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Preface

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

Informatica Resources

Informatica My Support Portal


The site contains product information, user group information, newsletters, access to the Informatica customer support case management system (ATLAS), the Informatica How-To Library, the Informatica Knowledge Base, Informatica Product Documentation, and access to the Informatica user community.

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 http://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/community/my-support/product-availability-matrixes.

Informatica Web Site

You can access the Informatica corporate web site at http://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.
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As an Informatica customer, you can access the Informatica How-To Library at http://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 http://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 http://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.

Part I: Version 9.6.1

This part contains the following chapters:

- New Features, Changes, and Release Tasks (9.6.1 HotFix 3), 18
- New Features, Changes, and Release Tasks (9.6.1 HotFix 2), 27
- New Features, Changes, and Release Tasks (9.6.1 HotFix 1), 44
- New Features (9.6.1), 57
- Changes (9.6.1), 76
New Features, Changes, and Release Tasks (9.6.1 HotFix 3)

This chapter includes the following topics:

- New Features (9.6.1 HotFix 3), 18
- Changes (9.6.1 HotFix 3), 22
- Release Tasks (9.6.1 HotFix 3), 26

New Features (9.6.1 HotFix 3)

This section describes new features in version 9.6.1 HotFix 3.

Business Glossary

This section describes new Business Glossary features in version 9.6.1 HotFix 3.

Delete Draft Assets

Effective in version 9.6.1 HotFix 3, you can delete draft assets before you publish them for the first time. You cannot delete assets that are in the review, published, or rejected phases. You cannot delete drafts after you revise published or rejected assets.

For more information, see the Informatica 9.6.1 HotFix 3 Business Glossary Guide.

Cross Glossary Relationships

Effective in version 9.6.1 HotFix 3, you can create relationships between assets from any glossary. You can link business terms across glossaries. You can link a policy from any glossary to a business term. You can view assets from across glossaries in the relationship view diagram. When you import or export a glossary, you can choose to import or export linked assets from other glossaries.

For more information, see the Informatica 9.6.1 HotFix 3 Business Glossary Guide.
Create Hyperlinks from URLs

Effective in version 9.6.1 HotFix 3, you can create hyperlinks when you insert URLs in the Description, Usage Context, Example, and Reference Table URL properties for business terms. You can link to assets from any glossary.

For more information, see the Informatica 9.6.1 HotFix 3 Business Glossary Guide.

Informatica Data Services

This section describes new Informatica Data Services features in version 9.6.1 HotFix 3.

Query datetime data from Microsoft Access

Effective in version 9.6.1 HotFix 3, you can query an SQL data service that contains datetime data from Microsoft Access. When you configure the Informatica Data Services ODBC Driver, enter the following parameter in the Optional Parameters field in the Configure Data Source to Informatica Data Services dialog box:

```
APPLICATION=ACCESS
```

When you configure the ODBC driver with this parameter, the Data Integration Service uses the date/time data type for Microsoft Access date data.

Informatica Transformations

This section describes new Informatica transformation features in version 9.6.1 HotFix 3.

Address Validator Transformation

This section describes the new Address Validator transformation features.

Support for locality and neighborhood identification codes in Belgium addresses

Effective in version 9.6.1 HotFix 3, you can configure the Address Validator transformation to return a code that uniquely identifies the neighborhood that contains a Belgium address. To return the code, select the NIS Code output port. Find the port in the BE Supplementary port group.

The NIS Code port returns the five-digit NIS code that identifies the locality and a four-character code that identifies the neighborhood within the locality. The national statistics directorate in Belgium defines the codes.

To return the data on the NIS Code port, the Address Validator transformation reads supplementary address reference data for Belgium. To verify that the Address Validator transformation can read the supplementary data, add the Supplementary BE Status output port to the transformation. Informatica adds the NIS Code port, the Supplementary BE Status port, and the BE Supplementary port group in version 9.6.1 HotFix 3.

Support for Federal Information Addressing System identifiers in Russian Federation addresses

Effective in version 9.6.1 HotFix 3, you can configure the Address Validator transformation to return the Federal Information Addressing System identifier for an address in the Russian Federation. To return the identifier, select the FIAS ID output port. Find the port in the RU Supplementary port group.

The FIAS ID port returns up to 36 characters. The Federal State Statistics Service of the Russian Federation maintains the identifier data.

To return the data on the FIAS ID port, the Address Validator transformation reads supplementary address reference data for the Russian Federation. To verify that the Address Validator transformation can read the supplementary data, add the Supplementary RU Status output port to the transformation.
Informatica adds the FIAS ID port, the Supplementary RU Status port, and the RU Supplementary port group in version 9.6.1 HotFix 3.

**Support for unique property reference numbers in Great Britain addresses**

Effective in version 9.6.1 HotFix 3, you can configure the Address Validator transformation to return the unique property reference number for an address in Great Britain. The number uniquely identifies the plot of land that contains an address in the United Kingdom. To return the unique property reference number, select the UPRN output port. Find the port in the UK Supplementary port group.

The unique property reference number contains 12 digits. The Ordnance Survey of Great Britain maintains the unique property reference numbers.

To return the data on the UPRN port, the Address Validator transformation reads supplementary address reference data for the Great Britain. To verify that the Address Validator transformation can read the supplementary data, add the Supplementary UK Status output port to the transformation. Informatica adds the UPRN port in version 9.6.1 HotFix 3.

**Ability to remove locality and province descriptors from China and Japan addresses**

Effective in version 9.6.1 HotFix 3, you can configure the Address Validator transformation to remove locality descriptors and province descriptors from addresses in China and Japan. For example, the Address Validator transformation can return Chaoyang instead of Chaoyangqu and Beijing instead of Beijingshi in Chinese addresses.

To remove the descriptors, configure the Preferred Language property and the Preferred Script property on the transformation.

**Ability to validate Bulgaria addresses in Cyrillic script**

Effective in version 9.6.1 HotFix 3, you can validate Bulgaria addresses in the Cyrillic script. By default, the Address Validator transformation returns the results in the Cyrillic script.

To receive the results in the Latin script, configure the Preferred Script property on the transformation.

**Ability to validate Slovakia addresses that contain street name abbreviations**

Effective in version 9.6.1 HotFix 3, you can validate Slovakia addresses that contain major street name abbreviations.

The transformation replaces the abbreviations with the names that the postal authority specifies in the valid address output.

**Ability to retrieve province ISO codes in batch, interactive, and fast completion modes**

Effective in version 9.6.1 HotFix 3, the Address Validator transformation extends support for ISO 3166-2 province codes to the following countries:

- Canada
- France
- United States

For example, the transformation returns the province code NC, which identifies North Carolina, for the following address:

```
15501 WESTON PKWY STE 150
CARY 27513
USA
```

For more information, see the *Informatica 9.6.1 HotFix 3 Address Validator Port Reference* and the *Informatica 9.6.1 HotFix 3 Developer Transformation Guide*. 
Metadata Manager

This section describes new Metadata Manager features in version 9.6.1 HotFix 3.

Metadata Source Versions

Effective in version 9.6.1 HotFix 3, some metadata sources have new supported versions.

The following metadata sources have new supported versions:

- Cloudera Navigator
- ERwin
- Informix

For more information about supported metadata source versions, see the PCAE Metadata Manager XConnect Support Product Availability Matrix on the Informatica My Support Portal:

https://mysupport.informatica.com/community/my-support/product-availability-matrices

Cloudera Navigator Resources

Effective in version 9.6.1 HotFix 3, you can enable incremental loading and create search queries to decrease the amount of time it takes for Metadata Manager to load Cloudera Navigator resources.

You can configure the following properties when you create or edit a Cloudera Navigator resource:

Enable incremental load

Enables incremental loading for Cloudera Navigator resources after the first successful resource load. When you enable this option, Metadata Manager loads recent changes to the metadata instead of loading complete metadata.

During an incremental load, Metadata Manager extracts only the following entities:

- HDFS entities that were created or changed after the previous resource load
- All Hive tables, views, and partitions
- Operation executions that were created after the previous resource load
- All templates related to the new operation executions

Search query

Query that limits the HDFS entities that Metadata Manager extracts. By default, Metadata Manager does not extract HDFS entities from certain directories that contain only canary files, log files, history files, or deleted files. You can update the default search query to prevent Metadata Manager from extracting other HDFS entities. The query that you enter must use valid Cloudera Navigator search syntax.

For more information about Cloudera Navigator resources, see the Informatica 9.6.1 HotFix 3 Metadata Manager Administrator Guide.

Microsoft SQL Server Resources

Effective in version 9.6.1 HotFix 3, Metadata Manager extracts the value of the MS_Description extended property for Microsoft SQL Server table and view columns.

For more information about extracting extended properties for Microsoft SQL Server resources, see the Informatica 9.6.1 HotFix 3 Metadata Manager Administrator Guide.
PowerExchange Adapters for PowerCenter

This section describes new PowerCenter adapter features in version 9.6.1 HotFix 3.

PowerExchange for SAP Netweaver

Effective in version 9.6.1 HotFix 3, you can set the `AddQuotesForCachedLookup` custom session property to Yes. This ensures that sessions do not fail when you use HANA table metadata that contains special characters, symbols, or lowercase characters in cached lookups.

PowerExchange for Greenplum

Effective in version 9.6.1 HotFix 3, you can configure the `MAX_LINE_LENGTH` attribute in the session properties when you load data to a column. This ensures that you can load data to a column with precision 104857600.

Changes (9.6.1 HotFix 3)

This section describes changes in version 9.6.1 HotFix 3.

Business Glossary

This section describes changes to Business Glossary in version 9.6.1 HotFix 3.

Business Glossary Export File

Effective in version 9.6.1 HotFix 3, the order of worksheets in the Business Glossary export file is rearranged. The worksheets that are not recommended to be altered in Microsoft Excel are hidden. The first worksheet is a home page and it provides a brief description of other worksheets in the export file.

Previously, the export file did not have hidden worksheets and a home page.

Business Glossary Security

Effective in version 9.6.1 HotFix 3, a user who is assigned the `Manage Glossaries` privilege in the Analyst tool for a particular glossary cannot perform user and role management for any other glossary.

Previously, a user who was assigned the `Manage Glossaries` privilege in the Analyst tool could modify the permissions and privileges of a user for any glossary.

Glossary Import

Effective in version 9.6.1 HotFix 3, when you import a glossary that is not present in Business Glossary, the Analyst tool creates the glossary during import. When you import a glossary, the Analyst tool automatically populates the custom properties which are present in the glossary with values from the export file. The Analyst tool also attaches the custom properties to the relevant templates, even if the custom properties were not attached to any template before the import process.

Previously, if wanted to import a glossary that was not present in Business Glossary, you first needed to create the glossary in the Analyst tool before importing the glossary contents from the export file. The Analyst tool did not populate the custom properties with information from the export file, when they were not attached to any template.
Synonyms
Effective in version 9.6.1 HotFix 3, synonyms in business terms have the following changed behavior:

- You can remove or modify the **Retirement Date** that you have set for the Synonym property.
- You do not have to use the date picker to set the **Create Date** and **Retirement Date**. You can manually set the date, but it must be in the format determined by the locale of the installation.
- You can see the **Create Date** of a synonym when you open a business term.

Previously, you could not remove or modify the retirement date. You could only use the date picker to set the date. You could not view the date of creation in the business term.

Informatica Transformations
This section describes the changes to the Informatica transformations in version 9.6.1 HotFix 3.

Address Validator Transformation
This section describes the changes to the Address Validator transformation.

- Effective in version 9.6.1 HotFix 3, the Address Validator transformation uses version 5.7.0 of the Informatica Address Doctor software engine. The engine enables the features that Informatica adds to the Address Validator transformation in version 9.6.1 HotFix 3.
  
  Previously, the transformation used version 5.6.0 of the Informatica Address Doctor software engine.

- Effective in version 9.6.1 HotFix 3, you can configure the Address Validator transformation to return the locality information in Switzerland addresses in French, German, or Italian. To set the language, use the **Preferred Language** property.
  
  Previously, the Address Validator transformation returned all information in a Switzerland address in the main language of the region to which the address belonged.

- Effective in version 9.6.1 HotFix 3, the Address Validator transformation returns rooftop-level geocodes for addresses in the United Kingdom that do not include house numbers or building number.
  
  Previously, the transformation returned rooftop-level geocodes for United Kingdom addresses that include house numbers or building numbers.

Data Processor Transformation
This section describes the changes to the Data Processor transformation.

XmlToXlsx with Template
The **XmlToXlsx** document processor converts XML documents to Microsoft Excel .xlsx format. Effective in version 9.6.1 HotFix 3, the **XmlToXlsx** document processor can optionally use an .xlsx template with the XML document to generate the .xlsx document.

Previously, you could generate an .xlsx document based on an XML document.
Metadata Manager

This section describes changes to Metadata Manager in version 9.6.1 HotFix 3.

Business Glossary Resources

Effective in version 9.6.1 HotFix 3, Business Glossary resources have behavior changes.

Business Glossary resources have the following behavior changes:

Privileges required to load Business Glossary resources

Effective in 9.6.1 HotFix 3, to load Business Glossary resources, you need the Load Resource, Manage Resource, and View Model privileges.

Previously, to load Business Glossary resources, you needed the Load Resource and Manage Models privileges for the Metadata Manager Service.

Migrating related catalog objects after upgrade

Effective in version 9.6.1 HotFix 3, do not run the mmcmd migrateBGLinks command after you upgrade a business glossary from version 9.5.x. The migrateBGLinks command restores related catalog objects for upgraded business glossaries. The command now runs automatically the first time that you load a Business Glossary resource after upgrade.

Previously, you had to run the migrateBGLinks command as the last step in the upgrade process for business glossaries.

Related catalog objects for categories

Effective in version 9.6.1 HotFix 3, you cannot create related catalog objects for categories. You can still create related catalog objects for business terms.

Previously, you could relate categories to other categories or to business glossaries in Metadata Manager, but you could not relate categories to other metadata objects. If you did create category to category or category to glossary relationships in Metadata Manager, Metadata Manager did not update these relationships in the Analyst tool business glossary.

To create term to term, term to category, category to term, or category to category relationships, use the Analyst tool.

Property names that contain special characters

Effective in 9.6.1 HotFix 3, Metadata Manager can load Business Glossary resources that contain custom properties with special characters in the name. However, Metadata Manager does not extract custom properties that contain special characters in the name.

Specifically, Metadata Manager does not extract custom properties with names that contain any of the following special characters:

~ * ( ) [ ] | \ : ; " ' < > , ? /

Previously, if you tried to load a Business Glossary resource that contained custom properties with any of these characters in the name, the load failed.

Microsoft SQL Server Integration Services Resources

Effective in version 9.6.1 HotFix 3, the property that controls how Metadata Manager displays lineage for Script components that are used as transformations is renamed to Hide transformation scripts.

Previously, the property was called Transformation scripts.
SAP PowerDesigner Resources

Effective in version 9.6.1 HotFix 3, Sybase PowerDesigner resources are called SAP PowerDesigner resources.

Permissions

Effective in version 9.6.1 HotFix 3, permissions control which resources that users can access on the Load tab as well as the Browse tab. To perform an action on a resource, a user needs both the appropriate privilege and the appropriate permission on the resource.

For example, to view a resource on the Load tab, a user needs the View Resource privilege and read permission on the resource. To load a resource, a user needs the Load Resource privilege and write permission on the resource. To edit a resource, a user needs the Manage Resource privilege and write permission on the resource.

Because of this change, the resources that a user sees on the Load tab match the resources that the user sees on the Browse tab. The user no longer sees all resources on the Load tab unless the user has at least read privilege on all resources.

Previously, permissions determined which resources and metadata objects that users could access on the Browse tab, but they did not affect the Load tab. Permissions for the Browse tab are not changed.

Metadata Manager Reports

Effective in version 9.6.1 HotFix 3, when you restart the domain, you no longer have to recycle the Metadata Manager Service to enable the View Reports button. If the domain contains a Reporting and Dashboards Service, the View Reports button is always enabled.

Previously, when you restarted the domain, you had to recycle the Metadata Manager Service to enable the View Reports button.

Security

This section describes changes to security in version 9.6.1 HotFix 3.

Effective in version 9.6.1 HotFix 3, Informatica dropped support for SSL keys that use fewer than 512 bits if they use RSA encryption. This change affects secure communication within the Informatica domain and secure connections to web application services.

If your SSL keys are affected by this change, you must generate new RSA encryption based SSL keys with more than 512 bits or use an alternative encryption algorithm. Then, use the new keys to create the files required for secure communication within the domain or for secure connections to web application services. For more information about the files required for secure communication within the Informatica domain or secure connections, see the Informatica Security Guide.

Previously, Informatica supported RSA encryption based SSL keys that use fewer than 512 bits.
Release Tasks (9.6.1 HotFix 3)

This section describes the release tasks in version 9.6.1 HotFix 3.

Metadata Manager

This section describes release tasks for Metadata Manager in version 9.6.1 HotFix 3.

Permissions Associated with Load Privileges

Effective in version 9.6.1 HotFix 3, permissions control which resources that users can access on the Load tab as well as the Browse tab. A user with any privilege in the Load privilege group requires permissions to perform actions on a particular resource. For example, to load a resource, a user needs Load Resource privilege and write permission on the resource.

After you upgrade to or apply 9.6.1 HotFix 3, you must verify permissions for each user that has privileges in the Load privilege group. If a user does not have the appropriate permissions on a resource, the user cannot view, load, or manage the resource.

The following table lists the privileges and permissions required to manage an instance of a resource in the Metadata Manager warehouse:

<table>
<thead>
<tr>
<th>Privilege</th>
<th>Includes Privileges</th>
<th>Permission</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>View Resource</td>
<td>-</td>
<td>Read</td>
<td>User is able to perform the following actions:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- View resources and resource properties in the Metadata Manager warehouse.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Export resource configurations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Download the Metadata Manager Agent installer.</td>
</tr>
<tr>
<td>Load Resource</td>
<td>View Resource</td>
<td>Write</td>
<td>User is able to perform the following actions:</td>
</tr>
<tr>
<td></td>
<td>View Resource</td>
<td></td>
<td>- Load metadata for a resource into the Metadata Manager warehouse.*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Create links between objects in connected resources for data lineage.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Configure search indexing for resources.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Import resource configurations.</td>
</tr>
<tr>
<td>Manage Schedules</td>
<td>View Resource</td>
<td>Write</td>
<td>User is able to perform the following actions:</td>
</tr>
<tr>
<td></td>
<td>View Resource</td>
<td></td>
<td>- Create and edit schedules.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Add schedules to resources.</td>
</tr>
<tr>
<td>Purge Metadata</td>
<td>View Resource</td>
<td>Write</td>
<td>User is able to remove metadata for a resource from the Metadata Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>warehouse.</td>
</tr>
<tr>
<td>Manage Resource</td>
<td>- Purge Metadata</td>
<td>Write</td>
<td>User is able to create, edit, and delete resources.</td>
</tr>
<tr>
<td></td>
<td>- View Resource</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* To load metadata for Business Glossary resources, the Load Resource, Manage Resource, and View Model privileges are required.

Configure permissions on the Security tab of the Metadata Manager application. For more information about configuring permissions, see the Informatica 9.6.1 HotFix 3 Metadata Manager Administrator Guide.
CHAPTER 2

New Features, Changes, and Release Tasks (9.6.1 HotFix 2)

This chapter includes the following topics:

- New Features (9.6.1 HotFix 2), 27
- Changes (9.6.1 HotFix 2), 38
- Release Tasks (9.6.1 HotFix 2), 43

New Features (9.6.1 HotFix 2)

This section describes new features in version 9.6.1 HotFix 2.

Big Data

This section describes new big data features in version 9.6.1 HotFix 2.

Informatica Analyst

Big Data Edition has the following new features and enhancements for the Analyst tool:

Analyst tool integration with Hadoop

Effective in version 9.6.1 HotFix 2, you can enable the Analyst tool to communicate with a Hadoop cluster on a specific Hadoop distribution. You must configure the JVM Command Line Options for the Analyst Service.

For more information, see the Informatica 9.6.1 HotFix 2 Application Services Guide.

Analyst tool connections

Effective in version 9.6.1 HotFix 2, you can use the Analyst tool to connect to Hive or HDFS sources and targets.

For more information, see the Informatica 9.6.1 HotFix 2 Analyst User Guide.

Data Warehousing

Big Data Edition has the following new features and enhancements for data warehousing:
**Binary Data Type**

Effective in version 9.6.1 HotFix 2, a mapping in the Hive environment can process expression functions that use binary data.

For more information, see the *Informatica 9.6.1 HotFix 2 Big Data Edition User Guide*.

**Timestamp and Date Data Type**

Effective in version 9.6.1 HotFix 2, PowerExchange for Hive supports the Timestamp and Date data types.

For more information, see the *Informatica 9.6.1 HotFix 2 Big Data Edition User Guide*.

**File Format**

Effective in version 9.6.1 HotFix 2, you can use the Data Processor transformation to read Parquet input or output.

Apache Parquet is a columnar storage format that can be processed in a Hadoop environment. Parquet is implemented to address complex nested data structures, and uses a record shredding and assembly algorithm.

For more information, see the *Informatica 9.6.1 HotFix 2 Data Transformation User Guide*.

**Data Lineage**

Effective in version 9.6.1 HotFix 2, you can perform data lineage analysis on big data sources and targets. You can create a Cloudera Navigator resource to extract metadata for big data sources and targets and perform data lineage analysis on the metadata.

For more information, see the *Informatica 9.6.1 HotFix 2 Metadata Manager Administrator Guide*.

**Hadoop Ecosystem**

Big Data Edition has the following new features and enhancements for the Hadoop ecosystem:

**Hadoop Distributions**

Effective in version 9.6.1 HotFix 2, Big Data Edition added support for the following Hadoop distributions:

- Cloudera CDH 5.2
- Hortonworks HDP 2.2
- IBM BigInsights 3.0.0.0
- Pivotal HD 2.1

Big Data Edition dropped support for the following Hadoop distributions:

- Cloudera CDH 5.0
- Cloudera CDH 5.1
- Hortonworks HDP 2.1
- Pivotal HD 1.1

For more information, see the *Informatica 9.6.1 HotFix 2 Big Data Edition Installation and Configuration Guide*.

Effective in version 9.6.1 HotFix 2, Big Data Edition supports Cloudera CDH clusters on Amazon EC2.
Kerberos Authentication

Effective in version 9.6.1 HotFix 2, you can configure user impersonation for the native environment. Configure user impersonation to enable different users to run mappings or connect to big data sources and targets that use Kerberos authentication.

For more information, see the Informatica 9.6.1 Big Data Edition User Guide.

Performance Optimization

Big Data Edition has the following new features for performance optimization:

Compress data on temporary staging tables

Effective in version 9.6.1 HotFix 2, you can enable data compression on temporary staging tables to optimize performance when you run a mapping in the Hive environment. When you enable data compression on temporary staging tables, mapping performance might increase.

To enable data compression on temporary staging tables, you must configure the Hive connection to use the codec class name that the Hadoop cluster uses. You must also configure the Hadoop cluster to enable compression on temporary staging tables.

For more information, see the Informatica 9.6.1 HotFix 2 Big Data Edition User Guide.

Parallel sort

Effective in version 9.6.1 HotFix 2, when you use a Sorter transformation in a mapping, the Data Integration Service enables parallel sorting by default when it pushes the mapping logic to the Hadoop cluster.

For more information, see the Informatica 9.6.1 HotFix 2 Big Data Edition User Guide.

Profile Run on Hadoop Sources in Informatica Analyst

Effective in version 9.6.1 HotFix 2, you can create and run a column profile, rule profile, and data domain discovery on Hive and HDFS sources in the Analyst tool.

For more information, see the Informatica 9.6.1 HotFix 2 Big Data Edition User Guide.

Business Glossary

This section describes new Business Glossary features in version 9.6.1 HotFix 2.

Refresh Asset

Effective in version 9.6.1 HotFix 2, you can refresh an asset in the Glossary workspace. Refresh the asset to view updates to the properties that content managers made after you opened the asset.

For more information, see the Informatica 9.6.1 HotFix 2 Business Glossary Guide.

Alert for Duplicate Asset Name

Effective in version 9.6.1 HotFix 2, the Analyst tool displays an alert when you try to create an asset with a name that already exists in the glossary. You can ignore the alert and create the asset with a duplicate name.

For more information, see the Informatica 9.6.1 HotFix 2 Business Glossary Guide.

LDAP Authentication in Business Glossary Desktop

Effective in version 9.6.1 HotFix 2, you can use an LDAP domain when you configure server settings to enable the Business Glossary Desktop client to reference the business glossary on a machine that hosts the Analyst Service.
Command Line Programs

This section describes new and changed commands and options for the Informatica command line programs in version 9.6.1 HotFix 2.

isp Command

Effective in version 9.6.1 HotFix 2, the following table describes an updated isp command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UpdateGrid</td>
<td>Contains the following new option:</td>
</tr>
<tr>
<td></td>
<td>-ul. Optional. Updates the current node list with the values in the -nl option instead of replacing the list of nodes previously assigned to the grid.</td>
</tr>
<tr>
<td></td>
<td>If true, infacmd updates the node list with the list of nodes specified using the -nl option along with the nodes previously assigned to the grid.</td>
</tr>
<tr>
<td></td>
<td>If false, infacmd replaces the node list with the list of nodes specified using the -nl option. Default is false.</td>
</tr>
<tr>
<td></td>
<td>Contains the following updated option:</td>
</tr>
<tr>
<td></td>
<td>-nl. Required. Names of the nodes that you want to assign to the grid. This list of nodes replaces or updates the list of nodes previously assigned to the grid.</td>
</tr>
<tr>
<td></td>
<td>If you specify the -ul option, the -nl option updates the list of nodes previously assigned to the grid.</td>
</tr>
<tr>
<td></td>
<td>If you do not specify the -ul option, the -nl option replaces the list of nodes previously assigned to the grid.</td>
</tr>
</tbody>
</table>

Data Quality Accelerators

This section describes new accelerator features in version 9.6.1 HotFix 2.

Updated reference data sets

Effective in version 9.6.1 HotFix 2, Informatica updates the reference data sets that the accelerator rules use to analyze and enhance data.

For more information, see the Informatica Data Quality 9.6.1 HotFix 2 Accelerator Guide.

Informatica Developer

This section describes new Informatica Developer features in version 9.6.1 HotFix 2.

Microsoft SQL Server Datetime2 Data Type

Effective in version 9.6.1 HotFix 2, Informatica Developer supports the Microsoft SQL Server Datetime2 data type. The Datetime2 data type can store a range of values from Jan 1, 0001 A.D. 00:00:00 to Dec 31, 9999 A.D. 23:59:59.9999999.

Informatica Domain

This section describes new Informatica domain features in version 9.6.1 HotFix 2.

Informatica on Amazon EC2

Effective in version 9.6.1 HotFix 2, you can setup and launch Informatica services with multiple nodes on Amazon EC2. You can launch an Informatica domain that contains up to four nodes.
Informatica DiscoveryIQ

Effective in version 9.6.1 HotFix 2, Informatica DiscoveryIQ, a product usage tool, sends routine reports on data usage and system statistics to Informatica. Data collection and upload is enabled by default. You can choose to not send any usage statistics to Informatica.

Informatica Transformations

This section describes new Informatica transformation features in version 9.6.1 HotFix 2.

Address Validator Transformation

This section describes the new features on the Address Validator transformation in version 9.6.1 HotFix 2.

Support for Taiwan addresses in the Mandarin Traditional Chinese script

Effective in version 9.6.1 HotFix 2, you can use the Address Validator transformation to validate Taiwan addresses in the Mandarin Traditional Chinese script. You can use ports from the Discrete or Multiline group to define the input address.

To enter a Mandarin Traditional Chinese address on single line, use the Formatted Address Line 1 port.

Enhancements to United States address validation

Effective in version 9.6.1 HotFix 2, the Address Validator transformation returns the county name when the address contains a valid ZIP code and locality. The transformation can add the county name regardless of an Ix match status for the address. The transformation adds the name to a Province output port. If the state identifier is absent from the address, the transformation adds the state identifier to a Province port.

When you validate an address that contains hyphenated house numbers, the transformation moves the second part of the house number to a Sub-building port.

Configurable output format for element descriptors

Effective in version 9.6.1 HotFix 2, you can configure the Address Validator transformation to specify the output format for the following elements:

• Street, building, and sub-building descriptors in Australia and New Zealand addresses
• Street descriptors in German addresses.

By default, the transformation returns the descriptor that the reference database specifies for the address. To specify the output format for the descriptors, configure the Global Preferred Descriptor property on the transformation.

Support for Address Key codes in United Kingdom Addresses

Effective in version 9.6.1 HotFix 2, you can return the address key for a United Kingdom address. The address key is an eight-digit numeric code identifies the address in the Postcode Address File from the Royal Mail. To add the address key to an address, select the Address Key port. To return the address key, the transformation reads supplementary reference data for the United Kingdom.

Extended data support for Japan

Effective in version 9.6.1 HotFix 2, the Address Validator transformation can validate Ban or block information in a Japan address. The Address Validator transformation writes the data to the Street Name 2 port or an equivalent port for dependent street data.
A Japanese address lists the address elements in order of size, from the largest or most general unit to the smallest or most specific unit. The Ban element follows the Chome element and precedes the Go element in the address.

Enhancements to Japan address validation

Enhancements to Japan address validation

Effective in version 9.6.1 HotFix 2, you can configure the Address Validator transformation to add the Gaiku code to a Japanese address. To add the code to the address, select the Gaiku Code port.

You can combine the current Choumei Aza code and the Gaiku code in a single string and return the address that the codes identify. To return the complete address, select the Choumei Aza and Gaiku Code JP port and configure the transformation to run in address code lookup mode.

The Japanese reference data contains the Gaiku code, the current Choumei Aza code, and any earlier version of the Choumei Aza code for the address. When you set the Matching Extended Archive property to ON, the transformation writes all of the codes to the output address.

Support for seven-digit postal codes in Israel

Support for seven-digit postal codes in Israel

Effective in version 9.6.1 HotFix 2, the Address Validator transformation supports the seven-digit postal codes that Israel Post defines for addresses in Israel. The seven-digit postal codes replace the five-digit postal codes that Israel Post previously defined. For example, the seven-digit postal code for Nazareth in Israel is 1623726. Previously, the postal code for Nazareth was 16237.

Enhancement to address validation in Germany, Austria, and Switzerland

Enhancement to address validation in Germany, Austria, and Switzerland

Effective in version 9.6.1 HotFix 2, the Address Validator transformation recognizes keywords, such as Zimmer and App, in the Street Number ports for addresses from Germany, Austria, and Switzerland. The Address Validator transformation writes the keywords to sub-building ports in the output address.

Support for the IRIS code in French addresses

Support for the IRIS code in French addresses

Effective in version 9.6.1 HotFix 2, you can configure the Address Validator transformation to add the IRIS code to an address in France. To add the code to the address, select the INSEE-9 Code output port.

An IRIS code uniquely identifies a statistical unit in a commune in France. INSEE, or the National Institute for Statistics and Economic Research in France, defines the codes. France has approximately 16,000 IRIS units.

Support for rooftop geocoding in the United Kingdom

Support for rooftop geocoding in the United Kingdom

Effective in version 9.6.1 HotFix 2, you can configure the Address Validator transformation to return rooftop-level geocodes for United Kingdom addresses. Rooftop geocodes identify the center of the primary building on a site or a parcel of land.

To generate the rooftop geocodes, set the Geocode Data Type property on the transformation to Arrival Point. You must also install the Arrival Point reference data for the United Kingdom.

Improved address reference data for Spain

Improved address reference data for Spain

Effective in version 9.6.1 HotFix 2, Informatica updates the address reference data for Spain. The Address Validator transformation can use the address reference data to validate sub-building-level information in Spanish addresses.

Improved address validation and address reference data for Turkey

Improved address validation and address reference data for Turkey

Effective in version 9.6.1 HotFix 2, Informatica updates the address reference data for Turkey.
The Address Validator transformation can also perform the following operations when it validates Turkish addresses:

- The transformation can identify a building name and a street name on the Delivery Address Line 1 port.
- The transformation adds a slash symbol (/) between a building element and a sub-building element when the sub-building element is a number.

**Improved address validation for Brazil**

Effective in version 9.6.1 HotFix 2, Informatica adds the following improvements to address validation for addresses in Brazil:

- The Address Validator transformation can add a third level of sub-building information to the Delivery Address Line and Formatted Address Line ports. The Brazil address system contains three levels of sub-building information.
- The Address Validator transformation validates kilometer information on the Street Additional Info port.
  
