefile_by_direct` configuration file parameter to false, or clear the **Read SECUREFILE by direct** option in the Fast Clone Console when you define unload settings on the **Runtime Settings** tab > **Miscellaneous Conditions** view.

For more information, see [“Configuration File Parameter Changes” on page 11](#) and the *Informatica Fast Clone User Guide*.

Support for Direct Path Unloads of Oracle SecureFile LOBs

Previous versions of Fast Clone could use only the conventional path unload method to unload data from LOB columns in tables that use SecureFile storage of LOBs.

For Oracle 11g and 12c sources, Fast Clone 10.0 uses the direct path unload method by default to unload data from SecureFile LOB columns. The tables that contain the LOB columns must be defined with the default SecureFile options. If you want to use the conventional path unload method for SecureFile LOBs, you must set the new `read_securefile_by_direct` configuration file parameter to false or clear the **Read SECUREFILE by direct** option on the **Runtime Settings** tab > **Miscellaneous Conditions** view in the Fast Clone Console.

For more information, see ["Configuration File Parameter Changes" on page 11](#) and the *Informatica Fast Clone User Guide*.

DataStreamer for Vertica Targets

In Fast Clone 10.0, you can use the DataStreamer add-on component for high-performance data loads to Vertica targets. DataStreamer streams unloaded Oracle data to Vertica targets by using the client-side LCOPY command or the server-side COPY command.

Configure DataStreamer for Vertica targets in one of the following ways:

- In the configuration file, set the new `direct_data_stream` parameter to true and set the `suppress_trailing_nullcols` parameter to false.
- From the Fast Clone Console, select the following options:
 - In the **Runtime Settings** tab > **Vertica Load Settings** view, select **Enable DataStream**.
 - On the **Runtime Settings** tab > **Format Settings** view, clear **Suppress trailing null columns**.
- From the command line, set the new `direct_stream` parameter to true.

For more information, see the *Informatica Fast Clone User Guide*.

Support for Amazon Redshift Targets

Fast Clone 10.0 can now unload source data to Amazon Redshift targets by using the direct path unload method.

Fast Clone connects to and writes source data to the Amazon Simple Storage Service (Amazon S3). Amazon S3 is a storage service that can copy data from a source and simultaneously move data to Amazon Redshift clusters. After the source data is in Amazon S3 storage, Fast Clone issues a copy command that copies the data to the Amazon Redshift target table. You can enter Amazon S3 information on the **Runtime Settings** tab > **Amazon S3 Load Settings** view.

If you plan to run unload jobs on a Windows system, you must install the PostgreSQL ODBC driver on the system. If you plan to run unload jobs on a Linux and UNIX system, use the DataDirect ODBC driver for PostgreSQL that Fast Clone provides.

Important: Fast Clone cannot load data from source columns that have binary datatypes to Amazon Redshift targets.

For more information, see the *Informatica Fast Clone User Guide*.

Parameter and Option Changes

Informatica Fast Clone 10.0 introduces changes to the following parameters:

- Parameters that you configure in the Fast Clone configuration file.

Configuration File Parameter Changes

The following table describes changes to configuration file parameters in Fast Clone 10.0:

Configuration File Parameter	Configuration File Section	New, Changed, or Deprecated	Description
direct_data_stream	[RUN]	New	Enables DataStreamer to load data to Greenplum, Netezza, Teradata, or Vertica targets. Valid values are: <ul style="list-style-type: none">- true. Use DataStreamer to load data to the target database.- false. Do not use DataStreamer to load data to the target database. Default value: false
greenplum_direct_data_stream	[RUN]	Deprecated	For new Fast Clone configurations, use the <code>direct_data_stream</code> parameter to enable DataStreamer to load data to Greenplum targets. If you used this parameter in a previous Fast Clone version and then upgraded to version 10.0, Fast Clone supports this parameter for enabling DataStreamer to load data to a Greenplum target.
netezza_direct_data_stream	[RUN]	Deprecated	For new Fast Clone configurations, use the <code>direct_data_stream</code> parameter to enable DataStreamer to load data to Netezza targets. If you used this parameter in a previous Fast Clone version and then upgraded to version 10.0, Fast Clone supports this parameter for enabling DataStreamer to load data to a Netezza target.

Configuration File Parameter	Configuration File Section	New, Changed, or Deprecated	Description
read_securefile_by_direct	[RUN]	New	<p>For Oracle 11g and 12c sources, enables Fast Clone to use the direct path unload method to unload data from SecureFile LOB columns. The read_securefile_by_direct parameter also enables Fast Clone to use the direct path unload method to unload data from columns with the extended NVARCHAR2, RAW, and VARCHAR2 datatypes that were introduced in Oracle 12c.</p> <p>Valid values are:</p> <ul style="list-style-type: none"> - true. Fast Clone reads SecureFile LOB and extended datatypes with the direct path unload method. - false. Fast Clone reads SecureFile LOB and extended datatypes with the conventional path unload method. <p>Default value: true</p>
s3_bucket	[DESTINATION]	New	Specifies the name of the Amazon S3 bucket that stores the temporary files with the data to be loaded to the Amazon Redshift target.
s3_file_size	[DESTINATION]	New	Specifies the maximum size of the temporary files, in kilobytes, that Fast Clone creates in the Amazon S3 bucket before loading the source data to Amazon Redshift. Default value: 5120 KB
s3_key_id	[DESTINATION]	New	Specifies an AWS access key ID that Fast Clone must use to access the Amazon S3 account resources including the bucket where Fast Clone creates temporary files.
s3_path	[DESTINATION]	New	Specifies the name of the directory in the Amazon S3 bucket where Fast Clone creates the temporary files that store source data.

Configuration File Parameter	Configuration File Section	New, Changed, or Deprecated	Description
s3_secret_key	[DESTINATION]	New	Specifies the secret access key for the access key ID that is specified in the s3_key_id parameter. The access key ID must have the authority to access the Amazon S3 account resources.
teradata_direct_data_stream	[RUN]	Deprecated	For new Fast Clone configurations, use the direct_data_stream parameter to enable DataStreamer to load data to Teradata targets. If you used this parameter in a previous Fast Clone version and then upgraded to version 10.0, Fast Clone supports this parameter for enabling DataStreamer to load data to a Teradata target.

Command Line Parameter Changes

The following table describes changes to command line parameters in Fast Clone 10.0:

Parameter	New, Changed, or Deprecated	Description
direct_stream	New	Enables DataStreamer to load data to Greenplum, Netezza, Teradata, or Vertica targets. Valid values are: - true . Use DataStreamer to load data to the target database. - false . Do not use DataStreamer to load data to the target database. Default value: false

Changes to Supported Operating Systems and Databases

Informatica Fast Clone 10.0 introduces changes to supported versions of operating systems and databases.

Operating Systems

The following table describes changes to the operating system versions that Fast Clone supports:

Operating System	Version	New or Deprecated
Redhat Enterprise Linux	7	New
Redhat Enterprise Linux	6.5	New

Operating System	Version	New or Deprecated
Redhat Enterprise Linux	6.4	Deprecated
Redhat Enterprise Linux	5.9	Deprecated
Suse Linux Enterprise Server	12	New
Solaris	10 u10	Deprecated
Windows	2012	Deprecated
Windows	2008 SP2	Deprecated

Source Database

The following table describes changes to the versions of the source database that Fast Clone supports:

Source	Version	Changed
Oracle	10g Release 2	Reinstated

Targets

The following table describes changes to the target versions that Fast Clone supports:

Target	Version	New or Deprecated
Amazon Redshift	-	New
Greenplum	4.1	Deprecated
Hive	1.0	New
Hive	.11	Deprecated
Microsoft SQL Server	2008	Deprecated
Teradata	15.x	New
Vertica	6.x	New

CHAPTER 2

Version 9.7.0

This chapter includes the following topics:

- [New Features, 15](#)
- [Changes to Supported Operating Systems and Databases, 16](#)

New Features

Informatica Fast Clone 9.7.0 contains the following new features and enhancements.

Enhanced Support for Hadoop Distribution Targets

Fast Clone 9.6.0 supported Cloudera, Hortonworks, and MapR Hadoop distributions when you selected the Hadoop target type in the Fast Clone Console. Fast Clone 9.6.0 required you to manually install the appropriate .jar files for these Hadoop distributions. Fast Clone 9.7.0 provides the .jar files for these Hadoop distributions and for supported Hive data warehouse targets in a separate package. You unpack these files to the Fast_Clone_installation directory. Also, in the Fast Clone Console, you can now select the specific Hadoop distribution type and version so that Fast Clone can dynamically use the correct .jar files.