  **Note:** The Address Validator transformation uses a comma, and not a decimal point, in kilometer information for Brazil.

For more information, see the *Informatica 9.6.1 HotFix 2 Address Validator Port Reference* and the *Informatica 9.6.1 HotFix 2 Developer Transformation Guide*.

**Data Processor Transformation**

This section describes the new features in the Data Processor transformation in version 9.6.1 HotFix 2:

- **RunMapplet**
  
  The RunMapplet action calls and runs a mapplet as part of a Data Processor transformation. The output of RunMapplet is read into the data holder specified in the RunMapplet action. Use the RunMapplet action to perform tasks such as data masking, data quality, data lookup, and other activities usually related to relational transformations.

- **Validation Rules Editor**
  
  You can use the Validation Rules editor to create user-defined rules that validate XML data. If the data violates the rules, the action generates an XML validation report.

- **Parquet Input or Output**
  
  Use the New Transformation wizard to create a Data Processor transformation with Parquet input or output.

- **Create an XMap Variable for the XMap Source or Target**
  
  You can create an XMap variable to serve as the XMap source or target.

For more information, see the *Informatica 9.6.1 HotFix 2 Data Transformation User Guide*. 
Metadata Manager

This section describes new Metadata Manager features in version 9.6.1 HotFix 2.

Cloudera Navigator Resources

Effective in version 9.6.1 HotFix 2, you can create and configure a Cloudera Navigator resource to extract metadata from the metadata component of Cloudera Navigator. You can create one Cloudera Navigator resource for each Hadoop cluster that is managed by Cloudera Manager.

For more information about creating and configuring Cloudera Navigator resources, see the Informatica 9.6.1 HotFix 2 Metadata Manager Administrator Guide.


Microsoft SQL Server Integration Services (SSIS) Resources

Effective in version 9.6.1 HotFix 2, you can create and configure a Microsoft SQL Server Integration Services resource to extract metadata from Microsoft SQL Server Integration Services packages. Metadata Manager can extract metadata from packages in the Microsoft SQL Server repository or from a package in a package (.dtsx) file.

For more information about creating and configuring Microsoft SQL Server Integration Services resources, see the Informatica 9.6.1 HotFix 2 Metadata Manager Administrator Guide.


Embarcadero ERStudio Resources

Effective in version 9.6.1 HotFix 2, you can prevent Metadata Manager from importing attachments from Embarcadero ERStudio. Attachments are also called user-defined properties, or UDPs. To prevent Metadata Manager from importing UDPs, enable the Skip UDP Extraction property when you configure the resource.

For more information about configuring Embarcadero ERStudio resources, see the Informatica 9.6.1 HotFix 2 Metadata Manager Administrator Guide.

PowerCenter Resources

Effective in version 9.6.1 HotFix 2, you can create and load a PowerCenter resource when the PowerCenter repository database type is IBM DB2 for LUW and the database user name differs from the schema name. To specify a schema name that differs from the database user name, enter the schema name in the Schema Name property when you configure the PowerCenter resource.

For more information about configuring PowerCenter resources, see the Informatica 9.6.1 HotFix 2 Metadata Manager Administrator Guide.

PowerCenter Flat Files in the Impact Summary

Effective in version 9.6.1 HotFix 2, the impact summary lists the flat files that are used in PowerCenter resources.

For more information about viewing the impact summary, see the Informatica 9.6.1 HotFix 2 Metadata Manager User Guide.
PowerCenter

This section describes new PowerCenter features in version 9.6.1 HotFix 2.

PowerCenter Upgrade

Effective in version 9.6.1 HotFix 2, PowerCenter preserves the AD50.cfg file when you upgrade from a hotfix or a base release of the same version. The upgrade operation preserves an AD50.cfg file in the server/bin directory and creates an empty configuration file named AD50.cfg.bak in the same directory.

When you upgrade from an earlier PowerCenter version, the upgrade operation writes an empty AD50.cfg file to the server/bin directory. The upgrade operation creates a backup copy of any AD50.cfg file that it finds in the directory.

For more information, see the Informatica 9.6.1 HotFix 2 Upgrade Guides.

PowerExchange

This section describes new PowerExchange features in version 9.6.1 HotFix 2.

PowerExchange infacmd pwx Commands

A new parameter is available for some PowerExchange Logger Service infacmd pwx commands.

The infacmd pwx CreateLoggerService and infacmd pwx UpdateLoggerService commands can now include the following optional startup parameter in the -StartParameters option:

encryptepwd=encryption_password

A password in encrypted format that enables the encryption of PowerExchange Logger log files. When this password is specified, the PowerExchange Logger can generate a unique encryption key for each Logger log file. The password is stored in the CDCT file in encrypted format. The password is not stored in CDCT backup files and is not displayed in CDCT reports that you generate with the PowerExchange PWXUCDCT utility. To use this encryption password, you must also specify coldstart=Y in the -StartParameters option.

For more information, see the Informatica 9.6.1 HotFix 2 Command Reference.

Encryption of PowerExchange Logger Log Files

You can now encrypt PowerExchange Logger Service log files to prevent unauthorized access to sensitive data that is stored in the log files.

To enable log-file encryption for a PowerExchange Logger Service, specify an encryption password in the startup parameters for a cold start of the PowerExchange Logger Service. You enter the encryption password in one of the following ways:

- In the infacmd pwx CreateListenerService or infacmd pwx UpdateListenerService command, add the encryptepwd parameter in the -StartParameters option.
- In the Informatica Administrator, edit the PowerExchange Logger Service configuration properties. In the Start Parameters property, add the encryptepwd parameter.

Note: The PowerExchange Logger uses AES encryption algorithms. You can set the type of AES algorithm in the ENCRYPTOPT statement of the PowerExchange Logger configuration file.
PowerExchange Adapters

This section describes new PowerExchange adapter features in version 9.6.1 HotFix 2.

PowerExchange Adapters for Informatica

This section describes new Informatica adapter features in version 9.6.1 HotFix 2.

PowerExchange for Cassandra

Effective in version 9.6.1 HotFix 2, you can tune consistency levels when you read data from or write data to a Cassandra database. Consistency level determines how data is synchronized on all replicas. Based on your requirement of data accuracy or response time, you can set the required consistency level.

For more information, see the Informatica PowerExchange for Cassandra 9.6.1 HotFix 2 User Guide.

PowerExchange for LinkedIn

Effective in version 9.6.1 HotFix 2, PowerExchange for LinkedIn secures all API calls to LinkedIn by using HTTPS URLs.

For more information, see the Informatica PowerExchange for LinkedIn 9.6.1 HotFix 2 User Guide.

PowerExchange for DataSift

Effective in version 9.6.1 HotFix 2, PowerExchange for DataSift has the following new features and enhancements:

• You can retrieve data from the DataSift buffer.
• You can pause and resume the Historics query.
• You can set the maximum number of attempts to re-establish a connection to DataSift if a connection fails.

For more information, see the Informatica PowerExchange for DataSift 9.6.1 HotFix 2 User Guide.

PowerExchange for Hive

Effective in version 9.6.1 HotFix 2, PowerExchange for Hive has the following new features and enhancements:

• You can use the user-defined functions in Informatica to transform the Binary data type in a Hive environment.
• PowerExchange for Hive processes sources and targets that contain the Timestamp data type. The Timestamp data type format is YYYY-MM-DD HH:MM:SS.fffffffff. The Timestamp data type has a precision of 29 and a scale of 9.
• PowerExchange for Hive processes sources and targets that contain the Date data type. The Date data type has a range of 0000-01-01 to 9999-12-31. The format is YYYY-MM-DD. The Date data type has a precision of 10 and a scale of 0.

For more information, see the Informatica PowerExchange for Hive 9.6.1 HotFix 2 User Guide.

PowerExchange for MongoDB

Effective in version 9.6.1 HotFix 2, the MongoDB ODBC driver creates a virtual table for each column that contain arrays and nested arrays. You can use the MongoDB ODBC driver to read up to five levels of nested columns and write up to three levels of nested columns.

For more information, see the Informatica PowerExchange for MongoDB 9.6.1 HotFix 2 User Guide.
PowerExchange for Salesforce

Effective in version 9.6.1 HotFix 2, PowerExchange for Salesforce has the following new features and enhancements:

- You can configure PowerExchange for Salesforce to capture changed data from a Salesforce object that is replicatable and contains the CreatedDate and SysModstamp fields.
- You can use PowerExchange for Salesforce to connect to Salesforce API v30 and v31.
- The Data Integration Service can push Filter transformation logic to Salesforce sources.

For more information, see the Informatica PowerExchange for Salesforce 9.6.1 HotFix 2 User Guide.

PowerExchange Adapters for PowerCenter

This section describes new PowerCenter adapter features in version 9.6.1 HotFix 2.

PowerExchange for Cassandra

Effective in version 9.6.1 HotFix 2, you can tune consistency levels when you read data from or write data to a Cassandra database. Consistency level determines how data is synchronized on all replicas. Based on your requirement of data accuracy or response time, you can set the required consistency level.

For more information, see the Informatica PowerExchange for Cassandra 9.6.1 HotFix 2 User Guide for PowerCenter.

PowerExchange for MongoDB

Effective in version 9.6.1 HotFix 2, the MongoDB ODBC driver creates a virtual table for each column that contain arrays and nested arrays. You can use the MongoDB ODBC driver to read up to five levels of nested columns and write up to three levels of nested columns.

For more information, see the Informatica PowerExchange for MongoDB 9.6.1 HotFix 2 User Guide for PowerCenter.

PowerExchange for Salesforce Analytics

Effective in version 9.6.1 HotFix 2, you can use PowerExchange for Salesforce Analytics to write data to Salesforce Analytics. You can then run queries on the Salesforce Analytics database to analyze the data.

For more information, see the Informatica PowerExchange for Salesforce Analytics 9.6.1 HotFix 2 User Guide for PowerCenter.

PowerExchange for Vertica

Effective in version 9.6.1 HotFix 2, you can perform the following tasks with PowerExchange for Vertica:

- You can create Vertica targets in the Target Designer.
- You can use relational mode to read large volumes of data from a Vertica source. To read data in relational mode, you must create a Vertica relational connection and configure the session to use a relational reader.
- You can use relational mode to update or delete data in a Vertica target. To write data in relational mode, you must create a Vertica relational connection and configure the session to use a relational writer.
- When you use bulk mode to write large volumes of data to a Vertica target, you can configure the session to create a staging file. On UNIX operating systems, when you enable file staging, you can also compress the data in a GZIP format. By compressing the data, you can reduce the size of data that is transferred over the network and improve session performance.
- You can run sessions on a grid to improve session performance.
• The PowerCenter Integration Service can push transformation logic to Vertica sources and targets that use native drivers. For more information, see the Informatica PowerCenter 9.6.1 HotFix 2 Advanced Workflow Guide.

For more information, see the Informatica PowerExchange for Vertica 9.6.1 HotFix 2 User Guide for PowerCenter.

Workflows

This section describes new workflow features in version 9.6.1 HotFix 2.

Pushdown Optimization for Amazon Redshift

Effective in version 9.6.1 HotFix 2, the PowerCenter Integration Service can push transformation logic to Amazon Redshift sources and targets when the connection type is ODBC.

For more information, see the Informatica PowerCenter 9.6.1 HotFix 2 Advanced Workflow Guide.

Support for Teradata Array Insert

Effective in version 9.6.1 HotFix 2, when you use an ODBC connection to connect to a Teradata target, you can insert arrays of data into the Teradata target instead of inserting data row by row. Inserting arrays of data results in higher session performance.

To insert arrays of data into a Teradata target by using an ODBC connection, configure the OptimizeTeradataWrite custom property at the session level or at the PowerCenter Integration Service level and set its value to 1.

For more information, see the Informatica PowerCenter 9.6.1 HotFix 2 Workflow Basics Guide.

Changes (9.6.1 HotFix 2)

This section describes changes in version 9.6.1 HotFix 2.

Connectivity

This section describes changes to connectivity in version 9.6.1 HotFix 2.

Sybase IQ External Loader Connection Attributes

Effective in version 9.6.1 HotFix 2, PowerCenter supports connectivity to Sybase IQ database version 16.0 by default. Informatica dropped support for the following Sybase IQ external loader connection attributes because Sybase IQ does not support these connection attributes from version 16.0:

• Block factor
• Block size

If you upgrade to version 9.6.1 HotFix 2 and want to use the block factor and block size connection attributes while connecting to a Sybase IQ database version that is earlier than 16.0, configure the SybaseIQPre16VersionSupport custom property and set its value to Yes.
Informatica Analyst

The following changes apply to Informatica Analyst:

- Effective in 9.6.1 HotFix 2, the Analyst tool displays the full name of the user who owns or most recently updated a Model repository object. The full name appears in any location that identifies the user, for example in the asset details in the library workspace.
  
  Previously, the Analyst tool displayed the login name of the user in the library workspace and in other locations.
  
  To view the full name, the login name, and any email address stored for the user, place the cursor on the full name.

- Effective in 9.6.1 HotFix 2, you can select the full name of the user in filter operations in the Analyst tool.
  
  Previously, you selected the login name of the user in filter operations in the Analyst tool.

Informatica Transformations

This section describes changes to Informatica transformations in version 9.6.1 HotFix 2.

Address Validator Transformation

The following changes apply to the Address Validator Transformation:

- Effective in version 9.6.1 HotFix 2, the Address Validator transformation uses version 5.6.0 of the Informatica Address Doctor software engine. The engine enables the new features that you can use in the Address Validator transformation in version 9.6.1 HotFix 2.
  
  Previously, the transformation used version 5.5.0 of the Informatica Address Doctor software engine.

- Effective in version 9.6.1 HotFix 2, the Address Validator transformation can return county information and sub-building information when you validate United States address data in suggestion list mode. The transformation returns the county information on a Province 2 port. The transformation returns the sub-building information on a sub-building port.
  
  The transformation continues to return county information and sub-building information when you validate the address data in batch mode, certified mode, and interactive mode.
  
  Previously, the transformation did not return the information for United States address data in suggestion list mode.

- Effective in version 9.6.1 HotFix 2, the National Institute of Statistics and Economic Studies Code port name changes to INSEE 9-Code. You do not need to update the configuration of an Address Validator transformation that uses the National Institute of Statistics and Economic Studies Code port.

- Effective in version 9.6.1 HotFix 2, all Locality Complete ports, Locality Name ports, and Locality Preferred Name ports have a precision of 100.
  
  Previously, the ports had a precision of 50.

Data Processor Transformation

Effective in version 9.6.1 HotFix 2, a Data Processor transformation that converts hierarchical input to relational output has significantly improved performance.

To further increase performance for XML input, you can clear the Normalize XML Input setting in the Settings tab when XML input is already normalized.
**Decision Transformation**

Effective in version 9.6.1 HotFix 2, you can set a maximum precision of 1024 on the REPLACESTR() function in the Decision transformation.

Previously, you set a maximum precision of 512 on the function.

**Metadata Manager**

This section describes changes to Metadata Manager in version 9.6.1 HotFix 2.

**Business Glossary Resources**

Effective in version 9.6.1 HotFix 2, business glossary resources have the following changes:

- When you load a business glossary resource, Metadata Manager extracts published business terms in unpublished categories. Previously, Metadata Manager did not extract a published business term when the category to which the term belongs was unpublished.
- Metadata Manager no longer displays audit trail information for business terms and categories. To view audit trail information for business terms or categories, view the object history in the Analyst tool.

**Metadata Manager Command Line Programs**

Effective in version 9.6.1 HotFix 2, Metadata Manager repository commands have behavior changes or changed command options. Additionally, some commands are moved from the mmcmd command line program to the mmRepoCmd command line program.

The following mmRepoCmd command has changed behavior:

- **restoreRepository**
  Restores Metadata Manager repository contents from a back-up file. You can restore repository contents to an empty repository. Previously, you had to create repository contents before you could run this command. The options for this command are not changed.

The following commands are moved from mmcmd to mmRepoCmd:

- **createRepository**
  Creates the Metadata Manager warehouse tables and imports models for metadata sources into the Metadata Manager repository. You must enable the Metadata Manager Service before you can run this command.

  You can run this command from an mmRepoCmd instance that is installed with the Informatica services, Informatica client, or Informatica utilities. Previously, you could run this command from an mmRepoCmd instance that was installed with the Informatica services.

  The options for this command are changed. You enter command options for the Metadata Manager user instead of for the domain user. Also, you no longer have to enter command options for the PowerCenter repository. The Metadata Manager Service process restores the PowerCenter repository content when you start the Metadata Manager service.
The following table describes new command options:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-url</td>
<td>Host name and port number of the Metadata Manager Service that runs the Metadata Manager application.</td>
</tr>
<tr>
<td>--user</td>
<td>Metadata Manager user name.</td>
</tr>
<tr>
<td>--encryptedPassword</td>
<td>Encrypted password flag for the Metadata Manager user password.</td>
</tr>
<tr>
<td>--password</td>
<td>Password for the Metadata Manager user.</td>
</tr>
<tr>
<td>--namespace</td>
<td>Name of the security domain to which the Metadata Manager user belongs.</td>
</tr>
</tbody>
</table>

The following table describes command options that are removed:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>--securityDomain</td>
<td>Name of the security domain to which the Informatica domain user belongs.</td>
</tr>
<tr>
<td>--domainUser</td>
<td>User name used to connect to the Informatica domain.</td>
</tr>
<tr>
<td>--domainPassword</td>
<td>Password for the Informatica domain user.</td>
</tr>
<tr>
<td>-pcRepositoryName</td>
<td>Name of the PowerCenter repository that contains the metadata objects used to load metadata into the Metadata Manager warehouse.</td>
</tr>
<tr>
<td>-pcRepositoryUser</td>
<td>User account for the PowerCenter repository. Use the repository user account you configured for the Repository Service.</td>
</tr>
<tr>
<td>-pcRepositoryNamespace</td>
<td>Name of the security domain to which the PowerCenter repository user belongs.</td>
</tr>
<tr>
<td>-pcRepositoryPassword</td>
<td>Password for the PowerCenter repository user.</td>
</tr>
<tr>
<td>-restorePCRepository</td>
<td>Restore the repository back-up file for the PowerCenter repository to create the objects used by Metadata Manager in the PowerCenter repository database.</td>
</tr>
</tbody>
</table>

The following table describes changed command options:

<table>
<thead>
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<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>--keyTab</td>
<td>This option specifies the path and file name of the keytab file for the Metadata Manager user instead of for the domain user.</td>
</tr>
</tbody>
</table>

`deleteRepository`

Deletes Metadata Manager repository content, including all metadata and repository database tables.

You can run this command from an mmRepoCmd instance that is installed with the Informatica services, Informatica client, or Informatica utilities. Previously, you could run this command from an mmRepoCmd instance that was installed with the Informatica services.
The options for this command are changed. You enter command options for the Metadata Manager user instead of for the domain user.

The following table describes new command options:

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<td>-url</td>
<td>Host name and port number of the Metadata Manager Service that runs the Metadata Manager application.</td>
</tr>
<tr>
<td>--user</td>
<td>Metadata Manager user name.</td>
</tr>
<tr>
<td>--encryptedPassword</td>
<td>Encrypted password flag for the Metadata Manager user password.</td>
</tr>
<tr>
<td>--password</td>
<td>Password for the Metadata Manager user.</td>
</tr>
<tr>
<td>--namespace</td>
<td>Name of the security domain to which the Metadata Manager user belongs.</td>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>--securityDomain</td>
<td>Name of the security domain to which the Informatica domain user belongs.</td>
</tr>
<tr>
<td>--domainUser</td>
<td>User name used to connect to the Informatica domain.</td>
</tr>
<tr>
<td>--domainPassword</td>
<td>Password for the Informatica domain user.</td>
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<tbody>
<tr>
<td>--keyTab</td>
<td>This option specifies the path and file name of the keytab file for the Metadata Manager user instead of for the domain user.</td>
</tr>
</tbody>
</table>

restorePCRepository

Restores a PowerCenter repository back-up file that contains Metadata Manager objects to the PowerCenter repository database. You must run this command from an mmRepoCmd instance that is installed with the Informatica services. The options for this command are not changed.

Metadata Manager Privileges

Effective in version 9.6.1 HotFix 2, the privileges that you need to create or restore the Metadata Manager repository are changed.

To create or restore the Metadata Manager repository, you must belong to the default Administrator group. Previously, you needed the Manage Services privilege with permission on the Metadata Manager Service.

Metadata Manager Product Name

Effective in version 9.6.1 HotFix 2, the product name that appears in the Metadata Manager web application is changed to Metadata Manager. Previously, the product name was Metadata Manager & Business Glossary.
PowerExchange Adapters

This section describes changes to PowerExchange Adapters in version 9.6.1 HotFix 2.

PowerExchange for Vertica

Effective in version 9.6.1 HotFix 2, the following changes apply to pushdown optimization with PowerExchange for Vertica:

- When you push the DATE_DIFF function to Vertica, Vertica rounds the date difference value to the nearest integer. However, the PowerCenter Integration Service returns a float value. If you want the date difference to be treated as a float value in the Vertica database, you can disable pushdown optimization.

- When you specify the format as Y and push the DATE_DIFF function to Vertica, Vertica calculates the difference in the dates in terms of number of days. However, the PowerCenter Integration Service calculates the difference in terms of number of years. If you want the difference value to be treated in terms of number of years, you can disable pushdown optimization.

Release Tasks (9.6.1 HotFix 2)

This section describes the release tasks in version 9.6.1 HotFix 2.

Metadata Manager

This section describes release tasks for Metadata Manager in version 9.6.1 HotFix 2.

HDFS Data Objects in Informatica Platform Resources

Effective in version 9.6.1 HotFix 2, Metadata Manager adds a class for HDFS data objects in Informatica Platform resources. Metadata Manager displays a new icon for objects of this class. The new class and icon differentiate HDFS data objects from flat file data objects.

To display the new class and icon, reload any Informatica Platform resource that includes HDFS data objects.
CHAPTER 3

New Features, Changes, and Release Tasks (9.6.1 HotFix 1)

This chapter includes the following topics:

- New Features (9.6.1 HotFix 1), 44
- Changes (9.6.1 HotFix 1), 52
- Release Tasks (9.6.1 HotFix 1), 55

New Features (9.6.1 HotFix 1)

This section describes new features in version 9.6.1 HotFix 1.

Big Data

This section describes new big data features in version 9.6.1 HotFix 1.

Data Warehousing

Big Data Edition has the following new features and enhancements for data warehousing:

Binary Data Type

Effective in version 9.6.1 HotFix 1, a mapping in the Hive environment can process binary data when it passes through the ports in a mapping. However, the mapping cannot process expression functions that use binary data.

For more information, see the Informatica 9.6.1 HotFix 1 Big Data Edition User Guide.

Truncate Partitions in a Hive Target

Effective in version 9.6.1 HotFix 1, the Data Integration Service can truncate the partition in the Hive target. You must choose to both truncate the partition in the Hive target and truncate the target table.

For more information, see the Informatica 9.6.1 HotFix 1 Big Data Edition User Guide.

Hadoop Distributions

Effective in version 9.6.1 HotFix 1, Big Data Edition added support for the following Hadoop distributions:

- Cloudera CDH 5.1
- Hortonworks HDP 2.1

Big Data Edition dropped support for Hortonworks HDP 2.0.
For more information, see the *Informatica 9.6.1 HotFix 1 Big Data Edition Installation and Configuration Guide*.

**Hadoop Ecosystem**

Big Data Edition has the following new features and enhancements for the Hadoop ecosystem:

**Cloudera Manager**

Effective in version 9.6.1 HotFix 1, you can use Cloudera Manager to distribute the Big Data Edition installation as parcels across the Hadoop cluster nodes for Cloudera CDH 5.1.

For more information, see the *Informatica 9.6.1 HotFix 1 Big Data Edition Installation and Configuration Guide*.

**High Availability**

Effective in version 9.6.1 HotFix 1, you can enable the Data Integration Service and the Developer tool to read from and write to a highly available Hadoop cluster. A highly available Hadoop cluster can provide uninterrupted access to the JobTracker, NameNode, and ResourceManager in the cluster. You must configure the Developer tool to communicate with a highly available Hadoop cluster on a Hadoop distribution.

For more information, see the *Informatica 9.6.1 HotFix 1 Big Data Edition Installation and Configuration Guide*.

**Kerberos Authentication**

Effective in version 9.6.1 HotFix 1, you can configure the Informatica domain that uses Kerberos authentication to run mappings in a Hadoop cluster that also uses Kerberos authentication. You must configure a one-way cross-realm trust to enable the Hadoop cluster to communicate with the Informatica domain.

Previously, you could run mappings in a Hadoop cluster that used Kerberos authentication if the Informatica domain did not use Kerberos authentication.

For more information, see the *Informatica 9.6.1 HotFix 1 Big Data Edition User Guide*.

**Schedulers**

Effective in version 9.6.1 HotFix 1, the following schedulers are valid for Hadoop distributions:

- Capacity scheduler
- Fair scheduler

For more information, see the *Informatica 9.6.1 HotFix 1 Big Data Edition Installation and Configuration Guide*.

**Business Glossary**

This section describes new Business Glossary features in version 9.6.1 HotFix 1.

**Export Relationship View Diagram**

Effective in version 9.6.1 HotFix 1, you can export the relationship view diagram after you open it. Export the relationship view diagram to access the diagram when you are not logged in to the Analyst tool or to share the diagram with users who cannot access Business Glossary.

For more information, see the *Informatica 9.6.1 HotFix 1 Business Glossary Guide*.
Multi-valued Attributes in Business Glossary Desktop

Effective in version 9.6.1 HotFix 1, you can view multi-valued attributes in Business Glossary Desktop. Previously, you could only view single-valued attributes. Properties such as Contains and See Also are examples of multi-valued attributes.

Command Line Programs

This section describes new and changed commands and options for the Informatica command line programs in version 9.6.1 HotFix 1.

pmrep Command

Effective in version 9.6.1 HotFix 1, the following table describes an updated pmrep command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PurgeVersion</td>
<td>Contains the following new option:</td>
</tr>
<tr>
<td></td>
<td>-k (log objects not purged). Optional. Lists all the object names and versions</td>
</tr>
<tr>
<td></td>
<td>that do not purge although they match the purge criteria. The -k option also</td>
</tr>
<tr>
<td></td>
<td>lists the reason that the object versions did not purge. For example, an</td>
</tr>
<tr>
<td></td>
<td>object version does not purge if you do not have sufficient privileges to</td>
</tr>
<tr>
<td></td>
<td>purge the object.</td>
</tr>
</tbody>
</table>

isp Commands

Effective in version 9.6.1 HotFix 1, the following table describes new isp commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>convertUserActivityLog</td>
<td>Converts binary user activity logs to text or XML format.</td>
</tr>
<tr>
<td>getUserActivityLog</td>
<td>Retrieves user activity logs in binary, text, or XML format.</td>
</tr>
<tr>
<td>migrateUsers</td>
<td>Migrates the groups, roles, privileges and permissions of users in a native</td>
</tr>
<tr>
<td></td>
<td>security domain to users in one or more LDAP security domains. Requires a</td>
</tr>
<tr>
<td></td>
<td>user migration file.</td>
</tr>
</tbody>
</table>

Connectivity

This section describes new connectivity features in version 9.6.1 HotFix 1.

Netezza Connectivity

Effective in version 9.6.1 HotFix 1, you can use ODBC to read data from and write data to a Netezza database.

For more information, see the Informatica 9.6.1 HotFix 1 Developer Tool Guide.
Data Quality Accelerators

This section describes new Data Quality accelerator features in version 9.6.1 HotFix 1.

Data Cleansing Rules

Effective in version 9.6.1 HotFix 1, you can select the following rule when you add the Core accelerator to a Model repository project:

rule_GTIN_Validation

Validates a Global Trade Item Number (GTIN). The rule validates eight-digit, twelve-digit, thirteen-digit, and fourteen-digit numbers. The rule returns "Valid" if the check digit is correct for the number and "Invalid" if the check digit is incorrect.

Find the rule in the General_Data_Cleansing folder of the accelerator project in the Model repository.

For more information, see the Informatica 9.6.1 HotFix 1 Accelerator Guide.

Matching Rules

Effective in version 9.6.1 HotFix 1, all Data Quality accelerator rules that perform match analysis contain a pass-through input port and a pass-through output port. Use the ports to pass unique identifiers through a rule.

Find the rules in the Matching_Deduplication folder of the accelerator project in the Model repository.

For more information, see the Informatica 9.6.1 HotFix 1 Accelerator Guide.

Documentation

This section describes new or updated guides included with the Informatica documentation in version 9.6.1 HotFix 1.

The Informatica documentation contains the following changed guide:

Informatica Business Glossary Version 2.0 API Reference Guide

Effective in version 9.6.1 HotFix 1, a new version of the guide contains URLs and parameters of the Business Glossary REST APIs used to develop a client application.

Informatica Developer

This section describes new Informatica Developer features in version 9.6.1 HotFix 1.

Customized Data Object Write Properties

Effective in version 9.6.1 HotFix 1, the Truncate Hive Target Partition property is added to the customized data object write properties. This property overwrites the partition in the Hive target in which the data is being inserted. To enable this option, you must also select the option to truncate target tables.

For more information, see the Informatica 9.6.1 HotFix 1 Developer Tool Guide.

Netezza Pushdown Optimization

Effective in version 9.6.1 HotFix 1, the Data Integration Service can push transformation logic to Netezza sources that use native drivers.

For more information, see the Informatica 9.6.1 HotFix 1 Mapping Guide.
Secure Communication for SAP HANA

Effective in version 9.6.1 HotFix 1, you can configure secure communication to an SAP HANA database with the SSL protocol.

Informatica Domain

This section describes new Informatica domain features in version 9.6.1 HotFix 2.

Informatica on Amazon EC2

Effective in version 9.6.1 HotFix 2, you can setup and launch Informatica services with multiple nodes on Amazon EC2. You can launch an Informatica domain that contains up to four nodes.

Informatica DiscoveryIQ

Effective in version 9.6.1 HotFix 2, Informatica DiscoveryIQ, a product usage tool, sends routine reports on data usage and system statistics to Informatica. Data collection and upload is enabled by default. You can choose to not send any usage statistics to Informatica.

Informatica Transformations

This section describes new Informatica transformation features in version 9.6.1 HotFix 1.

Address Validator Transformation

Effective in version 9.6.1 HotFix 1, you can select the following ports on the Address Validator transformation:

Input Data

Output port that contains the data elements in an input address record in a structured XML format.

Result

Output port that contains data elements that represent the data in an output address in a structured XML format.

Find the Input Data port and the Result port in the XML port group on the transformation.

For more information, see the Informatica 9.6.1 HotFix 1 Address Validator Port Reference.

Mappings

This section describes new mapping features in version 9.6.1 HotFix 1.

Informatica Mappings

Branch Pruning Optimization Method

Effective in version 9.6.1 HotFix 1, the Data Integration Service can apply the branch pruning optimization method. When the Data Integration Service applies the branch pruning method, it removes transformations that do not contribute any rows to the target in a mapping.

The Developer tool enables the branch pruning optimization method by default when you choose the normal or full optimizer level. You can disable branch pruning if the optimization does not increase performance by setting the optimizer level to minimal or none.

For more information, see the Informatica Data Services 9.6.1 HotFix 1 Performance Tuning Guide.
**Constraints**

Effective in version 9.6.1 HotFix 1, the Data Integration Service can read constraints from relational sources, logical data objects, physical data objects, or virtual tables. A constraint is a conditional expression that the values on a data row must satisfy. When the Data Integration Service reads constraints, it might drop the rows that do not evaluate to TRUE for the data rows based on the optimization method applied.

For more information, see the *Informatica 9.6.1 HotFix 1 Mapping Guide*.

**Metadata Manager**

This section describes new Metadata Manager features in version 9.6.1 HotFix 1.

**Browser Support**

Effective in version 9.6.1 HotFix 1, the Metadata Manager application can run in the following web browsers:

- Internet Explorer 11.0
- Google Chrome 35

For more information about product requirements and supported platforms, see the Product Availability Matrix on the Informatica My Support Portal:
https://mysupport.informatica.com/community/my-support/product-availability-matrices

**Microsoft SQL Server and Oracle Exadata Versions**

Effective in version 9.6.1 HotFix 1, Metadata Manager supports the following database versions:

- Microsoft SQL Server 2014
- Oracle Exadata 11g

Therefore, you can perform the following actions:

- Create Microsoft SQL Server or Oracle resources that extract metadata from these database versions.
- Create Business Glossary, Informatica Platform, or PowerCenter resources when the Model repository or PowerCenter repository is in either of these database versions.
- Create the Metadata Manager repository in either of these database versions.