Note: If you configured Hadoop or Hive targets in a previous version of Fast Clone, you must create new configurations to these targets after upgrading to Fast Clone 9.7.0.

For more information, see the *Informatica Fast Clone User Guide*.

New 64-bit Installation for Windows

Fast Clone 9.7.0 now provides installation files only for 64-bit systems. Installation files for Windows 32-bit systems are no longer available. All applications that communicate with Fast Clone now must also be 64-bit. For example, if you use a 32-bit Oracle client on Windows, you must install the 64-bit Oracle client.

For more information, see the *Informatica Fast Clone Installation Guide*.

Changes to Supported Operating Systems and Databases

Informatica Fast Clone 9.7.0 introduces changes to supported versions of operating systems and databases.

Fast Clone 9.7.0 no longer supports the following target types:

- DB2 for Linux, UNIX, and Windows
- MySQL
- PostgreSQL
- Sybase ASE

Operating Systems

The following table describes changes to the operating system versions that Fast Clone supports:

Operating System	Version	New or Deprecated
Redhat Enterprise Linux	6.4	New
Redhat Enterprise Linux	6.1	Deprecated
Redhat Enterprise Linux	5.9	New
Redhat Enterprise Linux	5.3	Deprecated
Suse Linux Enterprise Server	10	Deprecated
Windows	2012 R2	New
Windows	2012	New

Source Database

The following table describes changes to the versions of the source database that Fast Clone supports:

Source	Version	New or Deprecated
Oracle	10g Release 2	Deprecated

Targets

The following table describes changes to the target versions that Fast Clone supports:

Target	Versions	New or Deprecated
Cloudera CDH ¹	5.x	New
Cloudera CDH	3	Deprecated
DB2 for Linux, UNIX, and Windows	- 10.1 - 9.7 - 9.5	Deprecated

Target	Versions	New or Deprecated
Greenplum	4.3	New
Greenplum	4.0	Deprecated
Hive data warehouse ¹	0.13.0	New
Hortonworks HDP ¹	- 2.1 - 2.0	New
Hortonworks HDP	1.3	Deprecated
MapR ¹	- 4.x - 3.x	New
MapR	2.x	Deprecated
MySQL	- 5.6 - 5.5 - 5.1	Deprecated
Netezza	- 5.0 - 4.6 - 4.5	Deprecated
Oracle	10g Release 2	Deprecated
PostgreSQL	- 9.2 - 9.1 - 9.0 - 8.4 - 8.3	Deprecated
Sybase ASE	- 15.7 - 15.3 - 15.0	Deprecated
Vertica	7.0.x	New
Vertica	- 6.1 - 6.0 - 5.0 - 4.1	Deprecated
1. These target types are supported with Hadoop versions 1, 2.2.0, and 2.4.0.		

CHAPTER 3

Version 9.6.0

This chapter includes the following topics:

- [New Features, 18](#)
- [Behavior Changes, 20](#)
- [Parameter Changes, 21](#)
- [Changes to Supported Operating Systems and Databases, 25](#)

New Features

Informatica Fast Clone 9.6.0 contains the following new features and enhancements.

Secure Sockets Layer (SSL) Connections to Oracle Sources and Targets

Fast Clone 9.6.0 can now connect to Oracle sources and targets by using the TCP/IP protocol with the Secure Sockets Layer (SSL).

For more information, see *Informatica Fast Clone User Guide*.

Enhanced Support for Generating Target Tables

The Fast Clone Console 9.5.0 could generate target tables based on source table schema only for Oracle and MySQL targets. Effective in Fast Clone 9.6.0, the Fast Clone Console can generate target tables for all of supported targets.

For the generated target tables, the Fast Clone Console preserves only primary key constraints that you define on the source.

Note: For Oracle and MySQL targets, you can configure the Data Replication Console to preserve default values, foreign key constraints, check constraints, unique constraints, indexes, and triggers that you define on the source.

For more information, see *Informatica Fast Clone User Guide*.

DataStreamer for Netezza Targets

Fast Clone 9.6.0 provides the DataStreamer add-on component for Netezza targets that you can use for high-performance data load to Netezza targets. DataStreamer loads data to the target tables in parallel. For each

table that you unload, DataStreamer creates a named pipe that represents a Netezza external table. DataStreamer writes unloaded data to the named pipes and the Netezza ODBC driver reads data from these pipes to load data to the target.

DataStreamer can use multiple threads to unload table data to a named pipe. The number of threads that Fast Clone spawns for each unloaded table is specified by the `threads_per_segment` parameter.

To use DataStreamer for Netezza targets, you must install the ODBC connectivity software on the system where you plan to run data unload jobs.

Fast Clone 9.6.0 introduces the following configuration file parameters that you can use to configure DataStreamer for Netezza targets:

- `netezza_control_chars_enabled`
- `netezza_direct_data_stream`
- `netezza_error_log_directory`
- `netezza_pipe_directory`
- `netezza_quoted_value`

You can configure DataStreamer for Netezza targets on the **Runtime Settings** tab > **Netezza Load Settings** view. Also, verify that you specify correct settings on the **Runtime Settings** tab > **Format Settings** view.

For more information, see *Informatica Fast Clone User Guide* and *Informatica Fast Clone Installation Guide*.

New License Key Format

Fast Clone 9.6.0 uses a new license key format. Fast Clone reads a license key from the `FastClone.key` file that must be located in the top-level Fast Clone installation directory. The license key can now control the availability of the following Fast Clone features:

- Fast Clone Server
- DataStreamer
- Support for Hadoop and Hive targets

The trial license now limits the number of records that the Fast Clone executable can unload from a source database. The following table describes the restrictions on the number of rows that the trial version of Fast Clone can unload per job:

Restriction	Maximum Result Set
Rows per table that uses WHERE clauses	1000
Rows per table that does not use WHERE clauses	10000
Total rows per unload job	100000

Important: To calculate the total number of unloaded rows, Fast Clone always uses the maximum number of rows that the trial license permits to unload from a given table. For example, the trial version of Fast Clone can unload a maximum of 10 tables that do not use WHERE clauses per unload job. For each of these tables, Fast Clone unloads a maximum of 10000 rows.

Integration with Informatica Data Replication for Initial Synchronization of Source and Target Databases

In addition to Data Replication XML configuration files, Fast Clone can now use a configuration SQLite database to perform an initial load of Data Replication targets.

Improved Patterns for Naming Output Files

The Fast Clone Console now has the following parameters to specify patterns for output file names:

- **Naming pattern for data files** specifies the naming pattern that Fast Clone uses to create the base name of the output data files.
- **Naming pattern for control files** specifies the naming pattern that Fast Clone uses to generate names for control files, log files, and SQL scripts.

In the naming pattern, you can now include the following new variables:

- **%&source_schema&%** represents a source schema name.
- **%&target_schema&%** represents a target schema name.

For more information, see *Informatica Fast Clone User Guide*.

Support for Hive Data Warehouse Targets

Fast Clone 9.6.0 can now unload source data to Hive targets.

For more information, see *Informatica Fast Clone User Guide*.

Support for Internet Protocol version 6

Fast Clone now supports Internet Protocol version 6 (IPv6).

Behavior Changes

Informatica Fast Clone 9.6.0 introduces the following change in the behavior of the Fast Clone executable.

Data Inconsistency Warnings

Fast Clone performs a checkpoint before starting a data unload job to ensure that the database flushes all data from memory to disk. In previous versions, if a user changes data in the source database when the unload job is still running, Fast Clone might unload inconsistent data.

Effective in Fast Clone 9.6.0, Fast Clone determines the Start SCN value that corresponds to point immediately after the checkpoint when Fast Clone started unloading data. During unload processing the Fast Clone compares the start SCN value with the SCN value of the last change in each unloaded data block. If the block SCN value is greater than the Start SCN value, Fast Clone logs a warning and continues unload processing.

Fast Clone 9.6.0 introduces a new runtime parameter `validate_block_scn` that determines whether to write a warning message to a log file when a block SCN value is greater than the Start SCN value.

For more information, see *Informatica Fast Clone User Guide*.

Parameter Changes

Informatica Fast Clone 9.6.0 introduces changes to the following parameters:

- Parameters that you configure in the Fast Clone configuration file.
- Start parameters that you enter with the Fast Clone executable at a command line.