For more information about creating resources, see the *Informatica 9.6.1 HotFix 1 Metadata Manager Administrator Guide*. For more information about creating the Metadata Manager repository, see the *Informatica 9.6.1 HotFix 1 Installation and Configuration Guide*.

**Security Enhancements**

Effective in version 9.6.1 HotFix 1, when you create or edit a PowerCenter resource, you can prevent Metadata Manager from displaying secure JDBC parameters that are part of the JDBC URL for the PowerCenter repository database.

For more information, see the *Informatica 9.6.1 HotFix 1 Metadata Manager Administrator Guide*.

**PowerCenter**

This section describes new PowerCenter features in version 9.6.1 HotFix 1.

**Secure Communication for SAP HANA**

Effective in version 9.6.1 HotFix 1, you can configure secure communication to an SAP HANA database with the SSL protocol.
PowerExchange Adapters

This section describes new PowerExchange adapter features in version 9.6.1 HotFix 1.

PowerExchange Adapters for Informatica

This section describes new Informatica adapter features in version 9.6.1 HotFix 1.

PowerExchange for Cassandra

Effective in version 9.6.1 HotFix 1, you can use PowerExchange for Cassandra to read data from or write data to a Cassandra database. You can add a Cassandra data object as a source or a target in a mapping and run the mapping to read or write data. You can create virtual tables to use Cassandra collections in a mapping.

For more information, see the Informatica PowerExchange for Cassandra 9.6.1 HotFix 1 User Guide.

PowerExchange for Greenplum

Effective in version 9.6.1 HotFix 1, you can configure secure communication to a Greenplum database with the SSL protocol.

For more information, see the Informatica PowerExchange for Greenplum 9.6.1 HotFix 1 User Guide.

PowerExchange for HBase

Effective in version 9.6.1 HotFix 1, you can use PowerExchange for HBase to connect to an HBase data store that uses Kerberos authentication. You must enable Kerberos authentication and configure HBase connection properties to access an HBase data store that uses Kerberos authentication.

For more information, see the Informatica PowerExchange for HBase 9.6.1 HotFix 1 User Guide.

PowerExchange for HDFS

Effective in version 9.6.1 HotFix 1, when you read complex files, you can use the com.informatica.adapter.hdfs.hadoop.io.InfaBatchTextInputFormat input format to read text files in batches and increase performance.

For more information, see the Informatica PowerExchange for HDFS 9.6.1 HotFix 1 User Guide.

PowerExchange for Hive

Effective in version 9.6.1 HotFix 1, PowerExchange for Hive supports the Binary data type in a Hive environment. The Binary data type has a range of 1 to 104,857,600 bytes.

For more information, see the Informatica PowerExchange for Hive 9.6.1 HotFix 1 User Guide.

PowerExchange for Salesforce

Effective in version 9.6.1 HotFix 1, you can use the PowerExchange for Salesforce connection listed under the Cloud connection category to read data from and write data to Salesforce. You can add a Salesforce data object operation as a source or a target in a mapping and run the mapping to read or write data.

For more information, see the Informatica PowerExchange for Salesforce 9.6.1 HotFix 1 User Guide.

PowerExchange for SAS

Effective in version 9.6.1 HotFix 1, you can use PowerExchange for SAS to read data from SAS and write data to SAS.

For more information, see the Informatica PowerExchange for SAS 9.6.1 HotFix 1 User Guide.
PowerExchange for Tableau

Effective in version 9.6.1 HotFix 1, you can use PowerExchange for Tableau to generate the Tableau data extract file by reading data from multiple sources, such as flat files and SAP applications. Business users can open the extract file in Tableau Desktop to visualize the data and identify patterns and trends.

For more information, see the Informatica PowerExchange for Tableau 9.6.1 HotFix 1 User Guide.

PowerExchange Adapters for PowerCenter

This section describes new PowerCenter adapter features in version 9.6.1 HotFix 1.

PowerExchange for Cassandra

Effective in version 9.6.1 HotFix 1, you can use PowerExchange for Cassandra to extract data from and load data to a Cassandra database. You can create virtual tables to use Cassandra collections in a mapping.

For more information, see the Informatica PowerExchange for Cassandra 9.6.1 HotFix 1 User Guide for PowerCenter.

PowerExchange for Greenplum

Effective in version 9.6.1 HotFix 1, you can configure secure communication to a Greenplum database with the SSL protocol.

For more information, see the Informatica PowerExchange for Greenplum 9.6.1 HotFix 1 User Guide for PowerCenter.

PowerExchange for Vertica

Effective in version 9.6.1 HotFix 1, you can use PowerExchange for Vertica to write large volumes of data to a Vertica database.

For more information, see the Informatica PowerExchange for Vertica 9.6.1 HotFix 1 User Guide for PowerCenter.

Reference Data

This section describes new reference data features in version 9.6.1 HotFix 1.

Probabilistic Models

Effective in version 9.6.1 HotFix 1, you can view the total number of reference data values that you assigned to a label in a probabilistic model.

You can use wildcard characters to search for data values in a probabilistic model.

For more information, see the Informatica 9.6.1 HotFix 1 Reference Data Guide.
Rule Specifications

This section describes new rule specification features in version 9.6.1 HotFix 1.

Date and Time Operations

Effective in version 9.6.1 HotFix 1, you can configure a rule statement to perform the following operations on date and time data:

- Return the date and time at which the Data Integration Service runs the mapping that contains the rule statement.
- Determine if a time stamp references a point in time before or after the Data Integration Service runs the mapping that contains the rule statement.
- Convert a string of date and time data to a date/time data type.

For more information, see the Informatica 9.6.1 HotFix 1 Rule Specification Guide.

Reference Table Operations

Effective in version 9.6.1 HotFix 1, you can configure a rule statement to return a value that you specify when an input value matches a reference table value.

For more information, see the Informatica 9.6.1 HotFix 1 Rule Specification Guide.

Changes (9.6.1 HotFix 1)

This section describes changes in version 9.6.1 HotFix 1.

Application Services

This section describes changes to application services in version 9.6.1 HotFix 1.

Content Management Service

Effective in version 9.6.1 HotFix 1, the Content Management Service sets default values for the following Address Validation process properties:

- No Pre-Load Countries
- No Pre-Load Geocoding Countries
- No Pre-Load Suggestion List Countries
- No Pre-Load Address Code Countries

The Content Management Service sets the default value for each property to ALL.

Previously, the Content Management Service did not set default values for the properties.

**Note:** The default properties do not affect the data output from any address validation mapping that you created in an earlier product version.
**Business Glossary**

This section describes changes to Business Glossary in version 9.6.1 HotFix 1.

**Business Glossary API changes**

The URLs and parameters of the Business Glossary REST APIs used to develop a client application have changed.

**Informatica Transformations**

This section describes changes to Informatica transformations in version 9.6.1 HotFix 1.

**Address Validator Transformation**

The following changes apply to the Address Validator transformation in version 9.6.1 HotFix 1:

- Effective in version 9.6.1 HotFix 1, the Address Validator transformation populates additional fields in a Software Evaluation and Recognition Program (SERP) report. The SERP report includes the following fields:
  - Processing Date
  - Date of CPC Address Data File
  Previously, the transformation did not populate the fields.

- Effective in version 9.6.1 HotFix 1, the Extended Element Status port name is Extended Element Result Status.

**Data Processor Transformation**

Effective in version 9.6.1 HotFix 1, you can export a Data Processor transformation with an XMap object and import it again into the Developer tool as a transformation with an XMap object.

Previously, when you exported a Data Processor transformation with an XMap object, it was re-imported into the Developer tool as a transformation with a Script object.

**Metadata Manager**

This section describes changes to Metadata Manager in version 9.6.1 HotFix 1.

**Microsoft Analysis and Reporting Services Metadata Source Version**

Effective in version 9.6.1 HotFix 1, you can create Microsoft Analysis and Reporting Services resources to extract metadata from Microsoft Analysis and Reporting Services version 10.5 (2008 R2).

Previously, you could extract metadata from Microsoft Analysis and Reporting Services version 9.0 (2005).
Search

Effective in version 9.6.1 HotFix 1, the behavior for customizing the list of words to ignore in searches is changed.

The behavior is changed in the following ways:

• You no longer need to create the stopwords.txt file manually. Instead, the Informatica services installer creates a default stopwords.txt file in the following directory:
  `<Informatica installation directory>\services\shared\jars\pc\classes`

• You must set the UseCustomStopWords property in the imm.properties file to true.

The stopwords.txt file created by the installer contains the default list of English words to ignore in searches. To customize the word list, update the stopwords.txt file, enable the UseCustomStopWords property, disable and enable the Metadata Manager Service, and then manually update the search index for all resources.

Previously, to customize the word list, you had to create the stopwords.txt file manually, disable and enable the Metadata Manager Service, and then manually update the search index for all resources.

PowerCenter Transformations

This section describes changes to PowerCenter transformations in version 9.6.1 HotFix 1.

Data Masking Transformation

Effective in version 9.6.1 HotFix 1, you set the substitution dictionary owner name and the storage owner name in the transaction environment properties.

Previously, you set the substitution dictionary owner name and the storage owner name in the Transformations view on the Mapping tab in the session properties.

PowerExchange

This section describes changes to PowerExchange functionality in the Informatica domain in version 9.6.1 HotFix 1.

infacmd pwx displayStatsListener Command

Effective in version 9.6.1 HotFix 1, the infacmd pwx displayStatsListener command can produce monitoring statistics for PowerExchange Listener processes on Linux, zLinux, and UNIX. Previously, the command produced statistics only for PowerExchange Listener processes on Windows.

PowerExchange Adapters

This section describes changes to PowerExchange adapters in version 9.6.1 HotFix 1.

PowerExchange Adapters for Informatica

This section describes changes to Informatica adapters in version 9.6.1 HotFix 1.

PowerExchange for Salesforce

Effective in version 9.6.1 HotFix 1, the PowerExchange for Salesforce connection listed under the Enterprise connection category is deprecated and Informatica will drop support in the next major release. Informatica
recommends that you use the new PowerExchange for Salesforce connection listed under the Cloud connection category to read data from and write data to Salesforce.

PowerExchange for Mongo DB

Effective in version 9.6.1 HotFix 1, the name of the Informatica PowerExchange for Mongo DB ODBC driver file is libinformaticamongodbodbc64.so.

Previously, the name of the Informatica PowerExchange for Mongo DB ODBC driver file was libsimbamongodbodbc64.so.

PowerExchange Adapters for PowerCenter

This section describes changes to PowerCenter adapters in version 9.6.1 HotFix 1.

PowerExchange for Mongo DB

Effective in version 9.6.1 HotFix 1, the name of the Informatica PowerExchange for Mongo DB ODBC driver file is libinformaticamongodbodbc64.so.

Previously, the name of the Informatica PowerExchange for Mongo DB ODBC driver file was libsimbamongodbodbc64.so.

Reference Data

This section describes changes to reference data functionality in version 9.6.1 HotFix 1.

Probabilistic Models

Effective in version 9.6.1 HotFix 1, the Developer tool uses version 3.4 of the Stanford Named Entity Recognition API to compile a probabilistic model.

Previously, the Developer tool used version 1.2.6 of the API to compile a probabilistic model.

Release Tasks (9.6.1 HotFix 1)

This section describes the release tasks in version 9.6.1 HotFix 1.

PowerExchange Adapters

This section describes release tasks for PowerExchange adapters in version 9.6.1 HotFix 1.

PowerExchange Adapters for Informatica

This section describes release tasks for Informatica adapters in version 9.6.1 HotFix 1.

PowerExchange for Salesforce

Effective in version 9.6.1 HotFix 1, the PowerExchange for Salesforce connection listed under the Enterprise connection category is deprecated, and Informatica will drop support in the next major release. Informatica recommends that you use the new PowerExchange for Salesforce connection listed under the Cloud connection category to read data from and write data to Salesforce.
You can use existing mappings with the deprecated PowerExchange for Salesforce adapter. However, you cannot update the existing mappings or connections to use the PowerExchange for Salesforce connection listed under the Cloud connection category. You must create new mappings and connections to use the new PowerExchange for Salesforce adapter.

For more information, see the Informatica PowerExchange for Salesforce 9.6.1 HotFix 1 User Guide.

PowerExchange for Mongo DB

Before you upgrade from Informatica 9.6.1 to Informatica 9.6.1 HotFix 1, you must backup the odbc.ini file. After you upgrade to Informatica 9.6.1 HotFix 1, replace the odbc.ini file with the back-up copy of the odbc.ini file, and change the MongoDB driver name in the odbc.ini file to libinformaticamongodbodbc64.so.

For more information, see the Informatica PowerExchange for MongoDB 9.6.1 HotFix 1 User Guide for PowerCenter.

Informatica Web Client Applications

After you upgrade, you must clear your web browser cache before you access the Informatica web client applications.

Informatica supports Google Chrome and Microsoft Internet Explorer browsers. After you upgrade, clear the browser caches on the machines from which you access the Informatica web client applications. The Informatica web client applications include the Administrator tool, Analyst tool, Reporting Service, Reporting and Dashboards Service, and Metadata Manager.
Chapter 4

New Features (9.6.1)

This chapter includes the following topics:

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Application Services

This section describes new application services features in version 9.6.1.

Content Management Service

This section describes new Content Management service features in version 9.6.1

The Content Management Service determines the preload behavior for address code lookup reference data and interactive reference data. Use the Address Validation process properties to set the preload behavior.
The following table describes the preload properties for address code lookup data:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Pre-Load Address Code</td>
<td>Lists the countries for which the Data Integration Service loads all reference data into memory before address validation begins.</td>
</tr>
<tr>
<td>Countries</td>
<td></td>
</tr>
<tr>
<td>Partial Pre-Load Address Code</td>
<td>Lists the countries for which the Data Integration Service loads address reference metadata and indexing structures into memory before address validation begins.</td>
</tr>
<tr>
<td>Countries</td>
<td></td>
</tr>
<tr>
<td>No Pre-Load Address Code</td>
<td>Lists the countries for which the Data Integration Service loads no address reference data into memory before address validation begins.</td>
</tr>
<tr>
<td>Countries</td>
<td></td>
</tr>
</tbody>
</table>

The following table describes the preload properties for interactive reference data in addition to batch and certified reference data:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Pre-Load Countries</td>
<td>Lists the countries for which the Data Integration Service loads all batch, certified, and interactive reference data into memory before address validation begins.</td>
</tr>
<tr>
<td>Partial Pre-Load Countries</td>
<td>Lists the countries for which the Data Integration Service loads batch, certified, and interactive metadata and indexing structures into memory before address validation begins.</td>
</tr>
<tr>
<td>No Pre-Load Countries</td>
<td>Lists the countries for which the Data Integration Service does not load batch, certified, or interactive reference data into memory before address validation begins.</td>
</tr>
</tbody>
</table>

For more information, see the *Informatica 9.6.1 Application Service Guide*.

**Big Data**

This section describes new Big Data features in version 9.6.1.

*Data Types in a Hive Environment*

You can push high precision Decimal data types to a Hive environment that uses Hive 0.11 and above.

If the mapping is not enabled for high precision, the Data Integration Service converts all decimal values to double values.

If the mapping is enabled for high precision, the Data Integration Service converts decimal values with a precision greater than 28 to double values.

For more information, see the *Informatica 9.6.1 Big Data Edition User Guide*.

*Hive Connection Properties*

In the Hive connection, you specify the following properties:

- Enter advanced Hive or Hadoop properties to configure or override Hive or Hadoop cluster properties in `hive-site.xml` on the machine on which the Data Integration Service runs.
- Enter the user name of the user that the Data Integration Service impersonates to run mappings on the Hadoop cluster.
User Authentication

You can enable the Data Integration Service to run mapping and workflow jobs on a Hadoop cluster that uses Kerberos authentication. The Hadoop cluster authenticates the SPN of the Data Integration Service user account to run mapping and workflow jobs on the Hadoop cluster. To enable another user to run jobs on the Hadoop cluster, you can configure the SPN of the Data Integration Service user account to impersonate another user account.

For more information, see the Informatica 9.6.1 Big Data Edition User Guide.

Mappings on Hadoop Distributions

You can enable mappings to run on the following Hadoop distributions:

- Cloudera CDH 5.0
- Hortonworks HDP 2.0
- MapR 3.1
- Pivotal HD 1.1

For more information, see the Informatica 9.6.1 Big Data Edition Installation and Configuration Guide.

Business Glossary

This section describes new Business Glossary features in version 9.6.1.

Business Initiatives

A business initiative is a container of Glossary assets that you want to collectively approve and publish in business glossary. Use a business initiative to publish multiple business terms, categories, and policies at the same time. The business initiative goes through the same approval process as any other Glossary asset.

Customize Category and Business Initiative Templates

You can customize templates for categories and business initiatives.

Default Values for Custom Properties

You can add default values for custom properties that you create when you customize a Glossary asset template.

Asset Relationship Visualization

You can see a visual representation of the relationships that business terms and policies have with other assets in business glossary. The asset relationship visualization diagram is dynamic and interactive. You can rearrange the context of the diagram, filter the assets that display in the diagram, and change the number of levels.

Synonym Retirement

You can set a retirement date for synonyms in business glossary. The state of the synonym changes after the retirement date. Business glossary consumers view the state to identify the validity of the synonym.

For more information, see the Informatica 9.6.1 Business Glossary Guide.
This section describes new commands in version 9.6.1.

**Environment Variables**

The following table describes new environment variables that you can use with command line programs:

<table>
<thead>
<tr>
<th>Environment Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>INFA_DEFAULT_DB_TRUSTSTORE_PASSWORD</td>
<td>Stores the database truststore password for infasetup commands.</td>
</tr>
<tr>
<td>INFA_NODE_KEYSTORE_PASSWORD</td>
<td>Stores the password for the infa_keystore.jks file for infasetup commands.</td>
</tr>
<tr>
<td>INFA_NODE_TRUSTSTORE_PASSWORD</td>
<td>Stores the password for the infa_truststore.jks file for infasetup commands.</td>
</tr>
</tbody>
</table>

**infacmd dis Commands**

The following table describes new infacmd dis commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ListSequenceObjectProperties</td>
<td>Lists the properties for a sequence data object.</td>
</tr>
<tr>
<td>ListSequenceObjects</td>
<td>Lists the sequence data objects deployed to an application.</td>
</tr>
<tr>
<td>SetSequenceState</td>
<td>Updates the current value of a sequence data object.</td>
</tr>
</tbody>
</table>

**infacmd isp Commands**

The following table describes a new infacmd isp command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>printSPNAndKeytabNames</td>
<td>Generates the list of SPN and keytab file names for the nodes and services in the domain.</td>
</tr>
</tbody>
</table>

The following table describes an updated infacmd isp command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>switchToGatewayNode</td>
<td>The command contains an option for the database truststore file (-dbt). Enter the path and file name of the truststore file for the secure domain configuration repository database. The option is required if you use a secure database for the domain configuration repository.</td>
</tr>
</tbody>
</table>
### infacmd mrs Commands

The following table describes a new infacmd mrs command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>rebuildDependencyGraph</td>
<td>Rebuilds the object dependency graph so that you can view object dependencies after an upgrade.</td>
</tr>
</tbody>
</table>

### infacmd rds Commands

Effective in version 9.6.1, the infacmd rds commands are obsolete. You can no longer use the infacmd rds commands to manage the Reporting and Dashboard Service. You need to use the Administrator tool.

The following table describes the obsolete infacmd rds commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CreateService</td>
<td>Creates a Reporting and Dashboards Service in a domain.</td>
</tr>
<tr>
<td>ListServiceProcessOptions</td>
<td>Lists the Reporting and Dashboards Service process options.</td>
</tr>
</tbody>
</table>

### infasetup Command

The following table describes a new infasetup command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>updateKerberosConfig</td>
<td>Changes the realm name that the Informatica domain users belong to or changes the service realm name that the Informatica domain services belong to. This command does not change the Kerberos configuration.</td>
</tr>
</tbody>
</table>

The following table describes updated infasetup commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>- BackupDomain</td>
<td>The command contains an option for the database truststore (-dbtl). Enter the path and file name of the truststore file for the secure domain repository database. The option is required if you configured a secure domain repository database for the domain.</td>
</tr>
<tr>
<td>- DefineDomain</td>
<td></td>
</tr>
<tr>
<td>- DefineGatewayNode</td>
<td></td>
</tr>
<tr>
<td>- DeleteDomain</td>
<td></td>
</tr>
<tr>
<td>- RestoreDomain</td>
<td></td>
</tr>
<tr>
<td>- updateGatewayNode</td>
<td></td>
</tr>
<tr>
<td>- upgradeDomainMetadata</td>
<td></td>
</tr>
</tbody>
</table>
**mmcmd**

Effective in version 9.6.1, the following mmcmd commands have changes:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>createRepository</td>
<td>The <code>--domainPassword</code> option is required only when the domain uses Kerberos authentication and you do not specify the <code>--keyTab</code> option for the domain user. Previously, this option was always required.</td>
</tr>
<tr>
<td>createResource</td>
<td>The following options are added:</td>
</tr>
<tr>
<td></td>
<td>- <code>--resourcePassword</code>. If the resource uses a password and the resource configuration file does not contain the resource password, use this option to specify the password.</td>
</tr>
<tr>
<td></td>
<td>- <code>--secureJDBCParameters</code>. Use this option to specify secure JDBC parameters to append to the JDBC connection URL. Metadata Manager does not display secure parameters or parameter values in the resource configuration properties.</td>
</tr>
<tr>
<td>deleteRepository</td>
<td>The <code>--domainPassword</code> option is required only when the domain uses Kerberos authentication and you do not specify the <code>--keyTab</code> option for the domain user. Previously, this option was always required.</td>
</tr>
<tr>
<td>getResource</td>
<td>The <code>-includePassword</code> option is added. You can include or exclude the resource password in the resource configuration file. Previously, the command always included the password.</td>
</tr>
<tr>
<td>restorePCRepository</td>
<td>The <code>--domainPassword</code> option is required only when the domain uses Kerberos authentication and you do not specify the <code>--keyTab</code> option for the domain user. Previously, this option was always required.</td>
</tr>
<tr>
<td>updateResource</td>
<td>The following options are added:</td>
</tr>
<tr>
<td></td>
<td>- <code>--resourcePassword</code>. If the resource uses a password and the resource configuration file does not contain the resource password, use this option to specify the password.</td>
</tr>
<tr>
<td></td>
<td>- <code>--secureJDBCParameters</code>. Use this option to specify secure JDBC parameters to append to the JDBC connection URL. Metadata Manager does not display secure parameters or parameter values in the resource configuration properties.</td>
</tr>
</tbody>
</table>

**mmRepoCmd**

Effective in version 9.6.1, you use the mmRepoCmd command line program to back up and restore Metadata Manager repository database contents.

mmRepoCmd contains the following enhancements:

- When you restore repository contents, mmRepoCmd encrypts sensitive data in the Metadata Manager repository with the domain encryption key.
- mmRepoCmd gets repository database connection information from the Metadata Manager Service. When you run commands, you do not need to specify connection parameters as arguments.

mmRepoCmd contains the following commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>backupRepository</td>
<td>Backs up the Metadata Manager repository to a backup file.</td>
</tr>
<tr>
<td>restoreRepository</td>
<td>Restores Metadata Manager repository contents from a backup file.</td>
</tr>
</tbody>
</table>

Previously, you used the backupCmdLine command line program to back up and restore Metadata Manager repository database contents. backupCmdLine is removed.
### pmprep Command

The following table describes an updated pmprep command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>createConnection</td>
<td>The command contains the kerberized_connection (-K) option. Indicates that the database you are connecting to runs on a network that uses Kerberos authentication.</td>
</tr>
</tbody>
</table>

**rcfmu**

Effective in version 9.6.1, you can use rcfmu to migrate resource configuration files from Metadata Manager 9.1.0, 9.5.x, and 9.6.0 to the current version. rcfmu contains a new option, -smv, that specifies the original resource configuration file version.

Previously, you used rcfmu to migrate resource configuration files from Metadata Manager 9.1.0 to 9.5.x or 9.6.0.

**rmu**

Effective in version 9.6.1, you can use rmu to migrate resources from Metadata Manager 9.1.0, 9.5.x, and 9.6.0 to the current version. rmu detects the original resource version.

Previously, you used rmu to migrate resources from Metadata Manager 9.1.0 to 9.5.x or 9.6.0.

### Documentation

This section describes new guides included with the Informatica documentation in version 9.6.1. Some new guides are organized based on shared functionality among multiple products and replace previous guides.

The Informatica documentation contains the following new guides:

**Informatica Big Data Edition Installation and Configuration Guide**

Contains information about installing Informatica Big Data Edition and configuring mappings to work with multiple Hadoop distributions. Previously, installation was documented in the PowerCenter Big Data Edition User Guide.

**Informatica Installation and Configuration Guide**

Contains information about planning the domain, preparing databases, installing Informatica services and clients, and creating application services for all Informatica platform products. Previously, installation was documented in guides specific to the Data Quality, Data Services, and PowerCenter products.

**Informatica Upgrading from Version 9.6.0**

Contains information about upgrading all Informatica platform products from version 9.6.0 to version 9.6.1. Previously, upgrade was documented in guides specific to the Data Quality, Data Services, and PowerCenter products.

**Informatica Upgrading from Version 9.5.1**

Contains information about upgrading all Informatica platform products from version 9.5.1 to version 9.6.1. Previously, upgrade was documented in guides specific to the Data Quality, Data Services, and PowerCenter products.
Informatica Upgrading from Version 9.5.0

Contains information about upgrading all Informatica platform products from version 9.5.0 to version 9.6.1. Previously, upgrade was documented in guides specific to the Data Quality, Data Services, and PowerCenter products.

Informatica Upgrading from Version 9.1.0

Contains information about upgrading all Informatica platform products from version 9.1.0 to version 9.6.1. Previously, upgrade was documented in guides specific to the Data Quality, Data Services, and PowerCenter products.

Informatica PowerExchange Adapters for Informatica Release Notes

Contains important information about installation, closed enhancements, fixed limitations, and known limitations for PowerExchange adapters for Informatica. Previously, this information was documented in the Informatica Release Notes.

Informatica PowerExchange Adapters for PowerCenter Release Notes

Contains important information about installation, closed enhancements, fixed limitations, and known limitations for PowerExchange adapters for PowerCenter. Previously, this information was documented in the Informatica Release Notes.

Informatica Administrator

This section describes new Informatica Administrator features in version 9.6.1.

Informatica Cloud Administration

You can use the Administrator tool to view Informatica Cloud organizations. You can monitor the status of Secure Agents and view cloud connections used in an organization.

For more information, see the Informatica 9.6.1 Administrator Guide.

Informatica Developer

This section describes new Informatica Developer features in version 9.6.1.

Object Dependencies

In the Developer tool, you can view the object dependencies for an object in the Object Dependencies view to perform an impact analysis on affected objects before you modify or delete the object.

For more information, see the Informatica 9.6.1 Developer Tool Guide.

Informatica Development Platform

This section describes new Informatica Development Platform features in version 9.6.1.

Informatica Connector Toolkit
After you define the run-time components of the adapter, you can use the **Test Read** and **Test Write** wizards to test the read and write capability of the adapter. The test wizards display the test statistics, error messages, and log files. You can debug and fix issues before you deploy the adapter to the Informatica domain.

For more information, see the *Informatica Development Platform 9.6.1 Informatica Connector Toolkit Developer Guide*.

**Informatica Transformations**

This section describes new transformation features in version 9.6.1.

**Address Validator Transformation**

This section describes new features to the Address Validator transformation that you create in the Developer tool.

**Modes**

You can configure the Address Validator transformation to run in the following modes:

**Address Code Lookup Mode**

When you select address code lookup mode, the Data Integration Service reads an identification code and returns the corresponding address elements from the reference data. The identification code can refer to a locality, street, or mailbox. For example, you can enter the choumei aza code for a Japanese address and retrieve the complete address as output.

**Interactive Mode**

When you select interactive mode, address validation reads a partial address and returns all addresses from the reference data that match the input elements. Select interactive mode to add data to an incomplete address. You can enter the partial address on a single input port.

You also can enter a partial address on a single input port when you configure the transformation to run in suggestion list mode.

**Ports**

You can select the following ports for the Address Validator transformation:

**Count**

Output port that indicates the number of addresses in the address reference data sets that match the data in the input address.

**Count Overflow**

Output port that indicates whether the reference data contains addresses that address validation does not return to the transformation.

**Gmina Code PL**

Output port returns the identification code for the municipality or commune to which a Polish address belongs.
Institute of Geography and Statistics Code
Output port that contains a seven-digit identification code for the city or state to which a Brazilian address belongs.

Locality Identifier DE
Input and output ports that contain the identification code for a German locality.

National Address Database Identifier ZA
Input and output port that contains a seven-digit identification code for the street in a South African address.

National Institute of Statistics and Economic Studies Code
Input and output port that identifies the administrative regions to which a French address belongs. The National Institute of Statistics and Economic Studies code is also called the INSEE code.

New Choumei Aza Code JP
Output port that returns a unique delivery point code for a Japanese mailbox.

Official Municipality Key DE
Input and output ports that contain an identification code for a German municipality.

Postal Address Code AT
Output port that contains building-level post code data for an Austrian address.

Postal Address Code RS
Output port that returns a street-level post code for a Serbian address.

Postal Code Extension
Output port that contains a two-digit suffix for the post code of a Swiss address.

Street Identifier DE
Input and output ports that contain a street-level identification code for a German address.

Supplementary status ports
Output ports that indicate if address validation can return supplementary data for an address.

The transformation includes supplementary status ports for Austria, Brazil, France, Germany, Poland, South Africa, and Switzerland.

TERYT Locality Identifier PL
Output port that contains the identification code for the locality to which a Polish address belongs.

TERYT Street Identifier PL
Output port that contains the identification code for the street in a Polish address.

Unique Delivery Point Reference Number GB
Output port that returns a unique delivery point code for a United Kingdom mailbox.

For more information, see the Informatica 9.6.1 Address Validator Port Reference and the Informatica 9.6.1 Developer Transformation Guide.

Properties
You can configure the following advanced properties for the Address Validator transformation:

Alias Locality
The property determines whether address validation replaces a valid location alias with the official location name.
Matching Extended Archive

The property determines whether address validation returns a unique delivery point code for an out-of-date Japanese address.

Data Processor Transformation

This section describes new features to the Data Processor transformation that you create in the Developer tool.

File Input for Streamer

A Data Processor transformation Streamer can use a file as input. Previously, the streamer only used a buffer as input.

For more information, see the Informatica Data Transformation 9.6.1 User Guide.

Generate Data Transformation with AVRO or XML

You can auto-generate a Data Processor transformation with AVRO input and any format output, or Avro output and any format input, with the New Transformation wizard. Use an Avro schema file or sample file to define the AVRO file specification. You can also generate a transformation with both Avro input format and output format. In this case, use separate Avro schema files or sample files to define both the input and the output.

When you add a Data Processor transformation that reads Avro input to a mapping, you also add a complex file reader to pass the Avro input to the transformation. For a mapping with a Data Processor transformation that generates Avro output, you pass the output to a complex file writer.

You can also auto-generate a Data Processor transformation with XML input, output, or both, with the New Transformation wizard. Use an .xsd schema file or a sample file to define the expected XML hierarchy.

For more information, see the Informatica Data Transformation 9.6.1 User Guide.

Generate Schema from Sample File

When you add a sample file to define a hierarchy with the New Transformation wizard or the Schema wizard, the wizard creates an .xsd schema file to define the hierarchy. The wizard creates the schema in the Model repository. You can use the schema with other transformations.

For more information, see the Informatica Data Transformation 9.6.1 User Guide.

Relational Mapping Keys

Keys in a relational mapping can be of type xs:string and xs:integer.

For more information, see the Informatica Data Transformation 9.6.1 User Guide.

Unread XMap Elements

You can select to track XMap input elements that you do not map to output elements. The transformation reports unmapped elements to the Default Handler output port named XMap_Unread_Input_Values.

For more information, see the Informatica Data Transformation 9.6.1 User Guide.

Match Transformation

This section describes new features to the Match transformation that you create in the Developer tool.

You can specify whether the transformation updates a current identity index data store with index data from a mapping data source. Use the Persistence Method option to set the update policy. Set a policy to update the data store with any index data from the data source that the data store does not contain. Alternatively, set a
policy that does not update the data store with index data. By default, the transformation updates the data store.

For more information, see the Informatica 9.6.1 Developer Transformation Guide.

**SQL Transformation**

This section describes new features of the SQL transformation that you create in the Developer tool.

You can use the SQL transformation to invoke stored procedures from a Sybase database.

For more information, see the Informatica 9.6.1 Developer Transformation Guide.

**Installer**

This section describes new Informatica platform installer features in version 9.6.1.

**Informatica Kerberos SPN Format Generator**

You can run Informatica Kerberos SPN Format Generator independent of the Informatica installer. You can start the utility from the command line or start it from the Informatica installer. The Informatica Kerberos SPN Format Generator installs with the Informatica services. After installation you can start the utility from the Informatica directory.

For more information, see the Informatica 9.6.1 Installation and Configuration Guide.

**Service Principal Level**

When you install the Informatica services with Kerberos authentication, you can set the Service Principal Level option to specify whether nodes and services can share service principal names and keytab files. If the domain does not require a high level of security, you can use one SPN and keytab file for the node and all the service processes on the node. If the domain requires a high level of security, create a unique SPN and keytab file for each node and each process on the node.

For more information, see the Informatica 9.6.1 Installation and Configuration Guide.

**Mappings**

This section describes new mapping features in version 9.6.1

**Informatica Mappings**

This section describes new features of mappings that you create in the Developer tool.

**IBM DB2 Partitioning**

The Data Integration Service can use multiple partitions to write to an IBM DB2 target.

For more information, see the Informatica 9.6.1 Big Data Edition User Guide.
This section describes new Metadata Manager features in version 9.6.1.

**Glossary View**

When you view a category or business term in the Glossary view, you can open the category or term in the Analyst tool by clicking the View in Informatica Analyst toolbar icon.

For more information, see the Informatica 9.6.1 Metadata Manager User Guide.

**Resource Properties**

Effective in version 9.6.1, database management, JDBC, and Microstrategy resources have new resource configuration properties.

**Database Management Resources**

The following table describes the new resource configuration property for database management resources:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure JDBC Parameters</td>
<td>Secure JDBC parameters that you want to append to the JDBC connection URL.</td>
</tr>
</tbody>
</table>

**JDBC Resources**

The following table describes the new resource configuration property for JDBC resources:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case sensitivity</td>
<td>Specifies the case sensitivity setting for the metadata source database. By default, the Metadata Manager Agent uses the JDBC driver to determine whether the database is case sensitive.</td>
</tr>
</tbody>
</table>

**Microstrategy Resources**

The following table describes the new resource configuration property for Microstrategy 7.0 - 9.x resources:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Import schema only</td>
<td>Imports the schemas for the selected projects without the reports and documents. By default, Metadata Manager imports the schemas, reports, and documents.</td>
</tr>
</tbody>
</table>

For more information, see the Informatica 9.6.1 Metadata Manager Administrator Guide.

**Resource Versions**

You can create resources of the following versions:

- Microstrategy 9.4.1. Previously, you could create Microstrategy resources up to version 9.3.1.
- Oracle 12c. Previously, you could create Oracle resources up to version 11g Release 2.
For information about creating resources, see the *Informatica 9.6.1 Metadata Manager Administrator Guide*.

**Search**

You can create a custom list of words and phrases to ignore in keyword and advanced searches.

For more information, see the *Informatica 9.6.1 Metadata Manager Administrator Guide*.

**Security**

Metadata Manager contains the following security enhancements:

**Encryption Key Support**

Metadata Manager uses the encryption key for the Informatica domain to encrypt sensitive data, such as passwords, in the Metadata Manager repository.

For more information about the encryption key for the Informatica domain, see the *Informatica 9.6.1 Security Guide*.

**Secure JDBC Parameters**

You can prevent the Administrator tool from displaying secure JDBC parameters that are part of the Metadata Manager repository database URL. You can also prevent Metadata Manager from displaying secure JDBC parameters that are part of the database connection URL for some database management resources.

You can prevent Metadata Manager from displaying secure JDBC parameters for the following database management resources:

- IBM DB2 for LUW
- IBM Informix
- Microsoft SQL Server
- Netezza
- Oracle
- Sybase ASE
- Teradata

For information about specifying secure JDBC parameters in the Metadata Manager repository database URL, see the *Informatica 9.6.1 Application Service Guide*. For information about specifying secure JDBC parameters in the database connection URL for database management resources, see the *Informatica 9.6.1 Metadata Manager Administrator Guide*.

**Custom Metadata Configurator**

To increase security for the PowerCenter repository, the Custom Metadata Configurator prompts you for the PowerCenter repository user name and password when you generate the mappings that extract metadata from custom metadata files.

For more information, see the *Informatica 9.6.1 Metadata Manager Custom Metadata Integration Guide*. 
PowerExchange

This section describes new PowerExchange features in version 9.6.1.

Listener Service

When you configure the domain to use Kerberos authentication, you can configure Informatica clients, the Data Integration Service, and the PowerCenter Integration Service to find a PowerExchange Listener Service in the domain.

To do so, include the optional `service_name` parameter in the NODE statement in the DBMOVER configuration file on the client, Data Integration Service, or PowerCenter Integration Service machine.

For more information, see the *Informatica 9.6.1 Application Service Guide*.

infacmd pwx Commands

The following table describes a new infacmd pwx command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>displayStatsListener</td>
<td>Displays monitoring statistics for a PowerExchange Listener on Windows or z/OS.</td>
</tr>
</tbody>
</table>

PowerExchange Adapters

This section describes new PowerExchange adapter features in version 9.6.1.

Informatica Adapters

This section describes new Informatica adapter features.

**PowerExchange for DataSift**

You can extract historical data from DataSift for Twitter sources.

For more information, see the *Informatica PowerExchange for DataSift 9.6.1 User Guide*.
PowerExchange for Greenplum

- You can use PowerExchange for Greenplum to load large volumes of data into Greenplum tables. You can run mappings developed in the Developer tool. You can run the mappings in native or Hive run-time environments.
- You can also use PowerExchange for Greenplum to load data to a HAWQ database in bulk.

For more information, see the Informatica PowerExchange for Greenplum 9.6.1 User Guide.

PowerExchange for LinkedIn

You can extract information about a group, information about posts of a group, comments about a group post, and comments about specific posts from LinkedIn. You can also extract a list of groups suggested for the user and a list of groups in which the user is a member from LinkedIn.

For more information, see the Informatica PowerExchange for LinkedIn 9.6.1 User Guide.

PowerExchange for HBase

You can use PowerExchange for HBase to read data in parallel from HBase. The Data Integration Service creates multiple Map jobs to read data in parallel.

For more information, see the Informatica PowerExchange for HBase 9.6.1 User Guide.

PowerExchange for Hive

You can create a Hive connection that connects to HiveServer or HiveServer2. Previously, you could create a Hive connection that connects to HiveServer. HiveServer2 supports Kerberos authentication and concurrent connections.

For more information, see the Informatica PowerExchange for Hive 9.6.1 User Guide.

PowerExchange for MongoDB

You can use the Schema Editor to change the schema of MongoDB collections. You can also use virtual tables for MongoDB collections that have nested columns.

For more information, see the Informatica PowerExchange for MongoDB 9.6.1 User Guide.

PowerExchange for Teradata Parallel Transporter API

When you load data to a Teradata table in a Hive run-time environment, you can use the Teradata Connector for Hadoop (TDCH) to increase performance. To use TDCH to load data, add the EnableTdch custom property at the Data Integration Service level and set its value to true.

For more information, see the Informatica PowerExchange for Teradata Parallel Transporter API 9.6.1 User Guide.

PowerCenter Adapters

This section describes new PowerCenter adapter features.

PowerExchange for LDAP

In the session properties, you can specify the path and name of the file that contains multiple filter conditions to query the LDAP entries.

For more information, see the Informatica PowerExchange for LDAP 9.6.1 User Guide for PowerCenter.

PowerExchange for MongoDB

You can use the Schema Editor to change the schema of MongoDB collections. You can also use virtual tables for MongoDB collections that have nested columns.

For more information, see the Informatica PowerExchange for MongoDB 9.6.1 User Guide for PowerCenter.
PowerExchange for Netezza

When you use bulk mode to read data from or write data to Netezza, you can override the table name and schema name in the session properties.

For more information, see the Informatica PowerExchange for Netezza 9.6.1 User Guide for PowerCenter.

PowerExchange for Salesforce

- You can configure a session to use the Salesforce Bulk API to read data in bulk from a Salesforce source.
- You can dissociate a custom child object from a standard parent object.

For more information, see the Informatica PowerExchange for Salesforce 9.6.1.0.1 User Guide for PowerCenter.

PowerExchange for SAP NetWeaver

- When you run a file mode session to read data from SAP through ABAP, you can configure the FileCompressEnable custom property to enable compressed data transfer. When you compress data, you can increase the session performance and decrease the disk storage that the staging file needs.
- The Source_For_BCI relational target in the BCI listener mapping that Informatica ships contains a new column called DataSourceName. You can use this field to partition the data that the Source_For_BCI relational target receives from SAP.
- Informatica ships an activation mapping along with the BCI_Mappings.xml file. You can use the activation mapping to activate multiple DataSources in SAP simultaneously.
- When you use numeric delta pointers to extract business content data, you can extract the changed data alone without doing a full transfer of the entire data.

For more information, see the Informatica PowerExchange for SAP NetWeaver 9.6.1 User Guide for PowerCenter.

Profiles and Scorecards

This section describes new profiles and scorecards features in version 9.6.1.

Column Profile Results

When you run a column profile in the Analyst tool, you can view the following visual charts in the column profile results:

- Pie charts that represent the value frequencies and column patterns for a column.
- A bar chart that represents the percentage of rows with null values, unique values, and non-unique values in a column.

Drill-down Filters

In the Analyst tool, you can right-click a column value in the drill-down results and add the column value as a filter condition.

Value of Data Quality

You can measure the value of data quality using scorecards in the Analyst tool. Define a cost unit for a scorecard metric, assign a variable or fixed cost, and view the cost trend chart along with the score trend chart. You can then monitor the value of data that you selected at the metric and scorecard levels.

For more information, see the Informatica 9.6.1 Profile Guide.
Reference Data

This section describes new reference data features in version 9.6.1.

Probabilistic Models

You can perform the following tasks when you create or edit a probabilistic model in the Developer tool:

- You can assign a color to each label that you add to a probabilistic model.
- You can view the total number of labels that you assign to the data values in a row.
- You can view the total number of data values that the probabilistic model associates with a label.

For more information, see the Informatica 9.6.1 Reference Data Guide.

Rule Specifications

This section describes new rule specifications features in version 9.6.1.

You can perform the following tasks when you work with rule specifications in the Analyst tool:

- You can change the order of the rule statements in a rule set.
- You can test the operations of a single rule set.
- You can save the data that you use to test a rule set or a rule specification, and you can delete the data.
- You can specify a null value in a condition or an action in a rule statement.
- You can use data that you copy from Microsoft Excel to test a rule set or a rule specification.

For more information, see the Informatica 9.6.1 Rule Specification Guide.

Sources and Targets

This section describes new sources and targets features in version 9.6.1.

Informatica Sources and Targets

This section describes new features of sources and targets in Informatica.

HAWQ Connectivity

You can use ODBC to read data from and write data to a HAWQ database.

For more information, see the Informatica 9.6.1 Developer Tool Guide.

Data Types

Microsoft SQL Server UniqueIdentifier Data Type

Informatica Developer supports the Microsoft SQL Server UniqueIdentifier data type. The UniqueIdentifier data type has a precision of 38 and a scale of 0.

For more information, see the Informatica 9.6.1 Developer Tool Guide.
Oracle Float Data Type

Informatica Developer supports the Oracle float data type. The float data type has a precision of 1 to 15 and a scale of 0.

For more information, see the Informatica 9.6.1 Developer Tool Guide.

PowerCenter Sources and Targets

This section describes new features of sources and targets in PowerCenter.

Oracle Sources and Targets

You can import Oracle sources and targets that use basic compression and OLTP compression. You can also manually create source and target definitions for Oracle tables that use basic compression and OLTP compression.

For more information, see the PowerCenter 9.6.1 Designer Guide.

Transformation Language Functions

This section describes new features of transformation language functions in version 9.6.1.

Informatica Functions

This section describes new features of Informatica functions.

ANY Function

You can use the ANY function to return any row in the selected port.

For more information, see the Informatica 9.6.1 Transformation Language Reference.
Changes (9.6.1)

This chapter includes the following topics:

- **Big Data**, 76
- **Domain**, 76
- **Informatica Transformations**, 77
- **Mappings**, 78
- **Metadata Manager**, 78
- **PowerCenter Transformations**, 79
- **PowerExchange Adapters**, 79
- **Profiles and Scorecards**, 81
- **Rule Specifications**, 81
- **Security**, 81

**Big Data**

This section describes changes to Big Data in version 9.6.1.

Effective in version 9.6.1, you can choose not to select a Hive version for the validation environment when you configure a mapping to run in the Hive environment.

The Data Integration Service evaluates a valid Hive version for the Hadoop cluster and validates the mapping.

Previously, you had to select a Hive version for the validation environment.

**Domain**

This section describes changes to the Informatica domain in version 9.6.1.

Effective in version 9.6.1, Informatica dropped support for SUSE Linux Enterprise Server 10. If any node in the domain is on SUSE Linux Enterprise Server 10, you must migrate the node to a supported operating system before upgrading the node to 9.6.1. For more information, see the Informatica upgrade guides.
Informatica Transformations

This section describes changes to Informatica transformations in version 9.6.1.

Address Validator Transformation

This section describes changes to the Address Validator transformation that you create in the Developer tool.

Effective in version 9.6.1, the Address Validator transformation uses version 5.5.0 of the Address Doctor software engine.

Previously, the transformation used version 5.4.1 of the Address Doctor software engine.

Effective in version 9.6.1, the transformation adds a two-character country code to the following port names:

- Choumei Aza Code JP.
  Previously, the port name was Choumei Aza Code.
- New Choumei Aza Code JP.
  Previously, the port name was New Choumei Aza Code.
- Postal Address Code RS.
  Previously, the port name was Postal Address Code.
- Unique Delivery Point Reference Number GB.
  Previously, the port name was Unique Delivery Point Reference Number.

Effective in version 9.6.1, you can disable the Alias Street property on the transformation. The property determines whether address validation replaces a street alias with the official street name.

Previously, you configured the property to replace all street aliases or to replace any term that is not a valid street alias.

Data Masking Transformation

This section describes changes to the Data Masking transformation that you create in the Developer tool.

Key Masking Technique

Effective in version 9.6.1, the key masking algorithm is changed. A mapping created in an earlier version that uses the key masking technique might create different masked output after upgrade to 9.6.1.

Previously, a mapping that used the key masking technique would create the same masked output when run after upgrade.

Data Processor Transformation

This section describes changes to the Data Processor transformation that you create in the Developer tool.

Effective in version 9.6.1, you can export a Data Processor transformation to PowerCenter with pass-through ports or a relational to hierarchical transformation. Previously, you could only export Data Processor transformations to PowerCenter if they did not have relational input or output.
Mappings

This section describes changes to mappings in version 9.6.1.

Informatica Mappings

This section describes changes to mappings that you create in the Developer tool.

Partitioned Mappings in the Native Environment

Effective in version 9.6.1, partitioned mappings in the native environment include the following changes:

IBM DB2 for LUW Relational Targets

The Data Integration Service can create partitions for a mapping when the mapping contains a DB2 for LUW target that has more database partitions than the parallelism value. If the DB2 for LUW target has more database partitions than the parallelism value, the Data Integration Service uses all of the writer threads defined by the parallelism value. The Data Integration Service distributes multiple database partitions to some of the writer threads.

Previously, if the DB2 for LUW target had more database partitions than the parallelism value, the Data Integration Service did not create partitions for the entire mapping. The Data Integration Service used one thread to process each mapping pipeline stage.

Mapping Maximum Parallelism

When the maximum parallelism for a mapping is Auto, the actual parallelism value equals the minimum of the following values:

- Maximum parallelism value set for the Data Integration Service process.
- Maximum number of partitions for all flat file, IBM DB2 for LUW, and Oracle sources in the mapping. The Data Integration Service determines the number of partitions based on the source type. The number of partitions for a flat file source equals the maximum parallelism value set for the Data Integration Service process. The number of partitions for a DB2 for LUW or Oracle relational source equals the number of database partitions in the relational source.

Previously, when the maximum parallelism for a mapping was Auto, the actual parallelism value equaled the maximum parallelism value set for the Data Integration Service process.

Metadata Manager

This section describes changes to Metadata Manager in version 9.6.1.

Resource Configuration Import and Export

Effective in version 9.6.1, there are behavior changes related to resource configuration import and export.

Password Import and Export

Effective in version 9.6.1, when you export a resource configuration through Metadata Manager or mmcmd, you can include or exclude the encrypted resource password in the resource configuration file. If you exclude the password, and the resource uses a password, you must enter it when you import the resource configuration.
Previously, Metadata Manager always included the encrypted resource password in the resource configuration file.

**Privilege Changes**

Effective in version 9.6.1, you can export a resource configuration if you have the View Resource privilege. You can import a resource configuration if you have the Load Resource privilege.

Previously, to export or import a resource configuration, you needed the Load Resource privilege.

**Resource Property Changes**

Effective in version 9.6.1, Microstrategy 7.0 - 9.x resources have resource property changes.

The following table describes the deleted resource configuration properties for Microstrategy 7.0 - 9.x resources:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data model reverse engineer joins</td>
<td>Optionally, transforms SQL joins of a model into foreign key relationships.</td>
</tr>
</tbody>
</table>
| Dimensional model reverse engineering         | Optionally, reverse engineers the following dimensional objects into relational objects when there is a direct match between the dimensional object and the relational object:  
- The dimension name, description, and role to the underlying table  
- The attribute or measure name, description, and datatype to the underlying column |

**PowerCenter Transformations**

This section describes changes to PowerCenter transformations in version 9.6.1.

**Data Masking Transformation**

This section describes changes to the Data Masking transformation that you create in the PowerCenter Client.

**Key Masking Technique**

Effective in version 9.6.1, the key masking algorithm is changed. A mapping created in an earlier version that uses the key masking technique might create different masked output after upgrade to 9.6.1.

Previously, a mapping that used the key masking technique would create the same masked output when run after upgrade.

**PowerExchange Adapters**

This section describes changes to PowerExchange adapters in version 9.6.1.

**PowerExchange Adapters for PowerCenter**

This section describes changes to PowerCenter adapters in version 9.6.1.
**PowerExchange for Salesforce**

Effective in version 9.6.1.0.1, PowerExchange for Salesforce includes the following changes:

**End of Life for Salesforce API Versions**

PowerExchange for Salesforce does not support the following Salesforce API versions:

- 7.0
- 8.0
- 16.0

Previously, PowerExchange for Salesforce supported these Salesforce API versions.

**Error Logging**

The PowerCenter Integration Service writes error messages to the error log for the session.

Previously, the PowerCenter Integration Service wrote error messages to both the error log and the session log.

**Java Requirements for Bulk API Target Sessions**

For Bulk API target sessions, configure at least 10 to 50 MB of space for the Java temporary directory on the PowerCenter Integration Service machine.

Previously, the Bulk API did not use the Java temporary directory when writing to Salesforce targets.

**Related Object Fields No Longer Available for Import**

You can no longer import fields from objects related to the following Salesforce objects:

- ActivityHistory
- EmailStatus
- Name
- OpenActivity
- OwnedContentDocument

Previously, you could import fields from objects related to these objects.

**Salesforce API Version**

PowerExchange for Salesforce uses version 31.0 of the Salesforce API.

Use the Salesforce service URL to configure connections to Salesforce. To use the latest version of the Salesforce API, create an application connection or update the service URL in an existing application connection.

Use the following version of the Salesforce service URL:

https://www.salesforce.com/services/Soap/u/31.0

If the new version of a Salesforce object has a different structure than the previous version of the object, re-import the Salesforce object. After you re-import the object, analyze the associated mapping to determine if you need to update the mapping.

Previously, PowerExchange for Salesforce used version 27.0 of the Salesforce API.

**SOAP Request Logging**

For sessions that read from Salesforce with the standard API, the PowerCenter Integration Service no longer includes SOAP requests in the session log.
Previously, you could view SOAP requests in session logs when you configured the session for verbose tracing.

Profiles and Scorecards

This section describes changes to profiles and scorecards in version 9.6.1.

Effective in version 9.6.1, the total count of unique values in column profile results does not include the null column values.

Previously, null column values were included in the total count of unique values.

Rule Specifications

This section describes changes to rule specifications in version 9.6.1.

Effective in version 9.6.1, you can use the rule statement options to specify a data value or a null value for a condition or action.

Previously, you opened a configuration dialog box to in the rule statement to specify a data value or a null value.

Effective in version 9.6.1, you do not need the Informatica domain access permission to perform the following operations:

- Test a rule set or a rule specification.
- Compile a rule specification.

Previously, you needed the Informatica domain access permission to test a rule set or a rule specification and to compile a rule specification.

Security

This section describes changes to security in version 9.6.1.

Encryption Key Directory

Effective in version 9.6.1, the directory where the domain encryption key is stored has changed. The new encryption key directory is `<INFA_HOME>/isp/config/keys`.

Previously, the encryption key directory was `<INFA_HOME>/isp/config/secret`.

Service Principal Requirements for Kerberos Authentication

Effective in 9.6.1, when you configure the domain to use Kerberos authentication, you can specify whether nodes and services can share service principal names (SPN) and keytab files.

You can select one of the following service principal levels:
Node Level

If the domain is used for testing or development and does not require a high level of security, you can set the service principal at the node level. You can use one SPN and keytab file for the node and all the service processes on the node. When you create additional services on a node, you do not need to create additional keytab files.

Process Level

If the domain is used for production and requires a high level of security, you can set the service principal at the process level. Create a unique SPN and keytab file for each node and each process on the node. The number of SPNs and keytab files required for each node depends on the number of service processes that run on the node.

Previously, the Informatica domain required a unique SPN and keytab file for each node and each process on the node.
This part contains the following chapters:

- New Features and Enhancements (9.6.0), 84
- Changes to Informatica Data Explorer (9.6.0), 111
- Changes to Informatica Data Quality (9.6.0), 113
- Changes to Informatica Data Services (9.6.0), 117
- Changes to Informatica Data Transformation (9.6.0), 120
- Changes to Informatica Domain (9.6.0), 121
- Changes to PowerCenter (9.6.0), 124
- Changes to PowerCenter Big Data Edition (9.6.0), 126
- Changes to Metadata Manager (9.6.0), 127
- Changes to Adapters for PowerCenter (9.6.0), 131
- Changes to Adapters for Informatica (9.6.0), 135
Chapter 6

New Features and Enhancements (9.6.0)

This chapter includes the following topic:

- Version 9.6.0, 84

Version 9.6.0

This section describes new features and enhancements in version 9.6.0.

Informatica Analyst

This section describes new features and enhancements to Informatica Analyst.

Informatica Analyst Interface

The Analyst tool interface has new headers and workspaces. A workspace is a web page where you perform tasks based on licensed functionality that you access through tabs in the Analyst tool.

The Analyst tool has the following workspaces:

- Start. Access other workspaces that you have the license to access through access panels on this workspace. If you have the license to perform exception management, your tasks appear in this workspace.
- Glossary. Define and describe business concepts that are important to your organization.
- Discovery. Analyze the quality of data and metadata in source systems.
- Design. Design business logic that helps analysts and developers collaborate.
- Scorecards. Open, edit, and run scorecards that you created from profile results.
- Library. Search for assets in the Model repository. You can also view metadata in the Library workspace.
- Exceptions. View and manage exception record data for a task. View duplicate record clusters or exception records based on the type of task you are working on. View an audit trail of the changes you make to records in a task.
- Connections. Create and manage connections to import relational data objects, preview data, run a profile, and run mapping specifications.
- Data Domains. Create, manage, and remove data domains and data domain groups.
Informatica Analyst Tasks

The Analyst tool is available to multiple Informatica products and is used by business users to collaborate on projects within an organization.

The tasks that you can perform in the Analyst tool depend on the license for Informatica products and the privileges to perform tasks. Based on the license that your organization has, you can use the Analyst tool to perform the following tasks:

- Define business glossaries, terms, and policies to maintain standardized definitions of data assets in the organization.
- Perform data discovery to find the content, quality, and structure of data sources, and monitor data quality trends.
- Define data integration logic and collaborate on projects to accelerate project delivery.
- Define and manage rules to verify data conformance to business policies.
- Review and resolve data quality issues to find and fix data quality issues in the organization.

Flat File Delimiters

When you import a delimited flat file, you can input the following non-printing multibyte characters as delimiters: /01, /01, and /001.

For more information, see the Informatica 9.6.0 Analyst Tool Guide.

Informatica Installer

This section describes new features and enhancements to the Informatica platform installer.

Accessibility and Section 508 Compliance

The Informatica platform installer conforms to Section 508 of the Rehabilitation Act and is accessible to people with disabilities.

Authentication

You can configure the Informatica domain to use Kerberos authentication. When you install the Informatica services, you can enable Kerberos authentication for the domain. A page titled Domain - Network Authentication Protocol appears in the Informatica services installer. To install the domain with Kerberos authentication, select the option to enable Kerberos authentication and enter the required parameters.

Encryption Key

Informatica encrypts sensitive data such as passwords when it stores data in the domain. Informatica uses a keyword to generate a unique encryption key with which to encrypt sensitive data stored in the domain.

A page titled Domain - Encryption Key appears in the Informatica services installer. If you create a node and a domain during installation, you must specify a keyword for Informatica to use to generate a unique encryption key for the node and domain. If you create a node and join a domain, Informatica uses the same encryption key for the new node.
Secure Communication

You can provide an SSL certificate or use the default Informatica SSL certificate to secure communication between services in the domain. To use your SSL certificate, specify a keystore and truststore file and password during installation.

For more information, see the Informatica 9.6.0 installation and upgrade guides.

Informatica Data Explorer

This section describes new features and enhancements to Informatica Data Explorer.

Column Profile Results

The column profile results include the sum of all values in columns with a numeric datatype.

For more information, see the Informatica Data Explorer 9.6.0 Data Discovery Guide.

Use the TOTAL_SUM column in the following relational database views to access the profiling warehouse for information about the sum of values in numeric columns:

- IDPV_COL_PROFILE_RESULTS
- IDPV_PROFILE_RESULTS_TRENDING

For more information, see the Informatica 9.6.0 Database View Reference.

Curation

You can curate inferred profile results in both Analyst and Developer tools. Curation is the process of validating and managing discovered metadata of a data source so that the metadata is fit for use and reporting. You can approve, reject, and restore datatypes. You can also approve, reject, and restore data domains, primary keys, and foreign keys. You can hide or show rows containing rejected datatypes or data domains. You can exclude approved datatypes, data domains, and primary keys from column profile inference and data domain discovery inference when you run the profile again.

For more information, see the Informatica Data Explorer 9.6.0 Data Discovery Guide.

Use the following relational database views to access profiling warehouse for information about curated profile results:

- IDPV_CURATED_DATATYPES
- IDPV_CURATED_DATADOOMAINS
- IDPV_CURATED_PRIMARYKEYS
- IDPV_CURATED_FOREIGNKEYS

For more information, see the Informatica 9.6.0 Database View Reference.

Data Domain Discovery

You can run data domain discovery on all rows of the source data to verify the inference results for multiple columns at the same time.

For more information, see the Informatica Data Explorer 9.6.0 Data Discovery Guide.

Datatype Inference

You can infer multiple datatypes that match the inference criteria when you run a column profile. You can drill down based on a column datatype in column profile results.

For more information, see the Informatica Data Explorer 9.6.0 Data Discovery Guide.
Use the following relational database views to access profiling warehouse for information on inferred datatypes:

- IDPV_DATATYPES_INF_RESULTS
- IDPV_DATATYPE_FREQ_TRENDING

For more information, see the Informatica 9.6.0 Database View Reference.

**Discovery Search**

Discovery search finds assets and identifies relationships to other assets in the databases and schemas of the enterprise. You can use discovery search to find where the data and metadata exists in the enterprise. You can find physical data sources and data object relationships or you can identify the lack of documented data object relationships. You can view the direct matches, indirect matches, and related assets from the discovery search results.

If you perform a global search, the Analyst tool performs a text-based search for data objects, datatypes, and folders. If you perform discovery search, in addition to the text matches, search results include objects with relationships to the objects that match the search criteria.

For more information, see the Informatica Data Explorer 9.6.0 Data Discovery Guide.

**Enterprise Discovery**

You can perform enterprise discovery in Informatica Analyst. The enterprise discovery includes column profile and data domain discovery.

For more information, see the Informatica Data Explorer 9.6.0 Data Discovery Guide.

**Profile Results Verification**

You can verify multiple inferred primary key and functional dependency results for a single data object in the Developer tool. When you verify the profile results, the Developer tool runs the profile on all rows of the source data. You can also verify multiple data object relationships and data domains in the enterprise discovery results.

For more information, see the Informatica Data Explorer 9.6.0 Data Discovery Guide.

**Scorecards**

You can export scorecard results to a Microsoft Excel file. The exported file contains scorecard summary, trend charts, rows that are not valid, and scorecard properties.

For more information, see the Informatica Data Explorer 9.6.0 Data Discovery Guide.

**Support for bigint Datatype**

You can run a profile on a data source with a large number of rows, such as many billions of rows. The profiling warehouse uses the bigint column to handle large volumes of source data.

For more information, see the Informatica Data Explorer 9.6.0 Data Discovery Guide.

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**Informatica Data Quality**

This section describes new features and enhancements to Informatica Data Quality.

**Accelerators**

The set of Informatica accelerators has the following additions:

- Informatica Data Quality Accelerator for Spain. Contains rules, reference tables, demonstration mappings, and demonstration data objects that solve common data quality issues in Spanish data.
Informatica Data Quality Accelerator for Data Discovery. Contains rules, reference tables, demonstration mappings, and demonstration data objects that you can use to perform data discovery operations.

For more information, see the *Informatica Data Quality 9.6.0 Accelerator Guide*.

### Address Validation

You can configure the following advanced properties on the Address Validator transformation:

**Dual Address Priority**

Determines the type of address to validate. Set the property when input address records contain more than one type of valid address data.

**Flexible Range Expansion**

Imposes a practical limit on the number of suggested addresses that the transformation returns when there are multiple valid addresses on a street. Set the property when you set the Ranges to Expand property.

**Geocode Data Type**

Determines how the transformation calculates geocode data for an address. Geocodes are latitude and longitude coordinates. Set the property to return the following types of geocode data:

- The latitude and longitude coordinates of the entrance to a building or a plot of land.
- The latitude and longitude coordinates of the geographic center of a plot of land.

The transformation can also estimate the latitude and longitude coordinates for an address. Estimated geocodes are called interpolated geocodes.

**Global Max Field Length**

Determines the maximum number of characters on any line in the address. Set the property to verify that the line length in an address does not exceed the requirements of the local mail carrier.

**Ranges To Expand**

Determines how the transformation returns suggested addresses for a street address that does not specify a house number. Set the property to increase or decrease the range of suggested addresses for the street.

**Standardize Invalid Addresses**

Determines if the transformation standardizes data values in an undeliverable address. Set the property to simplify the terminology in the address record so that downstream data processes can run more efficiently.

You can configure the following address validation process property in the Administrator tool:

**SendRight Report Location**

The location to which address validation writes a SendRight report and any log file that relates to the creation of the report. Generate a SendRight report to verify that a set of New Zealand address records meets the certification standards of New Zealand Post.

**Note:** You configure the Address Validator transformation to create a SendRight report file.

For more information, see the *Informatica 9.6.0 Developer Transformation Guide*.

### Automatic Workflow Recovery

You can configure automatic recovery of aborted workflow instances due to an unexpected shutdown of the Data Integration Service process. When you configure automatic recovery, the Data Integration Service process recovers aborted workflow instances due to a service process shutdown when the service process restarts.
For more information, see the Informatica 9.6.0 Developer Workflow Guide.

**Business Glossary**

Business Glossary comprises online glossaries of business terms and policies that define important concepts within an organization. Data stewards create and publish terms that include information such as descriptions, relationships to other terms, and associated categories. Glossaries are stored in a central location for easy lookup by end-users.

Business Glossary is made up of glossaries, business terms, policies, and categories. A glossary is the high-level container that stores other glossary content. A business term defines relevant concepts within the organization, and a policy defines the business purpose that governs practises related to the term. Business terms and policies can be associated with categories, which are descriptive classifications. You can access Business Glossary through Informatica Analyst (the Analyst tool).

For more information, see the Informatica 9.6.0 Business Glossary Guide.

**Column Profile Results**

The column profile results include the sum of all values in columns with a numeric datatype.