Configuration File Parameter Changes

The following table describes changes to configuration file parameters in Fast Clone 9.6.0:

Configuration File Parameter	Configuration File Section	New, Changed, or Deprecated	Description
asm_protocol	[SOURCE]	New	The protocol that Fast Clone uses to connect to an ASM instance. Valid values are: <ul style="list-style-type: none"> - TCP. Use the TCP/IP protocol. - TCPs. Use the TCP/IP protocol with the Secure Sockets Layer (SSL). Default value: TCP
control_file_name_base	[RUN]	Changed	Specifies the naming pattern that Fast Clone uses to generate names for control files, log files, and SQL scripts. In the naming pattern you can now include the following new variables: <ul style="list-style-type: none"> - %&source_schema&% represents a source schema name. - %&target_schema&% represents a target schema name.
dbsync_config.xml	[RUN]	Changed	Specifies the path and file name for the Data Replication configuration file that can be in XML or SQLite format. The path is relative to the DBSYNC_HOME directory.
db_type	[DESTINATION]	Changed	Specifies the target database type. This parameter now has the hive option.
netezza_control_chars_enabled	[RUN]	New	If you use DataStreamer to load data to a Netezza target, specifies the value of the EscapeChar option for the Netezza external tables. This option indicates whether the control characters, such as delimiter and backslash characters, are escaped in the data fields of the external tables. The Netezza external tables use a backslash as an escape character.

Configuration File Parameter	Configuration File Section	New, Changed, or Deprecated	Description
netezza_direct_data_stream	[RUN]	New	<ul style="list-style-type: none"> - true. Select this option to stream data directly to the Netezza target by using the Netezza external tables. Fast Clone unloads data to the named pipes that represent the Netezza external tables. DataStreamer uses bulk Insert to load data from the external tables to the corresponding target tables. - false. Select this option if you unload data to the output files or pipes. You can then load data from these files or pipes to the Netezza target by using the nzload utility. Default value: false
netezza_error_log_directory	[RUN]	New	<p>If you use DataStreamer to load data to a Netezza target, specifies the directory in which DataStreamer creates the following Netezza log files:</p> <ul style="list-style-type: none"> - <i>table_name.schema_name.nzlog</i>. This log file includes load statistics and diagnostic messages that the Netezza ODBC driver issues when loading data to the target tables from the corresponding external tables. - <i>table_name.schema_name.nzbad</i>. This log file includes the external table rows that DataStreamer could not load to the corresponding target table.
netezza_pipe_directory	[RUN]	New	<p>If you use DataStreamer to load data to a Netezza target, specifies the directory in which Fast Clone creates named pipes that represent Netezza external tables.</p> <p>On Windows, DataStreamer ignores this parameter because the named pipes are created in the named pipe directory that is mounted under the special path <code>\\.\pipe\</code>.</p>

Configuration File Parameter	Configuration File Section	New, Changed, or Deprecated	Description
netezza_quoted_value	[RUN]	New	<p>If you use DataStreamer to load data to a Netezza target, specifies the value of the QuotedValue option for the Netezza external tables. DataStreamer requires this option to build correct Insert statements when loading data to the target tables from the corresponding external tables. Options are:</p> <ul style="list-style-type: none"> - single. Indicates that the data values in the external tables are enclosed with single quotation marks. - double. Indicates that the data values in the external tables are enclosed with double quotation marks. - no. Indicates that the data values in the external tables are not quoted. <p>Ensure that the quotation character that you specify for the load operation matches the quotation character that you specify for the unload operation. For unload jobs, Fast Clone uses the quotation character that you specify in the Enclosed by field on the Runtime Settings tab > Format Settings view.</p>
output_file_name_base	[RUN]	Changed	<p>Specifies the naming pattern that Fast Clone uses to create the base name of the output data files.</p> <p>In the naming pattern you can now include the following new variables:</p> <ul style="list-style-type: none"> - %&source_schema&% represents a source schema name. - %&target_schema&% represents a target schema name.