For more information, see the Informatica Data Explorer 9.6.0 Data Discovery Guide.

Use the TOTAL_SUM column in the following relational database views to access the profiling warehouse for information about the sum of values in numeric columns:

- IDPV_COL_PROFILE_RESULTS
- IDPVPROFILE_RESULTS_TRENDING

For more information, see the Informatica 9.6.0 Database View Reference.

**Curation**

You can curate inferred profile results in both Analyst and Developer tools. Curation is the process of validating and managing discovered metadata of a data source so that the metadata is fit for use and reporting. You can approve, reject, and restore datatypes. You can also approve, reject, and restore data domains, primary keys, and foreign keys. You can hide or show rows containing rejected datatypes or data domains. You can exclude approved datatypes, data domains, and primary keys from column profile inference and data domain discovery inference when you run the profile again.

For more information, see the Informatica Data Explorer 9.6.0 Data Discovery Guide.

Use the following relational database views to access profiling warehouse for information about curated profile results:

- IDPV_CURIATED_DATATYPES
- IDPV_CURIATED_DATADOOMAINS
- IDPV_CURIATED_PRIMARYKEYS
- IDPV_CURIATED_FOREIGNKEYS

For more information, see the Informatica 9.6.0 Database View Reference.

**Datatype Inference**

You can infer multiple datatypes that match the inference criteria when you run a column profile. You can drill down based on a column datatype in column profile results.

For more information, see the Informatica Data Explorer 9.6.0 Data Discovery Guide.
Use the following relational database views to access profiling warehouse for information on inferred datatypes:

- IDPV_DATATYPES_INF_RESULTS
- IDPV_DATATYPE_FREQ_TRENDING

For more information, see the *Informatica 9.6.0 Database View Reference*.

**Identity Index Data Persistence**

You can configure a Match transformation to write the identity index data for a data source to database tables. You can configure a Match transformation to compare a data source to the identity index data in the database tables. The stored index data for one of the two data sources means that the identity match mappings take less time to run.

When you configure a Match transformation to read index tables, you control the types of record that the transformation analyzes and the types of output that the transformation generates. You can configure the transformation to analyze all the records in the data sources or a subset of the records. You can configure the transformation to write all records as output or a subset of the records.

For more information, see the *Informatica 9.6.0 Developer Transformation Guide*.

**Java Transformation**

In a Java transformation, you can configure an input port as a partition key, a sort key, and assign a sort direction. The partition key and sort key are valid when you process the transformation in a mapping that runs in a Hive environment.

For more information, see the *Informatica 9.6.0 Developer Transformation Guide*.

**Lookup Transformation**

If you cache the lookup source for a Lookup transformation, you can use a dynamic cache to update the lookup cache based on changes to the target. The Data Integration Service updates the cache before it passes each row to the target.

For more information, see the *Informatica 9.6.0 Developer Transformation Guide*.

**Normalizer Transformation**

The Normalizer transformation is an active transformation that transforms one source row into multiple output rows. When a Normalizer transformation receives a row that contains repeated fields, it generates an output row for each instance of the repeated data.

Use the Normalizer transformation when you want to organize repeated data from a relational or flat file source before you load the data to a target.

For more information, see the *Informatica 9.6.0 Developer Transformation Guide*.

**Performance**

In the Developer tool you can enable a mapping to perform the following optimizations:

- Push a Union transformation to a relational data object.
- Push Filter, Expression, Union, Sorter, and Aggregator transformations to a Hive relational object.

For more information, see the *Informatica 9.6.0 Mapping Guide*.

**Profile Results Verification**

You can verify multiple inferred primary key and functional dependency results for a single data object in the Developer tool. When you verify the profile results, the Developer tool runs the profile on all rows of the source data. You can also verify multiple data object relationships and data domains in the enterprise discovery results.
For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

**Pushdown Optimization**

The Data Integration Service can push expression, aggregator, operator, union, sorter, and filter functions to Greenplum sources when the connection type is ODBC.

For more information, see the *Informatica 9.6.0 Mapping Guide*.

**Rule Builder**

Rule Builder is an Informatica Analyst feature that converts business rule requirements to transformation logic. You save the business rule requirements in a rule specification. When you compile the rule specification, the Analyst tool creates transformations that can analyze the business data according to the requirements that you defined. The Analyst tool saves the transformations to one or more mapplets in the Model repository.

A rule specification contains one or more IF-THEN statements. The IF-THEN statements use logical operators to determine if the input data satisfies the conditions that you specify. You can use AND operators to link IF statements and verify that a data value satisfies multiple conditions concurrently. You can define statements that compare data from different inputs and test the inputs under different mathematical conditions. You can also link statements so that the output from one statement becomes the input to another.

Rule Builder represents a link between business users and the Informatica development environment. Business users can log in to the Analyst tool to create mapplets. Developer tool users add the mapplets to mappings and verify that the business data conforms to the business rules.

For more information, see the *Informatica 9.6.0 Rule Builder Guide*.

**Scorecards**

You can export scorecard results to a Microsoft Excel file. The exported file contains scorecard summary, trend charts, rows that are not valid, and scorecard properties.

For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

**Sequence Generator Transformation**

Effective in 9.6.0, you can use the Sequence Generator transformation to add a sequence of values to your mappings.

For more information, see the *Informatica 9.6.0 Developer Transformation Guide*.

**Informatica Data Services**

This section describes new features and enhancements to Informatica Data Services.

**Column Profile Results**

The column profile results include the sum of all values in columns with a numeric datatype.

For more information, see the *Informatica Data Explorer 9.6.0 Data Discovery Guide*.

Use the TOTAL_SUM column in the following relational database views to access the profiling warehouse for information about the sum of values in numeric columns:

- IDPV_COL_PROFILE_RESULTS
- IDPV_PROFILE_RESULTS_TRENDING

For more information, see the *Informatica 9.6.0 Database View Reference*.
Curation

You can curate inferred profile results in both Analyst and Developer tools. Curation is the process of validating and managing discovered metadata of a data source so that the metadata is fit for use and reporting. You can approve, reject, and restore datatypes. You can also approve, reject, and restore data domains, primary keys, and foreign keys. You can hide or show rows containing rejected datatypes or data domains. You can exclude approved datatypes, data domains, and primary keys from column profile inference and data domain discovery inference when you run the profile again.

For more information, see the Informatica Data Explorer 9.6.0 Data Discovery Guide.

Use the following relational database views to access profiling warehouse for information about curated profile results:
- IDPV_CURATED_DATATYPES
- IDPV_CURATED_DATADOMAINS
- IDPV_CURATED_PRIMARYKEYS
- IDPV_CURATED_FOREIGNKEYS

For more information, see the Informatica 9.6.0 Database View Reference.

Datatype Inference

You can infer multiple datatypes that match the inference criteria when you run a column profile. You can drill down based on a column datatype in column profile results.

For more information, see the Informatica Data Explorer 9.6.0 Data Discovery Guide.

Use the following relational database views to access profiling warehouse for information on inferred datatypes:
- IDPV_DATATYPES_INF_RESULTS
- IDPV_DATATYPE_FREQ_TRENDING

For more information, see the Informatica 9.6.0 Database View Reference.

Data Masking Transformation

The Data Masking transformation has the following new features in this release:
- The Data Masking transformation is supported on Hadoop clusters. You can run the transformation in a Hive environment.
- Tokenization is a masking technique in which you can provide JAR files with your own algorithm or logic to mask string data.
- You can use the Phone masking technique to mask fields with numeric integer and numeric bigint datatypes.

For more information, see the Informatica 9.6.0 Developer Transformation Guide.

Java Transformation

In a Java transformation, you can configure an input port as a partition key, a sort key, and assign a sort direction. The Partition key and Sort key are valid when you process the transformation in a mapping that runs in a Hive environment.

For more information, see the Informatica 9.6.0 Developer Transformation Guide.
Normalizer Transformation

The Normalizer transformation is an active transformation that transforms one source row into multiple output rows. When a Normalizer transformation receives a row that contains repeated fields, it generates an output row for each instance of the repeated data.

Use the Normalizer transformation when you want to organize repeated data from a relational or flat file source before you load the data to a target.

For more information, see the Informatica 9.6.0 Developer Transformation Guide.

Performance

In the Developer tool you can enable a mapping to perform the following optimizations:

- Push a custom SQL query to a relational data object.
- Push operations such as Union, Union All, Intersect, Intersect All, Minus, Minus All, and Distinct to a relational data object.
- Perform early selection and push queries that contain the SQL keyword LIMIT to a relational data object.
- Push a Union transformation to a relational data object.
- Push Filter, Expression, Union, Sorter, and Aggregator transformations to a Hive relational object.


Profile Results Verification

You can verify multiple inferred primary key and functional dependency results for a single data object in the Developer tool. When you verify the profile results, the Developer tool runs the profile on all rows of the source data. You can also verify multiple data object relationships and data domains in the enterprise discovery results.

For more information, see the Informatica Data Explorer 9.6.0 Data Discovery Guide.

Pushdown Optimization for Greenplum

The Data Integration Service can push expression, aggregator, operator, union, sorter, and filter functions to Greenplum sources when the connection type is ODBC.

For more information, see the Informatica 9.6.0 Mapping Guide.

Pushdown Optimization for SAP HANA

The Data Integration Service can push transformation logic to SAP HANA sources when the connection type is ODBC.

For more information, see the Informatica 9.6.0 Mapping Guide.

Pushdown Optimization for Teradata

The Data Integration Service can push transformation logic to Teradata sources when the connection type is ODBC.

For more information, see the Informatica 9.6.0 Mapping Guide.

REST Web Service Consumer Transformation

The REST Web Service Consumer transformation consumes REST web services in a mapping. The transformation can use GET, PUT, POST, and DELETE HTTP operations.

You can create a REST Web Service Consumer transformation from a Schema object or add elements to an empty transformation.
For more information, see the Informatica 9.6.0 Developer Transformation Guide.

Scorecards
You can export scorecard results to a Microsoft Excel file. The exported file contains scorecard summary, trend charts, rows that are not valid, and scorecard properties.

For more information, see the Informatica Data Explorer 9.6.0 Data Discovery Guide.

Sequence Generator Transformation
You can now use the Sequence Generator transformation to add a sequence of values to your mappings.

For more information, see the Informatica 9.6.0 Developer Transformation Guide.

Stored Procedures
You can use the SQL transformation to invoke stored procedures from a relational database. You can create the SQL transformation in the Developer tool by importing a stored procedure. The Developer tool adds the ports and the stored procedure call. You can manually add more stored procedure calls in the SQL transformation. Return zero rows, one row, or result sets from the stored procedure.

For more information, see the Informatica 9.6.0 Developer Transformation Guide.

Tableau
You can query a deployed SQL data service with Tableau through the Informatica Data Services ODBC driver.

For more information, see the Informatica 9.6.0 Data Services Guide.

Web Service Consumer Transformation
The Web Service Consumer transformation has the following new features in this release:
• The external web service provider can authenticate the Integration Service using NTLMv2.
• In a Web Service Consumer transformation, you can use WSDL with one-way message pattern.

For more information, see the Informatica 9.6.0 Developer Transformation Guide.

Informatica Data Transformation
This section describes new features and enhancements to Informatica Data Transformation.

Data Processor Transformation Wizard
You can use a wizard to create a Data Processor transformation in the Developer with COBOL, ASN.1, relational or JSON input or output.

For more information about the wizard, see the Informatica 9.6.0 Data Transformation User Guide.

Relational Input
A Data Processor transformation can transform relational input into hierarchical output.

For more information about relational input, see the Informatica 9.6.0 Data Transformation User Guide.

XMap with JSON
You create an XMap that reads or writes directly to JSON.

For more information about XMap or JSON, see the Informatica 9.6.0 Data Transformation User Guide.

XMap with Transformers
In an XMap mapping statement, you can include any user-defined transformer with the dp:transform function. Use the XPath Editor to add the dp:transform function to the input, output, or condition fields.
For more information about XPath and the XPath editor, see the Informatica 9.6.0 Data Transformation User Guide.

Informatica Developer

This section describes new features and enhancements to Informatica Developer.

Alerts

In the Developer tool, you can view connection status alerts in the Alerts view.

For more information, see the Informatica 9.6.0 Developer Tool Guide.

Functions

In the Developer tool, you can use the following functions in the transformation language:

- UUID4(). Returns a randomly generated 16-byte binary value.
- UUID_UNPARSE(binary). Takes a 16-byte binary argument and returns a 36-character string.

For more information, see the Informatica 9.6.0 Developer Transformation Language Reference.

JDBC Connectivity

You can use the Data Integration Service to read from relational database sources and write to relational database targets through JDBC. JDBC drivers are installed with the Informatica services and the Informatica clients. You can also download the JDBC driver that is JDBC 3.0 compliant from third party vendor websites. You can use the JDBC driver to import database objects, such as views and tables, preview data for a transformation, and run mappings.

For more information, see the Informatica 9.6.0 Developer Tool Guide.

Keyboard Accessibility

In the Developer tool, you can use keyboard shortcuts to work with objects and ports in the editor. You can also use keyboard shortcuts to navigate the Transformation palette and the workbench.

For more information, see the Informatica 9.6.0 Developer Tool Guide.

Model Repository Service Refresh

In the Developer tool, you can refresh the Model Repository Service to see new and updated objects in the Model repository.

For more information, see the Informatica 9.6.0 Developer Tool Guide.

Passphrases

In the Developer tool, you can enter a passphrase instead of a password for following connection types:

- Adabas
- DB2 for i5/OS
- DB2 for z/OS
- IMS
- Sequential
- VSAM

A valid passphrase for accessing databases and data sets on z/OS can be up to 128 characters in length. A valid passphrase for accessing i5/OS can be up to 31 characters in length. Passphrases can contain the following characters:

- Uppercase and lowercase letters
• The numbers 0 to 9
• Spaces
• The following special characters:
  ' - ; # \ , / $ & * ( ) + ( ) : @ ! < > ?

**Note:** The first character is an apostrophe.

For more information, see the *Informatica 9.6.0 Developer Tool Guide*.

**Informatica Development Platform**

This section describes new features and enhancements to Informatica Development Platform.

**Design API**

Version 9.6.0 includes the following enhancements for the Design API:

• You can use the Design API to fetch an XML source or XML target from the PowerCenter repository.
• You can use Design API to connect to a hierarchical VSAM data source or target through PowerExchange.
• You can use the Design API to perform repository functions in a domain that uses Kerberos authentication. You can enable Kerberos authentication through the pcconfig.properties file or when you create a Repository object.

For more information, see the *Informatica Development Platform 9.6.0 Developer Guide*.

**Informatica Connector Toolkit**

You can use the Informatica Connector Toolkit to build an adapter to provide connectivity between a data source and the Informatica platform. The Informatica Connector Toolkit consists of libraries, plug-ins, and sample codes to develop an adapter in an Eclipse environment.

For more information, see the *Informatica Development Platform 9.6.0 Informatica Connector Toolkit Developer Guide*.

**Informatica Domain**

This section describes new features and enhancements to the Informatica domain.

**Analyst Service**

Version 9.6.0 includes the following enhancements to the Analyst Service:

• You can select a Data Integration Service configured to run Human tasks. If the Data Integration Service associated with the Analyst Service is not configured to run Human tasks, choose a different Data Integration Service.
• You can select a Search Service to enable searches in the Analyst tool.
• You can set the location of the export file directory to export a business glossary.

For more information, see the *Informatica 9.6.0 Application Service Guide*.

**Content Management Service**

You can set the location of the SendRight report file on the Content Management Service. Generate a SendRight report when you run an address validation mapping in certified mode on New Zealand address records. The report verifies that the address records meet the certification standards of New Zealand Post.

For more information, see the *Informatica 9.6.0 Application Service Guide*.
The Content Management Service manages the compilation of rule specifications into mapplets. When you compile a rule specification in the Analyst tool, the Analyst Service selects a Content Management Service to generate the mapplet. The Analyst tool uses the Model Repository Service configuration to select the Content Management Service.

For more information, see the Informatica 9.6.1 Application Service Guide.

High Availability

Version 9.6.0 includes the following enhancements to high availability for services:

- When the Model Repository Service becomes unavailable, the Service Manager can restart the service on the same node or a backup node. You can configure the Model Repository Service to run on one or more backup nodes.
- When the Data Integration Service becomes unavailable, the Service Manager can restart the service on the same node or a backup node. You can configure the Data Integration Service to run on one or more backup nodes.
- When the Data Integration Service fails over or restarts unexpectedly, you can enable automatic recovery of aborted workflows.
- You can enable the PowerCenter Integration Service to store high availability persistence information in database tables. The PowerCenter Integration Service stores the information in the associated repository database.

For more information, see the Informatica 9.6.0 Administrator Guide.

Log Management

You can aggregate logs at the domain level or service level based on scenarios with the Administrator tool. You can also compress the log files that you aggregate to save disk space.

For more information, see the Informatica 9.6.0 Administrator Guide.

Passphrases

You can enter a passphrase instead of a password at the following locations:

- In the -ConnectionPassword option of the infacmd isp CreateConnection and UpdateConnection commands for ADABAS, DB2I, DB2Z, IMS, SEQ, or VSAM connections.
- In the -pwxPassword option of the infacmd pwx createdatamaps command for IMS, SEQ, and VSAM data sources.
- In the Administrator tool, for DB2 for i5/OS and DB2 for z/OS connections.

A valid passphrase for accessing databases and data sets on z/OS can be up to 128 characters in length. A valid passphrase for accessing i5/OS can be up to 31 characters in length. Passphrases can contain the following characters:

- Uppercase and lowercase letters
- The numbers 0 to 9
- Spaces
- The following special characters:
  `‘ - ; # \ . / ! % & * ( ) _ + { } : ; | < > ?`

  **Note:** The first character is an apostrophe.

For more information, see the Informatica 9.6.0 Administrator Guide and Informatica 9.6.0 Command Reference.

Search Service

Create a Search Service to enable search in the Analyst tool and Business Glossary Desktop.
Workflow Graph
You can view the graphical representation of a workflow that you run in the Administrator tool. You can view the details of the tasks within the workflow and the failure points.

For more information, see the Informatica 9.6.0 Administrator Guide.

Informatica Domain Security
This section describes security enhancements to the Informatica domain.

Authentication
You can run Informatica with Kerberos authentication and Microsoft Active Directory (AD) directory service. Kerberos authentication provides single sign-on capability to Informatica domain client applications. The Informatica domain supports Active Directory 2008 R2.

Two-Factor Authentication (TFA)
Informatica clients can run on a Windows network that uses two-factor authentication.

Encryption Key
You can specify a keyword to generate a unique encryption key for encrypting sensitive data such as passwords that are stored in the domain.

Workflow Security
You can configure the PowerCenter Integration Service to run PowerCenter workflows securely. The Enable Data Encryption option enables secure communication between the PowerCenter Integration Service and the Data Transformation Manager (DTM) process and between DTM processes.

Administrator Group
The Informatica domain includes an Administrator group with default administrator privileges. You can add users to or remove users from the Administrator group. You cannot delete the Administrator group.

Administrator Account Lockout
When you configure account lockout in the Administrator tool, you can enforce account lockout for administrator user accounts. The Admin Account Lockout option enables lockout for administrator user accounts. When you enable the Account Lockout option, you can also enable the Admin Account Lockout option.

Connection to Secure Relational Databases
You can use the Informatica relational database drivers to connect to a secure Oracle, Microsoft SQL Server, or IBM DB2 database. You can create repositories, sources, and targets on databases secured with SSL certificates.

Audit Reports
In the Administrator tool, you can generate audit reports to get information on users and groups in the Informatica domain. For example, you can get information about a user account, such as the privileges and permissions assigned to the user and the groups associated with the user.
Analyst Service Privileges

The following table describes new privileges for the Analyst Service:

<table>
<thead>
<tr>
<th>Privilege</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manage Glossaries</td>
<td>User is able to manage business glossaries.</td>
</tr>
<tr>
<td>Workspace Access</td>
<td>User is able to access the following workspaces in the Analyst tool:</td>
</tr>
<tr>
<td></td>
<td>- Design workspace.</td>
</tr>
<tr>
<td></td>
<td>- Discovery workspace.</td>
</tr>
<tr>
<td></td>
<td>- Glossary workspace.</td>
</tr>
<tr>
<td></td>
<td>- Scorecards workspace.</td>
</tr>
<tr>
<td>Design Workspace</td>
<td>User is able to access the Design workspace.</td>
</tr>
<tr>
<td>Discovery Workspace</td>
<td>User is able to access the Discovery workspace.</td>
</tr>
<tr>
<td>Glossary Workspace</td>
<td>User is able to access the Glossary workspace.</td>
</tr>
<tr>
<td>Scorecards Workspace</td>
<td>User is able to access the Scorecards workspace.</td>
</tr>
</tbody>
</table>

Model Repository Service Privileges

The following table describes new privileges for the Model Repository Service:

<table>
<thead>
<tr>
<th>Privilege</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access Analyst</td>
<td>User is able to access the Model repository from the Analyst tool.</td>
</tr>
<tr>
<td>Access Developer</td>
<td>User is able to access the Model repository from the Developer tool.</td>
</tr>
</tbody>
</table>

For more information, see the Informatica 9.6.0 Security Guide.
Command Line Programs

This section describes new and changed commands and options for the Informatica command line programs.

infacmd as Commands

The following table describes an updated infacmd as command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CreateService</td>
<td>Contains the following new options:</td>
</tr>
<tr>
<td></td>
<td>- HumanTaskDataIntegrationService(-htds). Optional. Name of the Data Integration Service that runs Human tasks.</td>
</tr>
<tr>
<td></td>
<td>Contains the following obsolete option:</td>
</tr>
<tr>
<td></td>
<td>- StagingDatabase(-sd). Required. Database connection name for a staging database</td>
</tr>
<tr>
<td>UpdateServiceOptions</td>
<td>Updates Analyst Service options. In version 9.6.0 you can run the command to specify a Data Integration Service to run Human tasks. For example, the following command configures the Analyst Service to specify DIS_ID_100 as the Data Integration Service name:</td>
</tr>
<tr>
<td></td>
<td>infacmd as UpdateServiceOptions</td>
</tr>
<tr>
<td></td>
<td>-dn InfaDomain -sn AS_ID_100</td>
</tr>
<tr>
<td></td>
<td>-un Username -pd Password</td>
</tr>
<tr>
<td></td>
<td>HumanTaskDataIntegrationService.humanTaskDsServiceName=DS_ID_100</td>
</tr>
</tbody>
</table>

The following table describes obsolete infacmd as commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CreateAuditTables</td>
<td>Creates audit tables that contain audit trail log events for bad record tables and duplicate tables in a staging database. Update any script that uses infacmd as CreateAuditTables.</td>
</tr>
<tr>
<td>DeleteAuditTables</td>
<td>Creates audit tables that contain audit trail log events for bad record tables and duplicate tables in a staging database. Update any script that uses infacmd as DeleteAuditTables.</td>
</tr>
</tbody>
</table>

infacmd dis Commands

The following table describes updated infacmd dis commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CreateService</td>
<td>Contains the following new option:</td>
</tr>
<tr>
<td></td>
<td>- BackupNodes(-bn). Optional. Name of the backup nodes.</td>
</tr>
<tr>
<td>UpdateService</td>
<td>Contains the following new option:</td>
</tr>
<tr>
<td></td>
<td>- BackupNodes(-bn). Optional. Name of the backup nodes.</td>
</tr>
</tbody>
</table>

infacmd idd Commands

The infacmd idd commands are obsolete. Update any script that refers to an infacmd idd command.
The following table describes the obsolete infacmd idd commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CreateService</td>
<td>Creates a Data Director Service.</td>
</tr>
<tr>
<td>ListServiceOptions</td>
<td>Lists the Data Director Service options.</td>
</tr>
<tr>
<td>ListServiceProcessOptions</td>
<td>Lists the Data Director Service process options.</td>
</tr>
<tr>
<td>RemoveService</td>
<td>Removes the Data Director Service.</td>
</tr>
<tr>
<td>UpdateServiceOptions</td>
<td>Updates the Data Director Service options.</td>
</tr>
<tr>
<td>UpdateServiceProcessOptions</td>
<td>Updates the Data Director Service process options.</td>
</tr>
</tbody>
</table>

**infacmd isp Commands**

The following table describes updated infacmd isp commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AssignISToMMService</td>
<td>Contains the following new option:</td>
</tr>
<tr>
<td></td>
<td>- RepositoryUserSecurityDomain(-rsdn).Optional. Name of the security domain to which the PowerCenter repository user belongs.</td>
</tr>
<tr>
<td>CreateConnection</td>
<td>Contains the following updated option:</td>
</tr>
<tr>
<td></td>
<td>- ConnectionPassword. You can enter a passphrase for ADABAS, DB2I, DB2Z, IMS, SEQ, or VSAM connections. A passphrase can be up to 128 characters in length for z/OS connections and up to 31 characters in length for DB2 for i5/OS connections. A passphrase can contain letters, numbers, spaces, and some special characters.</td>
</tr>
<tr>
<td>CreateIntegrationService</td>
<td>Contains the following service option (-so):</td>
</tr>
<tr>
<td></td>
<td>- StoreHAPersistenceInDB. Optional. Stores process state information in high availability persistence tables in the associated PowerCenter repository database. Default is no.</td>
</tr>
<tr>
<td>EnableService</td>
<td>Can enable the Search Service.</td>
</tr>
<tr>
<td>GetLog</td>
<td>Contains the argument SEARCH for the ServiceType option. Use the argument to get the log events for the Search Service.</td>
</tr>
<tr>
<td>ListServices</td>
<td>Contains the argument SEARCH for the ServiceType option. Use the argument to get a list of all Search Services running in the domain.</td>
</tr>
<tr>
<td>UpdateConnection</td>
<td>Contains the following updated option:</td>
</tr>
<tr>
<td></td>
<td>- ConnectionPassword. You can enter a passphrase for ADABAS, DB2I, DB2Z, IMS, SEQ, or VSAM connections. A passphrase can be up to 128 characters in length for z/OS connections and up to 31 characters in length for DB2 for i5/OS connections. A passphrase can contain letters, numbers, spaces, and some special characters.</td>
</tr>
<tr>
<td>UpdateDomainOptions</td>
<td>Contains the following domain option (-do):</td>
</tr>
<tr>
<td></td>
<td>- ServiceResilTimeOut. Amount of time in seconds that a service tries to establish or reestablish a connection to another service.</td>
</tr>
</tbody>
</table>
infacmd mrs Commands

The following table describes updated infacmd mrs commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CreateService</td>
<td>Contains the following new option:</td>
</tr>
<tr>
<td></td>
<td>-<code>-BackupNodes(-bn)</code>. Optional. Name of the backup nodes.</td>
</tr>
<tr>
<td>UpdateService</td>
<td>Contains the following new option:</td>
</tr>
<tr>
<td></td>
<td>-<code>-PrimaryNode(-nn)</code>. Optional. Name of the primary node.</td>
</tr>
<tr>
<td></td>
<td>-<code>-BackupNodes(-bn)</code>. Optional. Name of the backup nodes.</td>
</tr>
</tbody>
</table>

infacmd ps Commands

The following table describes new infacmd ps commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>migrateProfileResults</td>
<td>Migrates column profile results and data domain discovery results from versions 9.1.0, 9.5.0, or 9.5.1.</td>
</tr>
<tr>
<td>synchronizeProfile</td>
<td>Migrates documented keys, user-defined keys, committed keys, primary keys, and foreign keys for all the profiles in a specific project from versions 9.1.0, 9.5.0, or 9.5.1.</td>
</tr>
</tbody>
</table>

infacmd pwx Commands

The following table describes a new infacmd pwx command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>createdatamaps</td>
<td>Creates PowerExchange data maps for IMS, SEQ, or VSAM data sources for bulk data movement.</td>
</tr>
</tbody>
</table>
infacmd search Commands

The following table describes the new infacmd search commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>createService</td>
<td>Creates a Search Service.</td>
</tr>
<tr>
<td>listServiceOptions</td>
<td>Lists the properties for a Search Service.</td>
</tr>
<tr>
<td>listServiceProcessOptions</td>
<td>Lists the properties for a Search Service process.</td>
</tr>
<tr>
<td>updateServiceOptions</td>
<td>Configures properties for a Search Service.</td>
</tr>
<tr>
<td>updateServiceProcessOptions</td>
<td>Configures properties for a Search Service process.</td>
</tr>
</tbody>
</table>

For more information, see the *Informatica 9.6.0 Command Reference*.

PowerCenter

This section describes new features and enhancements to PowerCenter.

Pushdown Optimization for SAP HANA

The PowerCenter Integration Service can push transformation logic to SAP HANA sources and targets when the connection type is ODBC.

For more information, see the *Informatica PowerCenter 9.6.0 Advanced Workflow Guide*.

High Availability Persistence in a Database

You can enable the PowerCenter Integration Service to store high availability persistence information in database tables. The PowerCenter Integration Service stores the information in the associated repository database.

For more information, see the *Informatica 9.6.0 Administrator Guide*.

Transformations

You can use a parameter file to provide cache size values in the following transformations:

- Aggregator
- Joiner
- Rank
- Sorter

For more information, see the *Informatica PowerCenter 9.6.1 Transformation Guide*.

PowerCenter Big Data Edition

This section describes new features and enhancements to PowerCenter Big Data Edition.

Automatic Workflow Recovery

You can configure automatic recovery of aborted workflow instances due to an unexpected shutdown of the Data Integration Service process. When you configure automatic recovery, the Data Integration Service process recovers aborted workflow instances due to a service process shutdown when the service process restarts.
Mappings in the Hive Environment

- You can run mappings with Cloudera 4.2, Hortonworks 1.3.2, MapR 2.1.3, and MapR 3.0.1 distributions.
- When you choose Hive as the validation environment for the mapping, you can now choose a Hive version.
- You can append to a Hive target table with Hive version 0.9 and later.
- In a Java transformation, you can configure an input port as a partition key, a sort key, and assign a sort direction to get sorted output data.
- To modify the Hadoop distribution directory on the Hadoop data nodes and the Data Integration Service node use the Hadoop resource descriptor configuration file hadoopRes.properties.

For more information, see the Informatica PowerCenter Big Data Edition 9.6.0 User Guide.

Partitioned Mappings in the Native Environment

If you have the Partitioning option, you can enable the Data Integration Service process to maximize parallelism when it runs mappings in the native environment. The Data Integration Service process must run on a node that has multiple CPUs. When you maximize parallelism, the Data Integration Service dynamically divides the underlying data into partitions and processes all of the partitions concurrently. When the Data Integration Service adds partitions, it increases the number of processing threads, which can increase mapping performance.

For more information, see the Informatica 9.6.0 Mapping Guide.

PowerCenter Advanced Edition

This section describes new features and enhancements to PowerCenter Advanced Edition.

Business Glossary

Business Glossary comprises online glossaries of business terms and policies that define important concepts within an organization. Data stewards create and publish terms that include information such as descriptions, relationships to other terms, and associated categories. Glossaries are stored in a central location for easy lookup by end-users.

Business Glossary is made up of glossaries, business terms, policies, and categories. A glossary is the high-level container that stores other glossary content. A business term defines relevant concepts within the organization, and a policy defines the business purpose that governs practices related to the term. Business terms and policies can be associated with categories, which are descriptive classifications. You can access Business Glossary through Informatica Analyst (the Analyst tool).

For more information, see the Informatica 9.6.0 Business Glossary Guide.

Metadata Manager

This section describes new features and enhancements to Metadata Manager.

Security Enhancements

Metadata Manager contains the following security enhancements:

Connection to secure relational databases

Metadata Manager can communicate with secure IBM DB2, Microsoft SQL Server, and Oracle databases. Metadata Manager can communicate with these databases when they are used for the Metadata Manager repository, for the PowerCenter repository, or as metadata sources.
For more information, see the Informatica PowerCenter 9.6.0 Metadata Manager Administrator Guide.

Kerberos authentication

Metadata Manager can run on a domain that is configured with Kerberos authentication.

For information about configuring the domain to use Kerberos authentication, see the Informatica 9.6.0 Security Guide. For information about running Metadata Manager and mmcmd when the domain uses Kerberos authentication, see the Informatica PowerCenter 9.6.0 Metadata Manager Administrator Guide.

Two-factor authentication

Metadata Manager can run on a Windows network that uses two factor authentication.

For more information, see the Informatica 9.6.0 Security Guide.

Business Glossary Resources

You can create Business Glossary resources that are based on Informatica Analyst business glossaries.

Create a Business Glossary resource to extract metadata from an Informatica Analyst business glossary.

For information about creating resources, see the Informatica PowerCenter 9.6.0 Metadata Manager Administrator Guide. For information about viewing resources, see the Informatica PowerCenter 9.6.0 Metadata Manager User Guide.

Resource Versions

You can create resources of the following versions:

- Microstrategy 9.3.1 and 9.4.1. Previously, you could create Microstrategy resources up to version 9.2.1.
- Netezza 7.0. Previously, you could create Netezza resources up to version 6.0.

For information about creating resources, see the Informatica PowerCenter 9.6.0 Metadata Manager Administrator Guide.

Browser Support

You can run the Metadata Manager application in the Google Chrome web browser.

PowerExchange Adapters for PowerCenter

This section describes new features and enhancements to PowerExchange adapters for PowerCenter.

PowerExchange for Greenplum

You can configure a session to override the schema that is specified in the Greenplum connection object.

For more information, see the Informatica PowerExchange for Greenplum 9.6.0 User Guide for PowerCenter.

PowerExchange for Hadoop

PowerExchange for Hadoop supports following updated versions of Hadoop distributions to access Hadoop sources and targets:

- Cloudera CDH 4.2
- Hortonworks 1.3.2
- MapR 2.1.3 and 3.0.1
- Pivotal HD 1.1
- IBM BigInsights-2.1
For more information, see the Informatica PowerExchange for Hadoop 9.6.0 User Guide for PowerCenter.

PowerExchange for Microsoft Dynamics CRM

- You can use Microsoft Dynamics CRM Online version 2013 for online deployment.
- You can configure the number of rows that you want to retrieve from Microsoft Dynamics CRM.
- You can join two related entities that have one to many or many to one relationships.
- PowerExchange for Microsoft Dynamics CRM uses HTTP compression to extract data if HTTP compression is enabled in the Internet Information Services (IIS) where Microsoft Dynamics CRM is installed.
- You can configure the PowerCenter Integration Service to write records in bulk mode.
- You can change the location of the krb5.conf file and the login.conf files at run time.

For more information, see the Informatica PowerExchange for Microsoft Dynamics CRM 9.6.0 User Guide for PowerCenter.

PowerExchange for SAP NetWeaver

- PowerExchange for SAP NetWeaver uses SAP NetWeaver RFC SDK 7.20 libraries.
- You can enable partitioning for SAP BW sessions that load data to 7.x DataSources. When you enable partitioning, the PowerCenter Integration Service performs the extract, transform, and load for each partition in parallel.
- You can run ABAP stream mode sessions with the Remote Function Call communication protocol.
- You can install secure transports to enforce security authorizations when you use ABAP to read data from SAP.
- When you extract business content data from SAP Business Suite applications, you can use data sources that belong to a custom namespace.
- When you use timestamp-based delta pointers to extract business content data, you can extract the changed data alone without doing a full transfer of the entire data.

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

PowerExchange for SAS

You can read data directly from a SAS data file.

For more information, see the Informatica PowerExchange for SAS 9.6.0 User Guide for PowerCenter.

PowerExchange for Siebel

When you import Siebel business components, you can specify the name of the Siebel repository if multiple Siebel repositories are available. You can create and configure the connection.properties file to add the Repository Name field to the Import from Siebel wizard in PowerExchange for Siebel.

For more information, see the Informatica PowerExchange for Siebel 9.6.0 User Guide for PowerCenter.

PowerExchange for Teradata Parallel Transporter API

- You can configure a session so that Teradata PT API uses one of the spool modes to extract data from Teradata.
- You can configure a session to use a character in place of an unsupported Teradata unicode character while loading data to targets.

For more information, see the Informatica PowerExchange for Teradata Parallel Transporter API 9.6.0 User Guide for PowerCenter.
PowerExchange for Web Services

- The PowerCenter Integration Service can process SOAP 1.2 messages with RPC/encoded and document/literal encoding styles. Each web service can have an operation that uses a SOAP 1.2 binding. You can create a Web Service Consumer transformation with a SOAP 1.2 binding.
- You can use PowerExchange for Web Services with SharePoint 2010 and 2013 as a web service provider.

For more information, see the Informatica PowerExchange for Web Services 9.6.0 User Guide for PowerCenter.

PowerExchange Adapters for Informatica

This section describes new features and enhancements to PowerExchange adapters for Informatica.

PowerExchange for HBase

PowerExchange for HBase provides connectivity to an HBase data store. Use PowerExchange for HBase to read data from the HBase columns families or write data to the columns families in an HBase table. You can read or write data to a column family or a single binary column.

You can add an HBase data object operation as a source or as a target in a mapping and run the mappings in the native or a Hive environment.

For more information, see the PowerExchange for HBase 9.6.0 User Guide.

PowerExchange for DataSift

You can configure the HTTP proxy server authentication settings at design time.

For more information, see the Informatica PowerExchange for DataSift 9.6.0 User Guide.

PowerExchange for Facebook

- You can extract information about a group, news feed of a group, list of members in a group, basic information about a page, and news feed from a page from Facebook.
- You can configure the HTTP proxy server authentication settings at design time.

For more information, see the Informatica PowerExchange for Facebook 9.6.0 User Guide.

PowerExchange for HDFS

- PowerExchange for HDFS supports the following Hadoop distributions to access HDFS sources and targets:
  - CDH Version 4 Update 2
  - HortonWorks 1.3.2
  - MapR 2.1.3
  - MapR 3.0.1
- You can write text files and binary file formats, such as sequence files, to HDFS with a complex file data object.
- You can write compressed complex files, specify compression formats, and decompress files.
- The Data Integration Service creates partitions to read data from sequence files and custom input format files that can be split.

For more information, see the Informatica PowerExchange for HDFS 9.6.0 User Guide.
PowerExchange for Hive

- PowerExchange for Hive supports the following Hive distributions to access Hive sources and targets:
  - Cloudera CDH Version 4 Update 2
  - HortonWorks 1.3.2
  - MapR 2.1.3
  - MapR 3.0.1
- You can write to Hive partitioned tables when you run mappings in a Hive environment.

PowerExchange for LinkedIn

- You can specify the full name of a person when you look up company information in LinkedIn.
- You can configure the HTTP proxy server authentication settings at design time.

For more information, see the *Informatica PowerExchange for LinkedIn 9.6.0 User Guide*.

PowerExchange for Salesforce

- You can select specific records from Salesforce by using the filter from the query property of the Salesforce data object read operation.
- You can use a Salesforce data object read operation to look up data in a Salesforce object.
- You can configure the HTTP proxy server authentication settings at design time.

For more information, see the *Informatica PowerExchange for Salesforce 9.6.0 User Guide*.

PowerExchange for SAP NetWeaver

- PowerExchange for SAP NetWeaver uses SAP NetWeaver RFC SDK 7.20 libraries.
- You can install secure transports to enforce security authorizations when you use ABAP to read data from SAP.

For more information, see the *Informatica PowerExchange for SAP 9.6.0 User Guide*.

PowerExchange for Twitter

- You can specify a list of user IDs or screen names in a .txt or .csv format to extract the profiles of users. You can specify a valid user ID or a screen name to extract the profile of a user.
- You can configure the HTTP proxy server authentication settings at design time.

For more information, see the *Informatica PowerExchange for Twitter 9.6.0 User Guide*.

PowerExchange for Web Content-Kapow Katalyst

You can configure the HTTP proxy server authentication settings at design time.

For more information, see the *Informatica PowerExchange for LinkedIn 9.6.0 User Guide*.

**Informatica Documentation**

This section describes new guides included with the Informatica documentation. Some new guides are organized based on shared functionality among multiple products and replace previous guides.

The Informatica documentation contains the following new guides:

**Informatica Analyst Tool Guide**

Contains general information about Informatica Analyst (the Analyst tool). Previously, the Analyst tool was documented in the *Informatica Data Integration Analyst User Guide*. 
Informatica Application Service Guide

Contains information about application services. Previously, the application services were documented in the Informatica Administrator Guide.

Informatica Connector Toolkit Developer Guide

Contains information about the Informatica Connector Toolkit and how to develop an adapter for the Informatica platform. You can find information on components that you define to develop an adapter such as connection attributes, type system, metadata objects, and run-time behavior.

Informatica Connector Toolkit Getting Started Guide

Contains a tutorial on how to use the Informatica Connector Toolkit to develop a sample MySQL adapter for the Informatica platform. You can find information on how to install Informatica Connector Toolkit and on how to create and publish a sample MySQL adapter with the Informatica Connector Toolkit.

Informatica Data Explorer Data Discovery Guide

Contains information about discovering the metadata of source systems that include content and structure. You can find information on column profiles, data domain discovery, primary key and foreign key discovery, functional dependency discovery, Join analysis, and enterprise discovery. Previously, data discovery was documented in the Informatica Data Explorer User Guide.

Informatica Business Glossary Guide

Contains information about Business Glossary. You can find information about how to manage and look up glossary content in the Analyst Tool. Glossary content includes terms, policies, and categories. Previously, information about Metadata Manager Business Glossary was documented in the Informatica PowerCenter Metadata Manager Business Glossary Guide.

Informatica Data Quality Exception Management Guide

Contains information about exception management for Data Quality. You can find information about managing exception record tasks in the Analyst tool. Previously, exception management was documented in the Informatica Data Director for Data Quality Guide, Data Quality User Guide, and Data Services User Guide.

Informatica Database View Reference

Contains information about Model Repository views, Profile Warehouse views, and Business Glossary views. Previously, this book was called the Informatica Data Services Model Repository Views and the profile views were documented in an H2L article. The Business Glossary views is the new content added in this book.

Informatica Developer Tool Guide

Contains information about Informatica Developer. You can find information on common functionality in the Developer tool. Previously, the Developer tool was documented in the Informatica Developer User Guide.

Informatica Mapping Guide

Contains information about configuring Model repository mappings. Previously, the mapping configuration was documented in the Informatica Developer User Guide.

Informatica Mapping Specifications Getting Started Guide

Contains getting started information for mapping specifications.

Informatica Mapping Specifications Guide

Contains information about mapping specifications. Previously, the mapping specifications were documented in the Informatica Data Integration Analyst User Guide.
Informatica Profile Guide

Contains information about profiles. The guide contains basic information about running column profiles, creating rules, and creating scorecards. Previously, profiling was documented in the Data Quality User Guide and Informatica Data Explorer User Guide.

Informatica Reference Data Guide

Contains information about reference data objects. A reference data object contains a set of data values that you can use to perform search operations in source data. You can create reference data objects in the Developer tool and Analyst tool, and you can import reference data objects to the Model repository. Previously, reference data objects were documented in the Informatica Data Quality User Guide.

Informatica Rule Builder Guide

Contains information about the Rule Builder feature in the Analyst tool. Use Rule Builder to describe business rule requirements as a series of logical statements. You compile the logical statements into a rule specification. The Analyst tool saves a copy of the rule specification as a mapplet in the Model repository.

Informatica Security Guide

Contains information about security for the Informatica domain. Previously, Informatica security was documented in the Informatica Administrator Guide.

Informatica SQL Data Service Guide

This manual contains information about creating SQL data services, populating virtual data and connecting to an SQL data service with third party tools. Previously, this book was called the Informatica Data Services User Guide.
Chapter 7

Changes to Informatica Data Explorer (9.6.0)

This chapter includes the following topics:

- Enterprise Discovery, 111
- Profile Results Verification, 111
- Rules, 112
- Scorecards, 112

Enterprise Discovery

Effective in version 9.6.0, enterprise discovery includes the following changes:

- You can refresh the Model Repository Service to view the enterprise discovery results for data sources from external connections. Previously, after you ran an enterprise discovery profile, you had to reconnect to the Model Repository Service.
- The Profile Model option in the profile wizard that you open by selecting File > New > Profile is renamed to Enterprise Discovery Profile.
- The graphical view of the enterprise discovery results displays the data domains overlap in entities for those data domains that you choose to include in the graphical view.

Profile Results Verification

Effective in version 9.6.0, you can verify the data domain discovery results on multiple columns in the Developer tool. When you verify the profile results, the Developer tool runs the profile on all rows of the data source.

Previously, you verified the data domain discovery results for a single column.
Rules

Effective in version 9.6.0, you can select multiple input columns when you apply a rule to a profile in Informatica Analyst.

Previously, you selected one input column when you applied a rule.

Scorecards

Effective in version 9.6.0, scorecards include the following changes:

- When you select the valid values for a metric, you can view the percentage of selected valid values and count of total valid values.
  Previously, you could view the count of total valid values in the column.

- When you view the source data for a metric, by default, the **Drilldown** section displays the rows of source data that are not valid.
  Previously, the default value was to display rows that are valid.

- In the scorecard results, you can select a score and click the trend chart arrow to view the trend chart.
  Previously, you right-clicked the score and selected the **Show Trend Chart** option.
CHAPTER 8

Changes to Informatica Data Quality (9.6.0)

This chapter includes the following topics:

- Address Validator Transformation, 113
- Exception Record Management, 113
- Informatica Data Director for Data Quality, 114
- Java Transformation, 114
- Mapping Parameters, 114
- Match Transformation, 115
- Native Connectivity to Microsoft SQL Server, 115
- Port-to-Port Data Conversion, 115
- Profile Results Verification, 115
- Reference Tables, 116
- Rules, 116
- Scorecards, 116

Address Validator Transformation

Effective in version 9.6.0, the Address Validator transformation uses version 5.4.1 of the Address Doctor software engine.

Previously, the transformation used version 5.3.1 of the Address Doctor software engine.

Exception Record Management

Effective in version 9.6.0, the Analyst tool reads exception records from the database tables that a Human task identifies.

Previously, the Analyst tool read exception records from a staging database that the Analyst Service identified.
To continue to analyze the records in the staging database after you upgrade, perform the following steps:

1. Create a mapping that reads the staging database tables. Use an Exception transformation to identify the exception records.
2. Configure a workflow with a Mapping task and a Human task. Configure the Mapping task to run the exception mapping. Configure the Human task to read the output of the Mapping task.
3. Run the workflow.
4. Log in to the Analyst tool to review and update the exception records.

**Informatica Data Director for Data Quality**

Effective in version 9.6.0, the Informatica Data Director for Data Quality web application is obsolete. To review and update Human task data in version 9.6.0, log in to the Analyst tool.

Previously, users logged in to Informatica Data Director for Data Quality to review and update the records that a Human task specified.

**Java Transformation**

Effective in version 9.6.0, the **Stateless** advanced property for the Java transformation is valid in both the native and Hive environments. In the native environment, Java transformations must have the **Stateless** property enabled so that the Data Integration Service can use multiple partitions to process the mapping.

Previously, the **Stateless** property was valid only in the Hive environment. The Data Integration Service ignored the Stateless property when a mapping ran in the native environment.

**Mapping Parameters**

Effective in version 9.6.0, the user-defined parameter that represents a long value is named Bigint. Previously, this user-defined parameter was named Long.

Effective in version 9.6.0, parameter names that are defined in reusable transformations, relational, PowerExchange, and flat file data objects, and that begin with the dollar sign ($) are renamed to a unique name in the Model repository. However, the parameter name is not changed in the parameter file. Previously, you could use the dollar sign ($) as the first character in mapping parameter names.
Match Transformation

Effective in version 9.6.0, a Match transformation that performs identity match analysis treats null data values and empty data fields differently. Identity match analysis and field match analysis treat null data values and empty data fields in the same manner in version 9.6.0.

Previously, a Match transformation treated null data values and empty data fields as identical data elements in identity match analysis.

Native Connectivity to Microsoft SQL Server

Effective in version 9.6.0, you must install the Microsoft SQL Server 2012 Native Client to configure native connectivity to Microsoft SQL Server databases from Windows machines.

Previously, you did not have to install an SQL client because Informatica used the Microsoft OLE DB provider for native connectivity.

If you upgrade from an earlier version, you must install the Microsoft SQL Server 2012 Native Client for the existing mappings to work.

Port-to-Port Data Conversion

Effective in version 9.6.0, the Data Integration Service uses the conversion functions in the transformation language to perform port-to-port conversions between transformations. The Data Integration Service performs port-to-port conversions when you pass data between ports with different datatypes. If the data that you pass is not valid for the conversion datatype, a transformation row error occurs.

Previously, the Data Integration Service did not use the transformation functions for port-to-port conversions. The Data Integration Service used a separate algorithm. If the data that you passed contained data that was not valid for the conversion datatype, the Data Integration Service dropped the value and used a substitute value.

Upgraded mappings that use port-to-port data conversion might produce different output data. For example, a mapping in a previous version produced the following output:

"0.377777","0.527777","0.000000","0.250000","0.000000","0.377777","0.250000"

After you upgrade, the same mapping might produce the following output:

"0.377777","0.527777","0","0.25","0","0.377777","0.25"

Profile Results Verification

Effective in version 9.6.0, you can verify the data domain discovery results on multiple columns in the Developer tool. When you verify the profile results, the Developer tool runs the profile on all rows of the data source.

Previously, you verified the data domain discovery results for a single column.
Reference Tables

The following changes apply to reference tables in version 9.6.0:

- Effective in version 9.6.0, you can use wildcards when you search a reference table for data values in the Developer tool. When you search a reference table for data values, the search is not case-sensitive in the Developer tool.
  Previously, you performed wildcard searches and searches that are not case-sensitive in the Analyst tool.
- Effective in version 9.6.0, the Data Integration Service stores a single instance of a reference table in memory when multiple mappings in a process read the reference table.
  Previously, the Data Integration Service stored an instance of the reference table in memory for each mapping.

Rules

Effective in version 9.6.0, you can select multiple input columns when you apply a rule to a profile in Informatica Analyst.

Previously, you selected one input column when you applied a rule.

Scorecards

Effective in version 9.6.0, scorecards include the following changes:

- When you select the valid values for a metric, you can view the percentage of selected valid values and count of total valid values.
  Previously, you could view the count of total valid values in the column.
- When you view the source data for a metric, by default, the Drilldown section displays the rows of source data that are not valid.
  Previously, the default value was to display rows that are valid.
- In the scorecard results, you can select a score and click the trend chart arrow to view the trend chart.
  Previously, you right-clicked the score and selected the Show Trend Chart option.
CHAPTER 9

Changes to Informatica Data Services (9.6.0)

This chapter includes the following topics:

- **Java Transformation**, 117
- **Native Connectivity to Microsoft SQL Server**, 117
- **Port-to-Port Data Conversion**, 118
- **Profile Results Verification**, 118
- **Rules**, 118
- **Scorecards**, 118

Java Transformation

Effective in version 9.6.0, the **Stateless** advanced property for the Java transformation is valid in both the native and Hive environments. In the native environment, Java transformations must have the **Stateless** property enabled so that the Data Integration Service can use multiple partitions to process the mapping.

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Previously, the Data Integration Service did not use the transformation functions for port-to-port conversions. The Data Integration Service used a separate algorithm. If the data that you passed contained data that was not valid for the conversion datatype, the Data Integration Service dropped the value and used a substitute value.

Upgraded mappings that use port-to-port data conversion might produce different output data. For example, a mapping in a previous version produced the following output:

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Changes to Informatica Data Transformation (9.6.0)

This chapter includes the following topics:

- Export Mapping to PowerCenter, 120
- Invalid CMConfig File, 120

Export Mapping to PowerCenter

You can export a mapping with a Data Processor transformation to PowerCenter.

Invalid CMConfig File

Effective in 9.6.0, a Data Processor transformation cannot run when the CMConfig.xml file is an invalid XML file.
CHAPTER 11

Changes to Informatica Domain (9.6.0)

This chapter includes the following topics:

- **Informatica Services**, 121
- **Analyst Service**, 122
- **Content Management Service**, 122
- **Data Integration Service**, 122
- **Data Director Service**, 122
- **Test Data Manager Service**, 123
- **Model Repository Service Privileges**, 123
- **Domain Security**, 123
- **Changes to Supported Platforms**, 123

Informatica Services

Effective in version 9.6.0, the Informatica Services include the following changes:

- On Windows, when you run the command `informaservice.bat startup` to start the Informatica services, the ISP console window runs in the background.

  Previously, the window appeared in the foreground when you ran `informaservice.bat startup` to start the Informatica services. Also, if you encounter error messages during the Service Manager startup, the installer saves the error messages to the `catalina.out` and `node.log` log files.

- On Windows, you must be a user with administrative privileges to start the Informatica services from the command line and the Windows Start menu.

  Previously, the user did not need administrative privileges to start the Informatica services.
Analyst Service

The following changes apply to the Analyst Service in version 9.6.0:

- Effective in version 9.6.0, the Analyst Service identifies the Data Integration Service that runs Human tasks.
  Previously, the Data Director Service identified the Data Integration Service that runs Human tasks.

- Effective in version 9.6.0, the Staging Database property is obsolete.
  Previously, the Analyst Service used the Staging Database property to identify the database that contained exception record tables.

Content Management Service

Effective in version 9.6.0, you can set the Max Result Count property on the Content Management Service and on the Address Validator transformation. The property determines the maximum number of address suggestions that the Address Validator transformation can generate for a single address.

Previously, you set the Max Result Count property on the Address Validator transformation.

Data Integration Service

Effective in version 9.6.0, when you run Data Integration Service jobs in separate operating system processes, the Data Integration Service maintains a pool of reusable DTM processes. Each job runs in a DTM process selected from the pool. One DTM process can run multiple DTM instances for related jobs. If you configure connection pooling, each DTM process maintains its own connection pool library that it can reuse for related jobs that run in the same DTM process.

Previously when you ran Data Integration Service jobs in separate operating system processes, each job ran in a separate DTM process. One DTM process ran a single DTM instance. When you ran jobs in separate operating system processes, the Data Integration Service ignored the connection pooling properties.

Data Director Service

Effective in version 9.6.0, the Data Director Service is obsolete.

Previously, you configured a Data Director Service to identify the Data Integration Service that runs Human tasks. To identify the Data Integration Service that runs Human tasks in version 9.6.0, configure the Human Task Properties on the Analyst Service.

The Informatica 9.6.0 upgrade process upgrades a Data Director Service to an Analyst Service. If you upgrade an Informatica domain that includes a Data Director Service and an Analyst Service, the upgrade process creates a separate Analyst Service for each service. After you upgrade, you can keep the Analyst Services in the domain. Optionally, you can merge the services.
Test Data Manager Service

Effective in version 9.6.0, Test Data Management (TDM) is available as a service on the Informatica domain. Create and configure a Test Data Manager Service (TDM Service) in the Informatica domain from the Administrator tool. Define roles and privileges to perform Test Data Management tasks as custom roles for the TDM Service. The web-based user interface of Test Data Management uses database content from the repository associated with the TDM Service. You must have installed TDM to be able to create the TDM Service. You also define security preferences for the TDM service from the Administrator tool.

Previously, TDM was independent of the Informatica domain and not a service on the domain.

Model Repository Service Privileges

Effective in version 9.6.0, the Create Projects privilege for the Model Repository Service is renamed to the Create, Edit, and Delete Projects privilege. Users must have the Create, Edit, and Delete Projects privilege to complete the following tasks in the Analyst tool and the Developer tool:

• Create projects.
• Edit projects. Users must also have Write permission on the project.
• Delete projects that the user created. Users must also have Write permission on the project.

Previously, when users had the Create Projects privilege for the Model Repository Service, they could create projects. When users had Write permission on the project, they could edit and delete the project.

Domain Security

Effective in version 9.6.0, the Enable Transport Layer Security (TLS) for the domain option in the Administrator tool is renamed Enable Secure Communication. The Enable Secure Communication option secures the communication between the Service Manager and all services in the Informatica domain. You can specify a keystore and truststore file for the SSL certificate.

Previously, the Enable Transport Layer Security (TLS) for the domain option in the Administrator tool did not enable secure communication for the PowerCenter services. The option used the default Informatica SSL certificate.

Changes to Supported Platforms

Effective in version 9.6.0, Informatica dropped support for 32-bit Linux and for Solaris on x64. Before you upgrade to Informatica 9.6.0 on a supported 64-bit server, back up the installation and restore it on the 64-bit server. When you select the Informatica product to upgrade, enter the path to the restored installation. For more information, see the Informatica upgrade guide.
CHAPTER 12

Changes to PowerCenter (9.6.0)

This chapter includes the following topics:

- **Native Connectivity to Microsoft SQL Server, 124**
- **Pushdown Optimization for ODBC Sources and Targets, 124**
- **Repository Connection File Default Location, 124**
- **Repository Connection File, 125**
- **Umask Configuration for Operating System Profiles, 125**

Native Connectivity to Microsoft SQL Server

Effective in version 9.6.0, you must install the Microsoft SQL Server 2012 Native Client to configure native connectivity to Microsoft SQL Server databases from Windows machines.

Previously, you did not have to install an SQL client because Informatica used the Microsoft OLE DB provider for native connectivity.

If you upgrade from an earlier version, you must install the Microsoft SQL Server 2012 Native Client for the existing mappings to work.

Pushdown Optimization for ODBC Sources and Targets

Effective in version 9.6.0, Informatica dropped support for pushdown optimization to ODBC sources and targets.

Repository Connection File Default Location

Effective in version 9.6.0, `pmrep` stores connection information in `pmrep.cnx` in the home directory by default. You can store the connection information in a different location when you set the INFA_REPCNX_INFO environment variable.

Previously, `pmrep` stored the connection information in `pmrep.cnx` in the directory where you started `pmrep`. 
Repository Connection File

Effective in version 9.6.0, each time you run `pmrep connect`, the command deletes the pmrep.cnx file. If the pmrep connect command succeeds, the command replaces the pmrep.cnx file with the repository connection information.

Previously, the pmrep connect command would not delete the pmrep.cnx file each time you ran `pmrep connect`.

Umask Configuration for Operating System Profiles

Effective in version 9.6.0, you do not have to set umask to 000 when you configure operating system profiles.

Previously, you had to set umask to 000 to enable operating system profiles to access files written by the DTM.

If you upgrade from an earlier version, the umask setting is not changed. You can change the umask setting before or after you upgrade. For example, you can change umask to 077 for maximum security. If you change the umask setting after you upgrade, you must restart the Informatica services.
This chapter includes the following topics:

- Hadoop Environment Properties File, 126
- Mappings in the Native Environment, 126

Hadoop Environment Properties File

Effective in 9.6.0, the Hadoop environment properties file hadoopEnv.properties is available at the following path:

```
<InformaticaInstallationDir>/services/shared/hadoop/<Hadoop_distribution_name>/infaConf
```

Mappings in the Native Environment

Effective in version 9.6.0, you can enable the Data Integration Service to maximize parallelism when it runs mappings in the native environment. When you maximize parallelism, the Data Integration Service can use multiple partitions to process a mapping. By default, each mapping has a maximum parallelism value of Auto. As a result, each mapping uses the maximum parallelism value set for the Data Integration Service process.

Previously, you could not enable the Data Integration Service to use multiple partitions to process a mapping in the native environment. By default, each upgraded mapping has a maximum parallelism value of one. As a result, partitioning is disabled for upgraded mappings.
This chapter includes the following topics:

- **Browser Support, 127**
- **Metadata Manager Agent, 127**
- **Metadata Manager Business Glossaries, 128**
- **Metadata Manager Documentation, 128**
- **mmcmd Changes, 128**
- **Native Connectivity to Microsoft SQL Server, 129**
- **Password Modification for Resources, 130**

## Browser Support

Effective in version 9.6.0, the Metadata Manager application can run in the following web browsers:

- Google Chrome
- Microsoft Internet Explorer

Previously, the Metadata Manager application could run in the following web browsers:

- Microsoft Internet Explorer
- Mozilla Firefox

## Metadata Manager Agent

Effective in version 9.6.0, you no longer have to install the Metadata Manager Agent separately for the following metadata source types:

- Cognos
- Oracle Business Intelligence Enterprise Edition
- Sybase PowerDesigner
Previously, you had to install the Metadata Manager Agent separately to extract metadata from these sources.

**Metadata Manager Business Glossaries**

Effective in version 9.6.0, Metadata Manager business glossaries are deprecated and replaced with Informatica Analyst business glossaries.

If you have a Metadata Manager business glossary that you created in a previous version of Metadata Manager, you must export the glossary from the previous version of Metadata Manager before you upgrade to version 9.6.0. After you upgrade, you can import the glossary into Informatica Analyst. To view the Informatica Analyst business glossary in Metadata Manager, create a Business Glossary resource in Metadata Manager 9.6.0.

**Metadata Manager Documentation**

Effective in version 9.6.0, the *Informatica PowerCenter Metadata Manager Business Glossary Guide* is obsolete.

For information about creating and configuring Business Glossary resources in Metadata Manager, see *Informatica PowerCenter 9.6.0 Metadata Manager Administrator Guide*. For information about viewing Business Glossary resources in Metadata Manager, see *Informatica PowerCenter 9.6.0 Metadata Manager User Guide*.

**mmcmd Changes**

**Domain Security Changes**

Effective in version 9.6.0, mmcmd has the following changes related to domain security:

**Environment Variables**

You might have to configure environment variables to run mmcmd. If the domain uses Kerberos authentication, you must set the KRB5_CONF environment variable on your system or in the mmcmd batch file. If secure communication is enabled for the domain, you must set the INFA_TRUSTSTORE and INFA_TRUSTSTORE_PASSWORD environment variables in the mmcmd batch file.

Previously, you did not have to configure environment variables for mmcmd.

**Command Options**

All mmcmd commands that authenticate with the domain contain options related to Kerberos authentication. You must specify the options if the domain uses Kerberos authentication.
The following table describes the command options:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>--domainName (-dn)</td>
<td>Required if you use Kerberos authentication and you do not specify the --</td>
</tr>
<tr>
<td></td>
<td>gateway option. Name of the Informatica domain.</td>
</tr>
<tr>
<td>--gateway (-hp)</td>
<td>Required if you use Kerberos authentication and you do not specify the --</td>
</tr>
<tr>
<td></td>
<td>domainName option. Host names and port numbers of the gateway nodes in the</td>
</tr>
<tr>
<td></td>
<td>domain.</td>
</tr>
<tr>
<td>--keyTab (-kt)</td>
<td>Required if you use Kerberos authentication and you do not specify a</td>
</tr>
<tr>
<td></td>
<td>password. Path and file name of the keytab file for the Metadata Manager</td>
</tr>
<tr>
<td></td>
<td>user.</td>
</tr>
<tr>
<td>--mmServiceName (-mm)</td>
<td>Required if you use Kerberos authentication. Name of the Metadata Manager</td>
</tr>
<tr>
<td></td>
<td>Service.</td>
</tr>
<tr>
<td>--namespace (-n)</td>
<td>Required if the domain uses LDAP authentication or Kerberos authentication.</td>
</tr>
<tr>
<td></td>
<td>Optional if the domain uses native authentication. Name of the security</td>
</tr>
<tr>
<td></td>
<td>domain to which the Metadata Manager user belongs.</td>
</tr>
<tr>
<td>--password (-pw)</td>
<td>Required if you do not use Kerberos authentication. Also required if you</td>
</tr>
<tr>
<td></td>
<td>use Kerberos authentication and you do not specify the --keyTab option.</td>
</tr>
<tr>
<td></td>
<td>Password for the Metadata Manager user.</td>
</tr>
<tr>
<td>-pcRepositoryNamespace</td>
<td>Required if the domain uses LDAP authentication or Kerberos authentication.</td>
</tr>
<tr>
<td></td>
<td>Optional if the domain uses native authentication. Name of the security</td>
</tr>
<tr>
<td></td>
<td>domain to which the PowerCenter repository user belongs.</td>
</tr>
<tr>
<td>--securityDomain (-sdn)</td>
<td>Required if the domain uses LDAP authentication or Kerberos authentication.</td>
</tr>
<tr>
<td></td>
<td>Optional if the domain uses native authentication. Name of the security</td>
</tr>
<tr>
<td></td>
<td>domain to which the Informatica domain user belongs.</td>
</tr>
</tbody>
</table>

**Business Glossary Upgrade Changes**

Effective in version 9.6.0, mmcmd includes the following command related to upgrading business glossaries:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>migrateBGLinks</td>
<td>Restores the related catalog objects for a business glossary after you upgrade from version 9.5.x.</td>
</tr>
</tbody>
</table>

**Native Connectivity to Microsoft SQL Server**

Effective in version 9.6.0, you must install the Microsoft SQL Server 2012 Native Client to configure native connectivity to Microsoft SQL Server databases from Windows machines.

Previously, you did not have to install an SQL client because Informatica used the Microsoft OLE DB provider for native connectivity.

If you upgrade from an earlier version, you must install the Microsoft SQL Server 2012 Native Client. Install the client so that the Metadata Manager Service can connect to Microsoft SQL Server databases.
Password Modification for Resources

Effective in version 9.6.0, to change the password for a resource, you edit the resource, enable the **Modify Password** option, and enter the new password in the **Password** field. This change prevents users from viewing the password with a password revelation tool.