Configuration File Parameter	Configuration File Section	New, Changed, or Deprecated	Description
protocol	[SOURCE], [DESTINATION]	New	The protocol that Fast Clone uses to connect to Oracle sources and targets. Valid values are: <ul style="list-style-type: none"> - TCP. Use the TCP/IP protocol. - TCPS. Use the TCP/IP protocol with the Secure Sockets Layer (SSL). Default value: TCP
validate_block_scn	[RUN]	New	Determines whether to write a warning message to a log file when the SCN value of an unloaded data block is greater than the Start SCN value. The Start SCN value corresponds to point immediately after the checkpoint when Fast Clone started unloading data. Fast Clone compares these values to detect possible data inconsistencies in the unloaded data. Valid values are: <ul style="list-style-type: none"> - true . Write a warning message to a log file when a block SCN value is greater than the Start SCN value. - false. Do not write the warning message. Default value: false Note: To use the parameter, you must manually enter it in the cloning configuration file. You cannot enter it at the command line or in the Fast Clone Console.

Command Line Parameter Changes

The following table describes new parameters that you can enter at the command line when you start the Fast Clone executable:

Parameter	New, Changed, or Deprecated	Description
asm_protocol	New	The protocol that Fast Clone uses to connect to an Oracle ASM instance. Valid values are: <ul style="list-style-type: none"> - TCP. Use the TCP/IP protocol. - TCPS. Use the TCP/IP protocol with the Secure Sockets Layer (SSL). Default value: TCP
dbsync_config_xml	Changed	Specifies the path and file name for the Data Replication configuration file that can be in XML or SQLite format. If you specify the config parameter, enter an absolute path. If you do not specify the config parameter, enter a path that is relative to the DBSYNC_HOME directory.

Parameter	New, Changed, or Deprecated	Description
protocol	New	The protocol that Fast Clone uses to connect to an Oracle source database. Valid values are: <ul style="list-style-type: none"> - TCP. Use the TCP/IP protocol. - TCPs. Use the TCP/IP protocol with the Secure Sockets Layer (SSL). Default value: TCP
resync	Changed	If you set the dbsync_integration parameter to lock or lock_disconnect, indicates whether to resynchronize all of the mapped target tables or a subset of the mapped target tables. Valid values are: <ul style="list-style-type: none"> - y. Synchronize all of the mapped target tables with the source tables. - n. Synchronize the set of tables that you specify in the dest_tables parameter. - p. Synchronize the mapped target tables for which Sync SCN value is -1. Default value: p

Changes to Supported Operating Systems and Databases

Informatica Fast Clone 9.6.0 introduces changes to supported versions of operating systems and databases.

Operating Systems

The following table describes changes to the operating system versions that Fast Clone supports:

Operating System	Version	New or Deprecated
Windows	2008 x86	Deprecated

Source Database

The following table describes changes to the versions of the source database that Fast Clone supports:

Source	Versions	New or Deprecated
Oracle	12c Release 1	New

Target Databases

The following table describes changes to the versions of target databases that Fast Clone supports:

Target	Versions	New or Deprecated
DB2 for Linux, UNIX, and Windows	10.1	New
Greenplum	4.2	New

Target	Versions	New or Deprecated
Hadoop Distributed File System (HDFS)	<ul style="list-style-type: none"> - Apache Hadoop 1.0.3 - Cloudera CDH3.4 - Cloudera CDH4.1 - MapR 2.x 	New
Hive data warehouse	<ul style="list-style-type: none"> - 0.12.0 - 0.11.0 	New
Microsoft SQL Server	2012	New
Microsoft SQL Server	2005	Deprecated
MySQL	<ul style="list-style-type: none"> - 5.6 - 5.5 	New
Netezza	7.0	New
PostgreSQL	9.2	New
Teradata	<ul style="list-style-type: none"> - 14.10 - 14.0 	New
Vertica	<ul style="list-style-type: none"> - 6.1 - 6.0 	New

INDEX

F

Fast Clone 10.0

- changes to supported operating systems and databases [13](#)
- command line parameter changes [13](#)
- configuration file parameter changes [11](#)
- new features [9](#)
- parameter changes [11](#)

Fast Clone 9.6

- changes to command line parameters [24](#)

Fast Clone 9.6 (*continued*)

- changes to supported operating systems and databases [25](#)
- configuration file parameter changes [21](#)
- new features [18](#)
- parameter changes [21](#)

Fast Clone 9.7.0

- changes to supported operating systems and databases [16](#)
- new features [15](#)