Previously, you edited the resource, selected the string of dots in the **Password** field, and entered the new password.
Changes to Adapters for PowerCenter (9.6.0)

This chapter includes the following topics:

- PowerExchange for Facebook, 131
- PowerExchange for Hadoop, 131
- PowerExchange for LinkedIn, 132
- PowerExchange for Microsoft Dynamics CRM, 132
- PowerExchange for SAP NetWeaver, 132
- PowerExchange for Twitter, 133
- PowerExchange for Web Services, 134

PowerExchange for Facebook

Effective in version 9.6.0, Informatica is not shipping PowerExchange for Facebook for PowerCenter. Informatica dropped support for versions 9.1.0, 9.5.0, and 9.5.1. You cannot upgrade from versions 9.1.0, 9.5.0, 9.5.1, and the hotfix versions. Sessions will fail in versions 9.1.0, 9.5.0, and 9.5.1, and the hotfix versions.

You can use PowerExchange for Facebook in the Developer tool.

For more information, see the End of Life (EOL) document at the following location:

PowerExchange for Hadoop

Effective in version 9.6.0, you must re-create HDFS connections using the NameNode URI property. Previously, HDFS connection properties Host Name and HDFS port was used to create HDFS connections. If you are upgrading from a previous release, you must re-create HDFS connections.

When you configure an HDFS connection, the default Hadoop distribution is Cloudera distribution. Previously, the default was Apache distribution.
PowerExchange for LinkedIn

Effective in version 9.6.0, Informatica is not shipping PowerExchange for LinkedIn for PowerCenter. Informatica dropped support for versions 9.1.0, 9.5.0, and 9.5.1. You cannot upgrade from versions 9.1.0, 9.5.0, 9.5.1, and the hotfix versions. Sessions will fail in versions 9.1.0, 9.5.0, and 9.5.1, and the hotfix versions.

You can use PowerExchange for LinkedIn in the Developer tool.

For more information, see the End of Life (EOL) document at the following location: https://mysupport.informatica.com/docs/DOC-10512.

PowerExchange for Microsoft Dynamics CRM

Effective in version 9.6.0, download and use version 7 of the Java Cryptography Extension (JCE) Unlimited Strength Jurisdiction Policy Files.

Previously, you had to download and use version 6 of the Java Cryptography Extension (JCE) Unlimited Strength Jurisdiction Policy Files.

PowerExchange for SAP NetWeaver

Effective in version 9.6.0, PowerExchange for SAP NetWeaver includes the following changes:

SAP SDK libraries

PowerExchange for SAP NetWeaver uses SAP NetWeaver RFC SDK 7.20 libraries. You must install SAP NetWeaver RFC SDK 7.20 libraries to run PowerExchange for SAP sessions. Previously, you installed SAP RFC SDK classic libraries to run sessions.

SAP configuration file

You use the sapnwrfc.ini file to configure RFC-specific parameters and connection information. Previously, you used the sprfc.ini file to configure RFC-specific parameters and connection information.

If you upgrade from an earlier version, you must create a sapnwrfc.ini file to enable communication between PowerCenter and SAP. You cannot use the sprfc.ini file to enable communication between PowerCenter and SAP.

For more information, see the Informatica PowerExchange for SAP 9.6.0 User Guide for PowerCenter.

SAP connection type parameter

You need not use the SAP connection parameter TYPE in the sapnwrfc.ini file to configure the connection type. The PowerCenter Client and PowerCenter Integration Service use the connection parameters that you define in the sapnwrfc.ini file to infer the connection type.

For example, if you set the ASHOST parameter, the PowerCenter Client and PowerCenter Integration Service create a connection to a specific SAP application server. If you set the MSHOST and GROUP parameters, the PowerCenter Client and PowerCenter Integration Service create an SAP load balancing
connection. If you set the PROGRAM_ID, GWHOST, and GWSERV parameters, the PowerCenter Client and PowerCenter Integration Service create a connection to an RFC server program registered at an SAP gateway.

Previously, you used the parameter TYPE to configure the connection type. For example, you set TYPE=A to create a connection to a specific application server. You set TYPE=B to create an SAP load balancing connection and you set TYPE=R to create a connection to an RFC server program registered at an SAP gateway.

If you upgrade from an earlier version, you must create a new sapwrfc.ini file and configure the connection parameters based on the type of connection that you want to create.

For more information, see the Informatica PowerExchange for SAP 9.6.0 User Guide for PowerCenter.

**ABAP stream mode sessions**

PowerExchange for SAP NetWeaver uses the RFC protocol to generate and install an ABAP program in stream mode.

Previously, PowerExchange for SAP NetWeaver used the CPI-C protocol to generate and install an ABAP program in stream mode.

Effective in version 9.6.0, the CPI-C protocol is deprecated and Informatica will drop support in a future release. You can run existing ABAP programs that use the CPI-C protocol. However, you cannot generate and install new ABAP programs that use the CPI-C protocol.

When you install an existing ABAP program that uses the CPI-C protocol, you are prompted to overwrite the program to use the RFC protocol. Informatica recommends overwriting the program to use the RFC protocol.

**BAPI and IDoc mappings**

Effective in version 9.6.0, Informatica dropped support for deprecated BAPI mappings created in versions earlier than 8.5 and deprecated IDOC mappings created in versions earlier than 7.1. If you upgrade the deprecated mappings to version 9.6.0, the sessions will fail.

Upgrade PowerExchange for SAP NetWeaver and create new BAPI and IDoc mappings with custom transformations.

---

**PowerExchange for Twitter**

Effective in version 9.6.0, Informatica is not shipping PowerExchange for Twitter for PowerCenter. Informatica dropped support for versions 9.1.0, 9.5.0, and 9.5.1. You cannot upgrade from versions 9.1.0, 9.5.0, 9.5.1, and the hotfix versions. Sessions will fail in versions 9.1.0, 9.5.0, and 9.5.1, and the hotfix versions.

You can use PowerExchange for Twitter in the Developer tool.

For more information, see the End of Life (EOL) document at the following location: [https://mysupport.informatica.com/docs/DOC-10512](https://mysupport.informatica.com/docs/DOC-10512).
PowerExchange for Web Services

SOAP 1.2

Effective in version 9.6.0, each web service can have one or more operations that use either a SOAP 1.1 binding or a SOAP 1.2 binding or both a SOAP 1.1 and a SOAP 1.2 binding. You can create a Web Service Consumer transformation with a SOAP 1.1 and SOAP 1.2 binding. The SOAP request can be of SOAP 1.1 or SOAP 1.2 format.

Previously, you could only create an operation with a SOAP 1.1 binding. You could only create a Web Service Consumer transformation with a SOAP 1.1 binding.

NTLMv2

Effective in version 9.6.0, the external web service provider authenticates the PowerCenter Integration Service by using NTLM v1 or NTLM v2.

Previously, the external web service provider used only NTLM v1 to authenticate the PowerCenter Integration Service.
CHAPTER 16

Changes to Adapters for Informatica (9.6.0)

This chapter includes the following topics:

- **PowerExchange for DataSift**, 135
- **PowerExchange for Facebook**, 135
- **PowerExchange for LinkedIn**, 136
- **PowerExchange for Salesforce**, 136
- **PowerExchange for SAP NetWeaver**, 136
- **PowerExchange for Twitter**, 136
- **PowerExchange for Web Content-Kapow Katalyst**, 136

PowerExchange for DataSift

Effective in version 9.6.0, PowerExchange for DataSift installs with Informatica 9.6.0.

Previously, PowerExchange for DataSift had a separate installer.

PowerExchange for Facebook

- Effective in version 9.6.0, PowerExchange for Facebook installs with Informatica 9.6.0.
  Previously, PowerExchange for Facebook had a separate installer.
- Effective in version 9.6.0, when you use the Self resource, you can specify the user name and a list of user IDs or user names to extract the profile of the user.
  Previously, when you used the Self resource, you could only specify the user ID or the Facebook operator `me` to extract the profile of the current user.
- Effective in version 9.6.0, when you use the Profile Feed resource, you can specify the user name to extract the news feeds or Facebook posts of the user.
  Previously, when you used the Profile Feed resource, you could only specify the user ID or the Facebook operator `me` to extract the news feeds of the current user.
**PowerExchange for LinkedIn**

Effective in version 9.6.0, PowerExchange for LinkedIn installs with Informatica 9.6.0.

Previously, PowerExchange for LinkedIn had a separate installer.

**PowerExchange for Salesforce**


Previously, PowerExchange for Salesforce had a separate installer.

**PowerExchange for SAP NetWeaver**

Effective in version 9.6.0, PowerExchange for SAP NetWeaver uses SAP NetWeaver RFC SDK 7.20 libraries. You must install SAP NetWeaver RFC SDK 7.20 libraries to run PowerExchange for SAP sessions.

Previously, you installed SAP RFC SDK classic libraries to run sessions.

**PowerExchange for Twitter**

- Effective in version 9.6.0, you cannot use basic authentication while creating a Twitter streaming connection.
  
  Previously, you could use basic authentication while creating a Twitter streaming connection.

- Effective in version 9.6.0, PowerExchange for Twitter installs with Informatica 9.6.0.
  
  Previously, PowerExchange for Twitter had a separate installer.

**PowerExchange for Web Content-Kapow Katalyst**


Previously, PowerExchange for Web Content-Kapow Katalyst had a separate installer.
Part III: Version 9.5.1

This part contains the following chapters:

- New Features and Enhancements (9.5.1), 138
- Changes to Informatica Data Explorer (9.5.1), 166
- Changes to Informatica Data Quality (9.5.1), 168
- Changes to Informatica Data Services (9.5.1), 174
- Changes to Informatica Data Transformation (9.5.1), 177
- Changes to Informatica Domain (9.5.1), 179
- Changes to PowerCenter (9.5.1), 182
- Changes to Metadata Manager (9.5.1), 184
- Changes to Adapters for PowerCenter (9.5.1), 188
- Changes to Adapters for Informatica (9.5.1), 192
New Features and Enhancements (9.5.1)

This chapter includes the following topics:

- Version 9.5.1 HotFix 4, 138
- Version 9.5.1 HotFix 3, 140
- Version 9.5.1 HotFix 2, 141
- Version 9.5.1 HotFix 1, 145
- Version 9.5.1, 152

Version 9.5.1 HotFix 4

This section describes new features and enhancements in version 9.5.1 HotFix 4.

Command Line Programs

This section describes new commands and options for the Informatica command line programs.

The following table describes a new infacmd oie command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>deployApplication</td>
<td>Deploys the application to an .iar file.</td>
</tr>
</tbody>
</table>

For more information, see Informatica 9.5.1 HotFix 4 Command Reference.

Data Transformation

This section describes new features and enhancements to Data Transformation.

XmlToXlsx Document Processor

Effective in version 9.5.1 HF4, use the XmlToXlsx document processor to convert XML documents to Microsoft Excel .xlsx format.
The processor reverses the operation of the ExcelToXml_03_07_10 document processor. To transform an Excel workbook to XML, use the ExcelToXml_03_07_10 processor in a Data Processor transformation. After you process the XML data, use the XmlToXlsx processor in a transformation to transform the data back to an Excel workbook.

For more information, see Data Transformation 9.5.1 HotFix 4 User Guide.

Metadata Manager

This section describes new features and enhancements to Metadata Manager.

Date Formats for Metadata Source Files

When you create a custom XConnect with a load template, you can specify the format that you use for dates in metadata source files. To specify the date format, edit the load template associated with the metadata source file, and set the dateFormat attribute in the loadTemplate element.

For more information, see Informatica PowerCenter 9.5.1 HotFix 4 Metadata Manager Custom Metadata Integration Guide.

PowerExchange Adapters

This section describes new features and enhancements to PowerExchange adapters.

Adapters for PowerCenter

PowerExchange for MongoDB for PowerCenter

In the Informatica MongoDB ODBC driver, you can select whether to check for errors after every insert or update operation, and check the validity of BSON objects when you run MongoDB writer sessions.

For more information, see Informatica PowerExchange for MongoDB 9.5.1 HotFix 4 User Guide for PowerCenter.

PowerExchange for Salesforce for PowerCenter

• You can configure a session to use the Salesforce Bulk API to read data in bulk from a Salesforce source.
• You can disassociate a custom child object from a standard parent object.

For more information, see Informatica PowerExchange for Salesforce 9.5.1.4.1 User Guide for PowerCenter.

Adapters for Informatica

PowerExchange for MongoDB

In the Informatica MongoDB ODBC driver, you can select whether to check for errors after every insert or update operation, and check the validity of BSON objects when you write data to a MongoDB database.

For more information, see Informatica PowerExchange for MongoDB 9.5.1 HotFix 4 User Guide.
Version 9.5.1 HotFix 3

This section describes new features and enhancements in version 9.5.1 HotFix 3.

PowerCenter

This section describes new features and enhancements to PowerCenter.

Data Masking

You can configure the following session properties for the Data Masking transformation:

- Name the owner of the substitution dictionary table when you configure substitution masking.
- Name the owner of the IDM_SUBSTITUTION_STORAGE or IDM_EXPRESSION_STORAGE table when you configure repeatable expression or unique repeatable substitution masking.

For more information, see Informatica PowerCenter 9.5.1 HotFix 3 Transformation Guide.

Metadata Manager

This section describes new features and enhancements to Metadata Manager.

JDBC Resources

When you configure a JDBC resource, you can specify optional data structures to import such as keys, indexes, and stored procedures.

For more information, see Informatica PowerCenter 9.5.1 HotFix 3 Metadata Manager Administrator Guide.

Oracle Business Intelligence Enterprise Edition (OBIEE) Resources

You can optimize resource loads for large OBIEE resources. Enable the Optimize for large models configuration property to prevent Metadata Manager from loading metadata such foreign keys, joins, relationships, and logical foreign keys.

For more information, see Informatica PowerCenter 9.5.1 HotFix 3 Metadata Manager Administrator Guide.

PowerExchange Adapters

This section describes new features and enhancements to PowerExchange adapters.

Adapters for PowerCenter

PowerExchange for Hadoop for PowerCenter

PowerExchange for Hadoop supports IBM InfoSphere BigInsights version 2.1 to access Hadoop sources and targets.

For more information, see Informatica PowerExchange for Hadoop 9.5.1 HotFix 3 User Guide for PowerCenter.

PowerExchange for Salesforce for PowerCenter

You can configure a CDC flush interval offset to capture real-time data that is submitted within the CDC time limit but not committed by Salesforce within the time limit.

For more information, see Informatica PowerExchange for Salesforce 9.5.1 HotFix 3 User Guide for PowerCenter.
PowerExchange for MongoDB for PowerCenter

You can use PowerExchange for MongoDB to extract data from and load to a MongoDB database.

For more information, see Informatica PowerExchange for MongoDB for 9.5.1 HotFix 3 User Guide for PowerCenter.

PowerExchange for Ultra Messaging for PowerCenter

• You use PowerExchange for Ultra Messaging to connect to Ultra Messaging Streaming and Persistence sources and targets.
• You can use Unicast Immediate Messaging (UIM) to publish topics on TCP streams or topic streams.
• You can use wildcards to configure receiving applications to match multiple topics.

For more information, see Informatica PowerExchange for Ultra Messaging for 9.5.1 HotFix 3 User Guide for PowerCenter.

Adapters for Informatica

PowerExchange for MongoDB

You can use Informatica Developer to create a MongoDB ODBC data object, specify resources, and create a data object operation. You can use the data object operation as a source or target in the mappings. You can also use Informatica Developer to create profiles and scorecards on a MongoDB ODBC data object.

For more information, see Informatica PowerExchange for MongoDB 9.5.1 HotFix 3 User Guide.

Version 9.5.1 HotFix 2

This section describes new features and enhancements in version 9.5.1 HotFix 2.

Informatica Data Quality

This section describes new features and enhancements to Informatica Data Quality.

Address Validator Transformation

The transformation delivers the following enhancements in Canadian address validation:

• You can change the language that the transformation uses to write a street descriptor or a Province name. You can change the language to English or to French. For example you can change "Street" to "Rue."
• You can return the thirteen-character locality code that identifies a locality.
• You can return the rural route identifier for an address.

The transformation delivers the following enhancements in French address validation:

• You can verify and correct addresses to the certification standards of the French National Address Management Service (SNA). SNA certifies the address validation software to verify and correct French address to street level.
• You can return the CEDEXA identifier for a mail center or postal facility.

The transformation delivers the following enhancements in Serbian address validation:

• You can add the PAK postal address code to a Serbian address. The six-digit PAK code identifies the street that contains the address mailbox.
The transformation delivers the following enhancements in United Kingdom address validation:

- You can add Unique Delivery Point Reference Number (UDPRN) data to a United Kingdom address. The UDPRN is an eight-digit code that uniquely identifies a United Kingdom address.

The transformation extends the range of status codes that the following ports can return for an address:

- Address Resolution Code. The port returns an alphanumeric code that describes the status of non-valid address elements in an address.
- Extended Element Status. The port returns an alphanumeric code that supplements the status data on the Element Input Status port and Element Result Status port.

For more information, see *Informatica 9.5.1 HotFix 2 Address Validator Port Reference* and *Informatica 9.5.1 HotFix 2 Developer Transformation Guide*.

**Data Masking**

The Data Masking transformation can mask integer and bigint data for phone number masking.

For more information, see *Informatica 9.5.1 HotFix 2 Developer Transformation Guide*.

**Import From PowerCenter**

When you import PowerCenter objects in the Developer tool, you can assign a single connection in the Model repository to multiple PowerCenter objects at the same time. You can assign a single connection to all sources, all targets, all Lookup transformations, or all objects that do not have an assigned connection. Or, you can assign a single connection to all objects with names that match a specified name pattern.

For more information, see *Informatica 9.5.1 HotFix 2 Developer User Guide*.

---

**Informatica Data Services**

This section describes new features and enhancements to Informatica Data Services.

**Data Masking**

The Data Masking transformation can mask integer and bigint data for phone number masking.

For more information, see *Informatica 9.5.1 HotFix 2 Developer Transformation Guide*.

**Import From PowerCenter**

When you import PowerCenter objects in the Developer tool, you can assign a single connection in the Model repository to multiple PowerCenter objects at the same time. You can assign a single connection to all sources, all targets, all Lookup transformations, or all objects that do not have an assigned connection. Or, you can assign a single connection to all objects with names that match a specified name pattern.

For more information, see *Informatica 9.5.1 HotFix 2 Developer User Guide*.

---

**Informatica Domain**

This section describes new features and enhancements to Informatica Domain.

**Informatica Administrator**

You can search the Informatica Knowledge Base from the Administrator tool. You can also, click an error message code to view the search results for the error in the Informatica Knowledge Base.

For more information, see *Informatica 9.5.1 HotFix 2 Administrator Guide*. 
Connectivity

You can create a connection to an Oracle database with the Oracle Advanced Security (OAS) option enabled using the DataDirect JDBC driver.

For more information, see *Informatica 9.5.1 HotFix 2 Installation Guide*.

PowerCenter

This section describes new features and enhancements to PowerCenter.

Data Masking

The Data Masking transformation can mask integer and bigint data for phone number masking.

For more information, see *Informatica PowerCenter 9.5.1 HotFix 2 Transformation Guide*.

PowerCenter Big Data Edition

This section describes new features and enhancements to PowerCenter Big Data Edition.

Mappings in a Hive Environment

You can run mappings in a Hive environment with MapR 2.1.2 and Hortonworks 1.1 distribution.

For more information, see *PowerCenter Big Data Edition 9.5.1 HotFix 2 User Guide*.

Metadata Manager

This section describes new features and enhancements to Metadata Manager.

Metadata Extraction Performance Improvements

To increase metadata extraction performance for Business Objects, Cognos, and Oracle Business Intelligence Enterprise Edition (OBIEE) resources, the Metadata Manager Agent can use multiple worker threads for metadata extraction. The Metadata Manager Agent calculates the optimal number of threads based on the JVM architecture and number of available CPU cores on the machine that runs the Metadata Manager Agent. You can also configure the number of threads manually.

For more information, see *Informatica PowerCenter 9.5.1 HotFix 2 Metadata Manager Administrator Guide*.

Resource Types

You can create the following resource types:

- Business Objects 14.0 SP6
- Cognos 10.2. Previously, you could create Cognos resources up to version 10.1.
- ERwin 9.1 (File)
- ERwin 9.1 (Single Model from mart)

For more information, see *Informatica PowerCenter 9.5.1 HotFix 2 Metadata Manager Administrator Guide*.

Oracle ASO Support

You can create an Oracle resource when the Oracle database uses the Oracle Advanced Security Option (ASO). You can also create a Metadata Manager repository on an Oracle database that uses the Advanced Security Option.

For more information, see *Informatica PowerCenter 9.5.1 HotFix 2 Metadata Manager Administrator Guide*.
PowerExchange Adapters

This section describes new features and enhancements to PowerExchange adapters.

Adapters for PowerCenter

PowerExchange for Hadoop for PowerCenter

PowerExchange for Hadoop supports MapR 2.1.2 and EMC Greenplum PivotalHD 2.0.1 to access Hadoop sources and targets.

For more information, see *Informatica PowerExchange for Hadoop 9.5.1 HotFix 2 User Guide for PowerCenter*.

PowerExchange for Salesforce for PowerCenter

You can configure a CDC flush interval offset to capture real-time data that is submitted within the CDC time limit but not committed by Salesforce within the time limit.

For more information, see *Informatica PowerExchange for Salesforce 9.5.1.2.1 User Guide for PowerCenter*.

PowerExchange for Salesforce for PowerCenter

- In Salesforce Bulk API sessions, the PowerCenter Integration Service can permanently delete rows from the target machine.
- You can configure the directory for the Bulk API error log file.
- You can configure the polling interval for a Bulk API session.

For more information, see *Informatica PowerExchange for Salesforce 9.5.1 HotFix 2 User Guide for PowerCenter*.

PowerExchange for Teradata Parallel Transporter API

You can specify how Teradata PT API marks error rows when it attempts to update or delete multiple rows in the target table. You can mark extra rows with any of the following values:

- None
- For update
- For delete
- Both

For more information, see *Informatica PowerExchange for Teradata Parallel Transporter API 9.5.1 HotFix 2 User Guide for PowerCenter*.

Adapters for Informatica

PowerExchange for DataSift

Use the PowerExchange for Social Media 9.5.1 HotFix 2 installer to install PowerExchange for DataSift.

For more information, see *Informatica PowerExchange for DataSift 9.5.1 Hot Fix 2 User Guide*.

PowerExchange for Facebook

- PowerExchange for Facebook uses the Facebook API to control the number of rows that you request when a mapping runs.
- Use the PowerExchange for Social Media 9.5.1 HotFix 2 installer to install PowerExchange for Facebook.

For more information, see *Informatica PowerExchange for Facebook 9.5.1 Hot Fix 2 User Guide*.
PowerExchange for LinkedIn

- PowerExchange for LinkedIn uses the LinkedIn API to control the number of rows that you request when a mapping runs.
- You can specify the profile query parameter in new formats.

For more information, see Informatica PowerExchange for LinkedIn 9.5.1 Hot Fix 2 User Guide.

PowerExchange for Twitter

PowerExchange for Twitter uses the Twitter API to control the number of rows that you request when a mapping runs.

For more information, see Informatica PowerExchange for Twitter 9.5.1 Hot Fix 2 User Guide.

PowerExchange for Web Content-Kapow Katalyst

Use the PowerExchange for Social Media 9.5.1 HotFix 2 installer to install PowerExchange for Web Content-Kapow Katalyst.

For more information, see Informatica PowerExchange for Web Content-Kapow Katalyst 9.5.1 Hot Fix 2 User Guide.

Version 9.5.1 HotFix 1

This section describes new features and enhancements in version 9.5.1 HotFix 1.

Informatica Data Explorer

This section describes the new features and enhancements to Informatica Data Explorer.

Look Up Business Terms

Look up the meaning of a Model repository object name as a business term in the Business Glossary Desktop to understand its business requirement and current implementation.

You can select an object in the Analyst tool, and use hotkeys to look up the name of the object in the Business Glossary Desktop. You can look up names of objects in Analyst tool views such as the Properties view or Navigator, or names of columns and profiles.

You can select an object in the Developer tool, and use hotkeys or the Search menu to look up the name of the object in the Business Glossary Desktop. You can look up names of objects in Developer tool views such as the Object Explorer view or editor, or names of columns and profiles in the editor.

For more information, see Informatica Data Explorer 9.5.1 HotFix 1 User Guide.

Scorecard Lineage

View a scorecard lineage diagram for a scorecard metric or metric group in Informatica Analyst. Use scorecard lineage to analyze the root cause of unacceptable score variance for a metric or metric group and understand the data flow. To view the scorecard lineage diagram, export scorecards to an XML file from Informatica Developer. Use the exported XML file to create and load a resource file in Metadata Manager. The name of the resource file that you create and load in Metadata Manager must use the following naming convention: <MRS name>_<project name>. You can then launch scorecard lineage from Informatica Analyst.

For more information, see Informatica Data Explorer 9.5.1 HotFix 1 User Guide.
Informatica Data Quality

This section describes new features and enhancements to Informatica Data Quality.

Accelerators

Informatica country accelerators include rules that calculate geographic coordinates for an address location.

The Core Accelerator includes rules that perform the following types of analysis:

- Calculate the distance between two geographic coordinates.
- Determine if a geographic coordinate falls inside or outside a set of coordinates that form a polygon shape.

For more information, see Informatica Data Quality 9.5.1 HotFix 1 Accelerator Guide.

Address Validator Transformation

The Address Validator transformation adds the following types of validation data and enrichment data to address records:

- Validation status indicators for New Zealand addresses, including the SendRight validation standard that New Zealand Post defines for certified addresses.
- Validation for address elements to delivery point level in New Zealand addresses.
- Locality ISO code values for Australian addresses.
- Extended validation status indicators for data elements in all addresses.

You can specify the maximum number of address suggestions that the Address Validator transformation returns in suggestion list mode.

For more information, see Informatica 9.5.1 HotFix 1 Address Validator Port Reference.

Classifier Models

You can perform the following classifier model operations in the Developer tool:

- Create a classifier model.
- Add label values and data values to a classifier model.
- Assign labels to data rows
- Edit label names.
- Filter the data rows that display in a classifier model.
- Search data rows for data values.
- Copy and paste classifier models between content sets in the Model repository.

For more information, see Informatica Data Quality 9.5.1 HotFix 1 User Guide.

Classifier Transformation

You can configure a Classifier transformation to generate a classifier score for each row of input data.

A classifier score represents the degree of similarity between the input data and the classifier model that the transformation uses to analyze the input data.

A high percentage score indicates a high degree of similarity.

For more information, see Informatica 9.5.1 Developer Transformation Guide.

Look Up Business Terms from Informatica Developer

Look up the meaning of a Model repository object name as a business term in the Business Glossary Desktop to understand its business requirement and current implementation.
You can select an object in the Developer tool and use hotkeys or the Search menu to look up the name of the object in the Business Glossary Desktop. You can look up the names of objects in the Object Explorer such as the names of reference data objects. You can look up the names of elements in the mapping editor such as transformation port names.

For more information, see Informatica 9.5.1 HotFix 1 Developer User Guide and Informatica Data Quality 9.5.1 HotFix 1 Analyst User Guide.

Pushdown Optimization Enhancements

You can push transformation logic for an Aggregator transformation and a Sorter transformation to a relational source database.

For more information see the Informatica Developer 9.5.1 HotFix 1 User Guide.

Reference Tables

You can perform the following operations on reference tables:

- You can edit unmanaged reference table data in the Developer tool and Analyst tool. You can edit unmanaged reference table metadata in the Analyst Tool.
- You can remove unused tables from the reference data warehouse. When you delete a reference table object from the Model repository, the associated tables in the reference data warehouse are no longer used by Informatica.

Run the infacmd cms Purge command to remove all unused tables from the reference data database. Or, use the Content Management Service options in the Administrator tool.

For more information, see Informatica 9.5.1 HotFix 1 Command Reference and Informatica 9.5.1 HotFix 1 Administrator Guide.

Workflows

If you enable a workflow for recovery, you can recover a workflow instance from the point of interruption. You interrupt a workflow when you abort or cancel the workflow instance. A Data Integration Service interrupts a workflow when the service shuts down unexpectedly.

Use the Developer tool to enable a workflow for recovery. When you enable a workflow for recovery, you must define a recovery strategy for each Command, Mapping, and Notification task in the workflow. A task recovery strategy defines how the Data Integration Service completes an interrupted task during a workflow recovery run. A Command, Mapping, and Notification task can have a restart or a skip recovery strategy. A Human task always has a restart strategy.

Use the Monitoring tab of the Administrator tool or use the infacmd wfs command line programs to recover aborted or canceled workflow instances that you enabled for recovery.

For more information, see Informatica 9.5.1 HotFix 1 Developer Workflow Guide.

Informatica Data Services

This section describes new features and enhancements to Informatica Data Services.

Look Up Business Terms

In the Analyst tool or Developer tool, you can look up the meaning of a Model repository object name as a business term in the Business Glossary Desktop to understand its business requirement and current implementation.

You can select an object in the Analyst tool, and use hotkeys to look up the name of the object in the Business Glossary Desktop. You can look up names of objects in Analyst tool views such as the Properties view or Navigator, or names of columns, profiles, and mapping specifications and transformation objects.
You can select an object in the Developer tool, and use hotkeys or the Search menu to look up the name of
the object in the Business Glossary Desktop. You can look up names of objects in Developer tool views such as
the **Object Explorer** view or editor, or names of columns, profiles, and mapping ports in the editor.

*For more information see the Informatica Data Integration Analyst 9.5.1 User Guide and the Informatica
Developer 9.5.1 User Guide.*

**Mapping Specification Enhancements**

In the Analyst tool, you can duplicate a target column or move a target column up or down.

You can search for a data object when you add a source or a lookup to a mapping specification. You can also
search for a reusable rule when you apply a rule to a mapping specification.

**Pushdown Optimization Enhancements**

You can push transformation logic for an Aggregator transformation and a Sorter transformation to a
relational source database.

*For more information see the Informatica Developer 9.5.1 HotFix 1 User Guide.*

---

**Informatica Data Transformation**

This section describes new features and enhancements to Informatica Data Transformation.

**Data Transformation Libraries**

Data Transformation libraries contain predefined transformation components used with the 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.

The Library object contains a large number of 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.

*For more information, see Data Transformation 9.5.1 HotFix 1 User Guide.*

**Data Transformation with JSON Input**

A Data Processor transformation can contain JSON input with an .xsd schema file that defines JSON input
file hierarchies.

You create a project with a JSON input schema in Data Transformation. The JSON schema is converted into
an .xsd file that Data Transformation uses to transform JSON input. You can import the project into your
repository and use the .xsd in Data Processor transformations to support JSON input with the same
hierarchy.

*For more information, see Data Transformation 9.5.1 HotFix 1 Studio User Guide.*

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**Informatica Domain**

This section describes new features and enhancements to the Informatica domain.

**Recover Workflows**

When you monitor workflows, you can recover aborted or canceled workflow instances that are enabled for
recovery. A workflow instance has an aborted state if a task with a restart recovery strategy encounters a
recoverable error, if you abort the workflow instance, or if the Data Integration Service process shuts down
unexpectedly. A workflow instance has a canceled state if you cancel the workflow instance.
When you recover a workflow instance, the Data Integration Service restarts or skips the interrupted task based on the task recovery strategy. The service continues processing the subsequent workflow objects.

When you upgrade a domain that contains aborted or canceled workflow instances, you cannot recover the upgraded workflow instances because the deployed workflow definitions are not enabled for recovery.

For more information, see Informatica 9.5.1 HotFix 1 Administrator Guide.

Command Line Programs

This section describes new and changed commands and options for the Informatica command line programs.

infacmd cms Commands

The following table describes a new infacmd cms command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purge</td>
<td>Deletes data that is not used by a reference table object from the reference data database.</td>
</tr>
</tbody>
</table>

infacmd oie Commands

The following table describes a new infacmd oie command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>exportResources</td>
<td>Exports scorecard objects and lineage information in a project or folder to an XML file that you use in Metadata Manager.</td>
</tr>
</tbody>
</table>

infacmd pwx Commands

The following table describes a deprecated infacmd pwx command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DisplayCheckpointsLogger</td>
<td>No longer displays checkpoint information for a PowerExchange Logger Service because the PowerExchange Logger no longer uses checkpoint files. If you enter this command, the PowerExchange Logger reports that the command is not valid.</td>
</tr>
</tbody>
</table>

infacmd wfs Commands

The following table describes new infacmd wfs commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>abortWorkflow</td>
<td>Aborts a running workflow instance.</td>
</tr>
<tr>
<td>cancelWorkflow</td>
<td>Cancels a running workflow instance.</td>
</tr>
<tr>
<td>listActiveWorkflowInstances</td>
<td>Lists active workflow instances. An active workflow instance is an instance on which an action can be performed.</td>
</tr>
<tr>
<td>recoverWorkflow</td>
<td>Recovers an interrupted workflow instance.</td>
</tr>
</tbody>
</table>
pmrep Commands

The following table describes an updated pmrep command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RollbackDeployment</td>
<td>Contains the following new options:</td>
</tr>
<tr>
<td></td>
<td>- <code>repositoryname (-r)</code>. Optional. Name of the source repository from where you deploy the deployment group.</td>
</tr>
</tbody>
</table>

For more information, see *Informatica 9.5.1 HotFix 1 Command Reference*.

PowerCenter Big Data Edition

This section describes new features and enhancements to PowerCenter Big Data Edition.

Workflows

If you enable a workflow for recovery, you can recover a workflow instance from the point of interruption. A running workflow instance can be interrupted when an error occurs, when you abort or cancel the workflow instance, or when a Data Integration Service process shuts down unexpectedly.

Use the Developer tool to enable a workflow for recovery. When you enable a workflow for recovery, you must define a recovery strategy for each Command, Mapping, and Notification task in the workflow. A task recovery strategy defines how the Data Integration Service completes an interrupted task during a workflow recovery run. A task can have a restart or a skip recovery strategy.

Use the Monitoring tab of the Administrator tool or use the infacmd wfs command line programs to recover aborted or canceled workflow instances that are enabled for recovery.

For more information, see *Informatica 9.5.1 HotFix 1 Developer Workflow Guide*.

Mappings in a Hive Environment

Effective in 9.5.1 HotFix 1, you can run mappings in a Hive environment with Cloudera 4.1.2 distribution.

For more information, see *PowerCenter Big Data Edition 9.5.1 HotFix 1 User Guide*.

Metadata Manager

This section describes new features and enhancements to Metadata Manager.

Linking Rule Definitions between Models

You can create linking rule definitions for pairs of models. Create linking rule definitions for a pair of models so that you can apply the same linking rules to different resources associated with the models. For example, you develop a custom model, "CustomETL," and you need to link objects in CustomETL resources with objects in Oracle resources. You can create a linking rule definition between the CustomETL model and the Oracle model and then instantiate the rule definition for each pair of resources of the two models.

For more information, see *Informatica PowerCenter 9.5.1 HotFix 1 Metadata Manager Custom Metadata Integration Guide*.

Lineage for Scorecards

You can view lineage for scorecards. Create an Informatica Platform resource from a resource file exported from the Developer tool, and then view lineage for objects in the Informatica Platform resource.
Lineage for Data Quality Transformations

You can view port-level lineage for Data Quality transformations. Create an Informatica Platform resource, and run data lineage on the resource.

For more information, see Informatica PowerCenter 9.5.1 HotFix 1 Metadata Manager Administrator Guide.

Resource Configuration Files

You can export resource properties to a resource configuration file on the Load tab. When you export the resource configuration, you can optionally include rule sets. You can also import resource properties from a resource configuration file on the Load tab.

For more information, see Informatica PowerCenter 9.5.1 HotFix 1 Metadata Manager Custom Metadata Integration Guide.

Keyword Search

As you type a search string in the Search list, Metadata Manager displays completed search strings that you can select.

PowerExchange Adapters

This section describes new features and enhancements to PowerExchange adapters.

Adapters for PowerCenter

PowerExchange for Hadoop for PowerCenter

Effective in 9.5.1 HotFix 1, PowerExchange for Hadoop supports Cloudera 4.1.2 and HortonWorks 1.1 to access Hadoop sources and targets.

For more information, see Informatica PowerExchange for Hadoop 9.5.1 HotFix 1 User Guide for PowerCenter.

PowerExchange for Salesforce for PowerCenter

Effective in 9.5.1 HotFix 1, you can add a prefix to the names of PowerExchange for Salesforce success log files and failure log files.

For more information, see the Informatica PowerExchange for Salesforce 9.5.1 HotFix 1 User Guide for PowerCenter.

PowerExchange for Teradata Parallel Transporter API

Effective in 9.5.1 HotFix 1, you can configure the following session properties for a Teradata PT API target:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insert</td>
<td>Teradata PT API creates a DML group to insert rows.</td>
</tr>
<tr>
<td>Update</td>
<td>Teradata PT API creates a DML group to update rows.</td>
</tr>
<tr>
<td>Delete</td>
<td>Teradata PT API creates a DML group to delete rows.</td>
</tr>
</tbody>
</table>

When you upgrade to PowerExchange for Teradata Parallel Transporter API version 9.5.1 HotFix 1, you must register the TeradataPT.xml file with the PowerCenter repository to use the new features introduced in version 9.5.1 HotFix 1.
Adapters for Informatica

PowerExchange for Salesforce

- You can use PowerExchange for Salesforce to read data from Salesforce sources.
- You can use the Developer tool to import a Salesforce data object and create a data object read operation. You can import both standard and custom Salesforce objects and read related objects.
- You can define data object read operation properties that determine how data is read from Salesforce sources.
- The data object read operation properties you can set include properties for changed data capture, bulk API, row limit, custom SOQL, sorted ports, and page size.
- You can use the data object read operation as a source in the mappings.
- You can run mappings developed in the Developer tool.
- You can access Salesforce through an HTTP proxy server.

For more information, see the Informatica PowerExchange for Salesforce 9.5.1 HotFix 1 User Guide.

Version 9.5.1

This section describes new features and enhancements in version 9.5.1.

Informatica Installer

This section describes new features and enhancements to the Informatica platform installer.

Pre-Installation (i9Pi) System Check Tool

If you run the Pre-Installation (i9Pi) System Check Tool, the values you enter during the system check appear as the default values in the Informatica installer during the services installation or upgrade.

Informatica Data Explorer

This section describes new features and enhancements to Informatica Data Explorer.

Data Domains

You can create data domains from the values and patterns in column profile results for use across the data systems or enterprise.

For more information, see Informatica Data Explorer 9.5.1 User Guide.

DDL Scripts from Profile Model

You can generate DDL scripts from the profile model. Supported databases are DB2, Oracle, and Microsoft SQL Server.

For more information, see Informatica Data Explorer 9.5.1 User Guide.
Enterprise Discovery

- The enterprise discovery results layout has a new canvas for the graphical view of foreign key results and filter at the top that displays filter conditions.
- You can save the graphical view of foreign key results as a .png file.
- You can select the top-ranking approach to determine primary keys when you specify the foreign key inference options for enterprise discovery. The Developer tool uses the top-ranking method along with documented primary keys and user-defined primary keys to infer the foreign key relationships. Top ranking of inferred keys is based on the descending conformance percentage rounded to a single decimal precision.

For more information, see Informatica Data Explorer 9.5.1 User Guide.

Export to Microsoft Excel

You can export data domain discovery results to Microsoft Excel from both Analyst and Developer tools. Export enterprise discovery results from the Developer tool to the client machine or a server location set in the Data Integration Service properties of Informatica Administrator.

For more information, see Informatica Data Explorer 9.5.1 User Guide.

Model Repository (MRX) Views

The MRX_PROFILERUNSTAT view provides information about the run-time statistics of a profile, profile model, or scorecard. The view provides information such as the object name, request type, start time and end time of the object, username, and the domain the user belongs to.

The MRX_PROFILE_SUMMARY view provides a summary of profile objects. The view provides information about the object name, type, and internal IDs.

For more information, see Informatica 9.5.1 Model Repository (MRX) Views.

Scorecards

- You can assign a metric weight for each metric in a scorecard.
- The score of a metric group is the weighted average of all scores in the metric group.
- You can configure scorecard notifications in the Analyst tool. Users receive email notifications when metric scores or metric group scores move across thresholds or remain in specific score ranges across multiple scorecard runs.
- Assign the Model Repository Service privilege Manage Notifications to enable a user to configure scorecard notifications.

For more information, see Informatica 9.5.1 Developer User Guide.

Informatica Data Quality

This section describes new features and enhancements to Informatica Data Quality.

Accelerators

The set of Informatica accelerators includes the Informatica Data Quality Accelerator for Spain. The accelerator contains rules, reference tables, demonstration mappings, and demonstration data objects that solve common data quality issues in Spanish data.
The core accelerator includes the following rule:

- Rule_Classify_Language. Use to classify data values based on the language of each value.

  The Rule_Classify_Language rule classifies each data value as one of the following languages: Arabic, Dutch, English, French, German, Italian, Portuguese, Russian, Spanish, or Turkish.

  The rule uses the Language_Classifier content set to analyze data values. When you import the core accelerator to the repository, you can configure a Classifier transformation to use the content set to classify data values by language.

The Brazil accelerator includes the following rules:

- Rule_BRA_Personal_PIS_PASEP_Validation. Use to validate Brazilian social insurance numbers.
- Rule_BRA_Personal_Voter_Registration_Validation. Use to validate the check digits in Brazil voter registration numbers.

Classifier Models

A classifier model is a type of reference data object that you can use to analyze input strings and determine the types of information they contain. You use a classifier model in a Classifier transformation.

Use a classifier model when input strings contain large amounts of data. For example, use a classifier model when you convert a series of documents or social media comments into a single data source.

You use the Developer tool to import classifier model files. The Model repository stores the classifier model object. The classifier model data is stored as a file on the Informatica services machine. The Content Management Service stores the path to the classifier model files that you import. Informatica uses the following directory path as the default location for classifier model files:

\[\text{Informatica	extunderscore install	extunderscore directory}/tomcat/bin/classifier\]

You can use the Content Management Service to update the location of the classifier model files on the Informatica services machine.

For more information, see Informatica 9.5.1 Data Quality User Guide.

Classifier Transformation

The Classifier transformation is a passive transformation that analyzes input fields and determines the type of information in each field. Use a Classifier transformation when each input field contains the contents of a document or a significant amount of text. A Classifier transformation uses a classifier model to analyze the input data.

For more information, see Informatica 9.5.1 Developer Transformation Guide.

Content Management Service

You can specify the temporary directory for the Content Management Service. The Content Management Service uses the directory to store reference table data during data import and export operations. You specify a directory on the Informatica services machine.

The default directory is [Informatica_install_directory]/Datafiles.

For more information, see Informatica 9.5.1 Administrator Guide.

Filter Projects

You can filter the list of projects that appear in the Object Explorer view before you connect to the Model repository. When you filter projects before you connect, you can decrease the amount of time that the Developer tool takes to connect to the repository.

For more information, see Informatica 9.5.1 Developer User Guide.
Informatica Data Director for Data Quality

You can use the following new features in Informatica Data Director for Data Quality:

- You can export record or cluster data from a task instance in Data Director for Data Quality task to a comma-separated file.
- When you log in as an administrator, you can find all task instances that share a common Human task parent.
- When you log in as an administrator, you stop operations on all task instances that share a common Human task parent. The records associated the task instances pass to the next stage in the Human task.
- You can view a unique task ID for every task instance.
- You can filter the clusters in a duplicate record task by the cluster status.

For more information, see Informatica 9.5.1 Data Director for Data Quality User Guide.

Java Transformation

You can enable the Stateless advanced property for a Java transformation in the Developer tool. When you enable the Stateless advanced property, the Data Integration Service processes the input row without depending on the value of the previous row. The Stateless property is valid only in a Hive environment.

For more information, see Informatica 9.5.1 HotFix 3 Developer Transformation Guide.

Lookup Transformation

You can create a Lookup transformation in the Developer tool that looks up data in a reference table.

For more information, see Informatica 9.5.1 Developer Transformation Guide.

Match Transformation

You can view logs in the Developer tool that display progress data for a mapping that runs a Match transformation. The mapping adds a record to the log every time the Match transformation performs 100,000 record comparisons.

You can select the following options when you configure a Match transformation to sort duplicate records into clusters:

- You can specify that the transformation writes identical records directly to the cluster output. The link scores and driver scores for records in the clusters may change when you select this option.

- You can specify that the transformation creates clusters that represent the best matches between one record and another in a data set. Use this option when you define an identity match strategy on a single data set.

For more information, see Informatica 9.5.1 Developer Transformation Guide.

Model Repository (MRX) Views

The MRX_OBJECT_SUMMARY view provides a summary of Model repository objects. The view provides information about the project that the object belongs to, the object path, and user activity on the object.

For more information, see Informatica 9.5.1 Model Repository (MRX) Views.

Reference Tables

You can assign privileges to users and groups on reference table objects. Use the Security options in the Administrator tool to assign privileges.

For more information, see Informatica 9.5.1 Administrator Guide.
User-Defined Parameters
In the Developer tool, you can create a user-defined parameter in reusable Aggregator, Joiner, Rank, Reference Table Lookup, Relational Lookup, and Sorter transformations. You can assign the parameter to the cache file directory, temporary file directory, or connection fields in the transformation.

For more information, see Informatica 9.5.1 Developer User Guide.

Workflows
- You can edit the email notifications that users receive when a Human task changes status.
- The workflow log file includes the thread name for each log event.

For more information, see Informatica 9.5.1 Developer Workflow Guide.

Informatica Data Services
This section describes new features and enhancements to Informatica Data Services.

Filter Projects
You can filter the list of projects that appear in the Object Explorer view before you connect to the Model repository. When you filter projects before you connect, you can decrease the amount of time that the Developer tool takes to connect to the repository.

For more information, see Informatica 9.5.1 Developer User Guide.

Find in Editor
In the Developer tool, you can search for attributes or virtual tables in the SQL data service editor. You can search for expressions, groups, ports, transformations, or virtual tables in the virtual table mapping editor. You can search for expressions, groups, ports, or transformations in the virtual stored procedure editor.

For more information, see Informatica 9.5.1 Developer User Guide.

Java Transformation
You can enable the Stateless advanced property for a Java transformation in the Developer tool. When you enable the Stateless advanced property, the Data Integration Service processes the input row without depending on the value of the previous row. The Stateless property is valid only in a Hive environment.

For more information, see Informatica 9.5.1 HotFix 3 Developer Transformation Guide.

Lookup Transformation
You can create a Lookup transformation in the Developer tool that looks up data in a reference table.

For more information, see Informatica 9.5.1 Developer Transformation Guide.

Mapping Specification
- After you import a flat file, the Analyst tool infers the Numeric or String datatypes for flat file columns based on the first 10,000 rows.
- You can search for a table or table schema when you import a table.
- You can export the mapping specification target as a table definition in the Analyst tool. The Analyst tool generates an SQL script that contains the table definition based on the structure of the mapping specification target. You can provide the script to a developer to create the mapping specification target as a table in a database.
- If you do not have permissions to export the mapping specification to a PowerCenter repository, you can choose to export the mapping specification logic as an XML file. You can download this file and provide it to a PowerCenter developer to import as a mapplet or mapping in the PowerCenter repository.
Model Repository (MRX) Views

The MRX_OBJECT_SUMMARY view provides a summary of Model repository objects. The view provides information about the project that the object belongs to, the object path, and user activity on the object.

For more information, see Informatica 9.5.1 Model Repository (MRX) Views.

ODBC Driver Installation

You can install the Informatica data services ODBC drivers in silent mode on UNIX and Windows machines.

For more information, see Informatica Data Services 9.5.1 User Guide.

User-Defined Parameters

In the Developer tool, you can create a user-defined parameter in reusable Aggregator, Joiner, Rank, Reference Table Lookup, Relational Lookup, and Sorter transformations. You can assign the parameter to the cache file directory, temporary file directory, or connection fields in the transformation.

For more information, see Informatica 9.5.1 Developer User Guide.

Informatica Development Platform

This section describes new features and enhancements to Informatica Development Platform.

Design API

Version 9.5.1 includes the following enhancements for the Design API:

- You can create a BAPI transformation to read or write cluster field data from an SAP table data.
- You can create a folder with a pound sign (#) in the folder name.
- You can create a Teradata MultiLoad connection object.
- You can use the following special mask formats in a Data Masking transformation:
  - Credit card numbers
  - Advanced email addresses
  - IP addresses
  - Phone numbers
  - Social insurance numbers
  - URL addresses
- You can create an XML source or XML target definition from an XML schema definition with an entity view or a hierarchical normalized view.

For more information, see Informatica Development Platform 9.5.1 IDP Developer Guide.

Informatica Domain

This section describes new features and enhancements to the Informatica domain.

Change Password Web Application

The Change Password web application allows you to change your password from Informatica Administrator and other Informatica client tools.
Command Line Programs

This section describes new commands and options for the Informatica command line programs.

infacmd cms Commands

The following table describes updated infacmd cms commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CreateService</td>
<td>Contains the following new options:</td>
</tr>
<tr>
<td></td>
<td>-RepositoryUsername (-rsu). Required. User name to connect to the Model Repository Service.</td>
</tr>
<tr>
<td></td>
<td>-RepositoryPassword (-rsp). Required. User name to connect to the Model Repository Service.</td>
</tr>
<tr>
<td></td>
<td>-RepositorySecurityDomain (-rssd). Required if you use LDAP authentication. Name of the security domain that the user belongs to.</td>
</tr>
<tr>
<td></td>
<td>Update any script that uses the CreateService command with the new required options.</td>
</tr>
<tr>
<td>ResyncData</td>
<td>Contains new option -Type (-t). This option specifies the type of model file to synchronize. You can specify probabilistic model files or classifier model files.</td>
</tr>
<tr>
<td>UpdateServiceOptions</td>
<td>Enables new options:</td>
</tr>
<tr>
<td></td>
<td>-DataServiceOptions.RepositoryUsername. Specifies a username that the Content Management Service uses to connect to the Model Repository Service.</td>
</tr>
<tr>
<td></td>
<td>-DataServiceOptions.RepositoryPassword. Specifies a password that the Content Management Service uses to connect to the Model Repository Service.</td>
</tr>
<tr>
<td></td>
<td>-FileTransferOptions.TempLocation. Specifies a directory that the Content Management Service uses to stage data that it adds to a reference table.</td>
</tr>
<tr>
<td>UpdateServiceProcessOptions</td>
<td>Enables new options:</td>
</tr>
<tr>
<td></td>
<td>-GeneralOptions.JVMOptions. Specifies Java memory allocation options and Java virtual machine command line options.</td>
</tr>
<tr>
<td></td>
<td>-IdentityOptions.IdentityReferenceDataLocation. Specifies the location of identity population files.</td>
</tr>
<tr>
<td></td>
<td>-IdentityOptions.IdentityCacheDir. Specifies the location of the cache directory used in identity match analysis.</td>
</tr>
<tr>
<td></td>
<td>-IdentityOptions.IdentityIndexDir. Specifies the location of the index key directory used in identity match analysis.</td>
</tr>
</tbody>
</table>

infacmd dis Commands

The following table describes an updated infacmd dis command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CreateService</td>
<td>Contains new option -httpProtocolType (-pt). This option specifies the security protocol that the Data Integration Service uses.</td>
</tr>
</tbody>
</table>

infacmd hts commands

infacmd hts commands manage the database tables that store Human task metadata.
The following table describes the infacmd hts commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CreateDB</td>
<td>Creates database tables that store Human task metadata.</td>
</tr>
<tr>
<td>DropBD</td>
<td>Drops database tables that store Human task metadata.</td>
</tr>
<tr>
<td>Exit</td>
<td>Stops all Human task operations, and passes the records associated with the task to the next stage in the workflow.</td>
</tr>
</tbody>
</table>

**infacmd ipc Commands**

The following table describes an updated command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ExportToPC</td>
<td>The option -DsServiceName (-dsn) is removed. You do not need to specify a Data Integration Service when you run the command. If you created scripts that use infacmd ipc ExportToPC, you must update the scripts.</td>
</tr>
</tbody>
</table>

**infacmd rtm Commands**

The following table describes an updated command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export</td>
<td>The option -DataIntegrationService (-ds) is removed. You do not need to specify a Data Integration Service when you run the command. If you created scripts that use infacmd rtm Export, you must update the scripts.</td>
</tr>
</tbody>
</table>

**infacmd wfs Commands**

The following table describes a new infacmd wfs command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ListWorkflows</td>
<td>Lists the workflows in an application.</td>
</tr>
</tbody>
</table>

For more information, see *Informatica 9.5.1 Command Reference*.

**PowerCenter**

This section describes new features and enhancements to PowerCenter.

**Data Masking Transformation**

You can configure advanced email address masking in the Data Masking transformation to create a realistic email address. You can generate an email address from a dictionary file or from the transformation output ports in the mapping. You can apply expressions to create an email address. You can also specify a domain dictionary to apply different domain names in the email address.

For more information, see the *Informatica PowerCenter 9.5.1 Transformation Guide*. 
PowerCenter Big Data Edition

PowerCenter Big Data Edition consists of a set of components to process large and complex data sets that cannot be processed through standard database management tools.

PowerCenter Big Data Edition includes functionality from the following Informatica products: PowerCenter, Data Quality, Data Explorer, Data Transformation, Data Replication, PowerExchange for Hive, PowerExchange for HDFS, and social media adapters.

In addition to basic functionality associated with the Informatica products, you can perform the following functionality associated with big data:

**Access big data sources**
Access unstructured and semi-structured data, social media data, cloud applications data, and HDFS and Hive data. You can process data in a Informatica domain environment or a Hive environment.

**Replicate data**
Replicate big transactional data between heterogeneous databases and platforms.

**High-performance processing within the Informatica domain**
Distribute mapping, session, and workflow processing across nodes on a grid, enable partitioning to process partitions of data in parallel, and process data through highly available services. In a Informatica Domain or the native environment, the Integration Service runs a mapping, a profile, or a workflow. The Integration Service performs the data processing. The PowerCenter Integration Service runs the PowerCenter mappings, sessions, and workflows. The Data integration Service runs the Model repository mappings, profiles, and workflows.

**High-performance processing in a Hive environment**
Distribute mapping and profile processing across Hadoop cluster nodes in a Hive environment. In a Hive environment, you can import mappings from PowerCenter or you can develop mappings in the Developer tool. The Data Integration Service pushes the data processing to Hadoop. The Data Integration Service creates a Hive execution plan for the mapping or profile that consists of Hive queries. At run time, Hive generates MapReduce jobs for the Hive queries. You can monitor the MapReduce jobs in the Administrator tool and the Hadoop JobTracker.

For more information, see *PowerCenter Big Data Edition 9.5.1 User Guide*.

Metadata Manager

This section describes new features and enhancements to Metadata Manager.

**Data Lineage Performance Improvements**
Metadata Manager generates data lineage diagrams much faster than it did in version 9.5.0.

**Informatica Platform Resources**
You can create and configure an Informatica Platform resource to extract metadata from an application deployed from Informatica Data Services or Informatica Data Quality. You can extract metadata from mappings and SQL data services.

For more information, see *Informatica PowerCenter 9.5.1 Metadata Manager Administrator Guide*.

**Custom XConnect Created with a Load Template**
- When you create a custom model, you can upload and update the load template through the Model tab.
• When you create the resource for the custom metadata, you can upload the source CSV files and map them to mapping rules in the new resource wizard.

• When you create the resource for the custom metadata, you can specify an additional input file that contains pairs of objects that you want to link. The enumerated links file links elements in the custom resource with elements in another custom, packaged, or business glossary resource so that you can run data lineage analysis across the metadata sources.

For more information, see Informatica PowerCenter 9.5.1 Metadata Manager Custom Metadata Integration Guide.

**Rule-Based Links**

• You can use rule-based links to link objects in a custom resource or a business glossary resource to non-endpoint elements in a PowerCenter resource.

• You can upload linking rule set files through the **Load** tab.

For more information, see Informatica PowerCenter 9.5.1 Metadata Manager Custom Metadata Integration Guide.

**Informatica Business Glossary**

**Informatica Business Glossary Desktop**

The Business Glossary Desktop is a desktop application that you can use to look up business terms and business term details in a business glossary. You can highlight a word in any application, such as an email application, and use hotkeys to look up the word in Business Glossary Desktop. The Business Glossary Desktop runs in the background and is accessible from the Windows system menu.

You can install the Business Glossary Desktop on a machine with the graphical installer. Or, an administrator can run the silent installer to install the Business Glossary Desktop on multiple machines.

For more information, see Informatica Business Glossary 9.5.1 Desktop Guide and Informatica Business Glossary Desktop 9.5.1 Installation and Configuration Guide.

**Revise Published Business Terms**

Revise a draft version of a published business term to change the term. When you revise a published term, Metadata Manager creates a revision copy of the term. After you make changes in the revision, you can follow the approval process to publish the term. Metadata Manager updates the original term, deletes the revision, and tracks changes in an audit trail.

For more information, see Informatica PowerCenter 9.5.1 Metadata Manager Business Glossary Guide.

**Informatica Business Glossary API**

You can use the Business Glossary API with any client that uses the HTTP protocol to request and retrieve business glossary data. The Business Glossary API allows developers to integrate lookups to the business glossary in other applications. The Business Glossary API is a REST API. The Business Glossary API uses the HTTP GET method to retrieve data from a business glossary.

For more information, see Informatica Business Glossary 1.0 API Guide.
**Metadata Manager Application Properties**

The following table describes new Metadata Manager application properties in the imm.properties file:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalog_Import_Batch_Size</td>
<td>The number of elements that Metadata Manager processes in one batch when you import metadata for a custom resource or a business glossary from an XML file. Increase this value if errors occur during XML import.</td>
</tr>
<tr>
<td>Glossary_Import_Export_Requires_Manage_Glossary_Privilege</td>
<td>Determines whether a user must have the Manage Glossary privilege to export or import a business glossary.</td>
</tr>
</tbody>
</table>

For more information, see *Informatica PowerCenter 9.5.1 Metadata Manager Administrator Guide*.

**Performance Metrics**

Metadata Manager writes lineage metrics such as number of links, number of resources, and graph build time to the following file:

`<Informatica installation directory>/tomcat/temp/<service name>/logs/lineage_perf.csv`

**Resource Configuration Files**

Resource configuration files contain new elements that provide information about the schedule that is attached to the resource and the enumerated links files that are associated with the resource.

**Utilities to Migrate Resources and Resource Configuration Files**

The following table describes new command line programs that allow you to migrate resources and resource configuration files:

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>rmu.bat</td>
<td>Migrates version 9.1.0 resources to version 9.5.1 resources. Also migrates deprecated resources.</td>
</tr>
<tr>
<td>rcfmu.bat</td>
<td>Migrates a version 9.1.0 resource configuration file to a version 9.5.1 resource configuration file.</td>
</tr>
</tbody>
</table>

For more information, see *Informatica PowerCenter 9.5.1 Metadata Manager Administrator Guide*.
PowerExchange Adapters

This section describes new features and enhancements to PowerExchange adapters.

Adapters for PowerCenter

PowerExchange for Greenplum

- The following table describes the new session properties you can configure for a PowerExchange for Greenplum session:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reuse Table</td>
<td>Determines if the gpload utility drops the external table objects and staging table objects it creates. The gpload utility reuses the objects for future load operations that use the same load specifications.</td>
</tr>
<tr>
<td>Delete Control File</td>
<td>Determines if the PowerCenter Integration Service must delete the gpload control file after the session is complete.</td>
</tr>
<tr>
<td>Gpload Log File Location</td>
<td>The file system location where the gpload utility generates the gpload log file.</td>
</tr>
<tr>
<td>Gpload Control File Location</td>
<td>The file system location where the PowerCenter Integration Service generates the gpload control file.</td>
</tr>
<tr>
<td>Encoding</td>
<td>Character set encoding of the source data.</td>
</tr>
<tr>
<td>Pipe Location</td>
<td>The file system location where the pipes used for data transfer are created.</td>
</tr>
</tbody>
</table>

- You can configure pass-through partitioning for Greenplum sessions. PowerExchange for Greenplum supports pass-through partitioning.

For more information, see Informatica PowerExchange for Greenplum 9.5.1 User Guide for PowerCenter.

PowerExchange for Microsoft Dynamics CRM

- You can run the PowerExchange for Microsoft Dynamics CRM server component on AIX and HP-UX.
- PowerExchange for Microsoft Dynamics CRM uses Office 365 for passport authentication.

For more information, see Informatica PowerExchange for Microsoft Dynamics CRM 9.5.1 User Guide for PowerCenter.

PowerExchange for SAP NetWeaver BI

- PowerExchange for SAP NetWeaver BI supports SAP BI version 7.3.
- You can import a 7.x DataSource from an SAP BI version 7.3 system as a target in the PowerCenter Designer and include it in a mapping. You can create a workflow for the mapping and configure an InfoPackage in the SAP system to load data to the Persistent Storage Area (PSA). You can then create a data transfer process to load the data from the PSA to an SAP target.

For more information, see Informatica PowerExchange for SAP NetWeaver 9.5.1 User Guide for PowerCenter.

PowerExchange for Teradata Parallel Transporter API

You can authenticate a user using either Native or LDAP authentication.
For more information, see *Informatica PowerExchange for Teradata Parallel Transporter API 9.5.1 User Guide for PowerCenter*.

**PowerExchange for Ultra Messaging**

- You can filter the messages that you want to read from an Ultra Messaging source.
- You can configure message fields in an Ultra Messaging target definition to be not null to ensure that the target has valid values.
- PowerExchange for Ultra Messaging supports the datetime datatype. The datetime datatype has a precision of 23 and a scale of 3.

For more information, see *Informatica PowerExchange for Ultra Messaging 9.5.1 User Guide for PowerCenter*.

**Adapters for Informatica**

**PowerExchange for DataSift**

- You can extract social media data from DataSift streams.
- You can use Informatica Developer to create a DataSift data object, specify resources, and create a data object operation. You can use the data object operation as a source in the mappings.
- You can specify a single hash value, a list of hash values, or CSDL code to extract data from DataSift streams.

For more information, see *Informatica PowerExchange for DataSift 9.5.1 User Guide*.

**PowerExchange for Facebook**

- You can access Facebook through an HTTP proxy server.
- You can specify a list of access tokens that the Data Integration Service can use at run time to authenticate access to Facebook.

For more information, see *Informatica PowerExchange for Facebook 9.5.1 User Guide*.

**PowerExchange for HDFS**

- You can access data in a Hadoop Distributed file System (HDFS) cluster.
- You can read and write fixed-width and delimited file formats with a flat file data object. You can read or write compressed files.
- You can read text files and binary file formats such as a sequence file from HDFS with a complex file data object. You can specify the compression format of the files. You can use the binary stream output of the complex file data object as input to a Data Processor transformation, which can parse the file.

For more information, see *Informatica PowerExchange for HDFS 9.5.1 User Guide*.

**PowerExchange for Hive**

- You can access data in a Hive data warehouse.
- You can read data from Hive in native or Hive run-time environments. You can write to Hive only if the run-time environment is Hive.
- You can create a Hive connection to run Informatica mappings in the Hadoop cluster. You can specify the Hive validation and run-time environment for Informatica mappings.

For more information, see *Informatica PowerExchange for Hive 9.5.1 User Guide*.
PowerExchange for LinkedIn

- You can access LinkedIn through an HTTP proxy server.
- You can specify a list of access tokens that the Data Integration Service can use at run time to authenticate access to LinkedIn.

For more information, see Informatica PowerExchange for LinkedIn 9.5.1 User Guide.

PowerExchange for Teradata Parallel Transporter API

- You can use PowerExchange for Teradata Parallel Transporter API to load large volumes of data into Teradata tables by using Load or Stream system operators.
- You can use the Developer tool to create a Teradata data object and create a data object write operation. You can use the data object write operation as a target in the mappings.
- You can run mappings developed in the Developer tool. You can run the mappings in the native environment or in a Hive environment.

For more information, see Informatica PowerExchange for Teradata Parallel Transporter API 9.5.1 User Guide.

PowerExchange for Twitter

- You can access Twitter through an HTTP proxy server.
- You can specify a list of access tokens that the Data Integration Service can use at run time to authenticate access to Twitter.

For more information, see Informatica PowerExchange for Twitter 9.5.1 User Guide.

PowerExchange for Web Content-Kapow Katalyst

You can use Kapow Katalyst through an HTTP proxy server to access web content.

For more information, see Informatica PowerExchange for Web Content-Kapow Katalyst 9.5.1 User Guide.

Documentation

This section describes new features and enhancements to the documentation.

Business Glossary Desktop

Business Glossary Desktop includes the following new guides:

Informatica Business Glossary Desktop Guide

Contains information about using Business Glossary Desktop to look up business terms and business term details in a business glossary.

Informatica Business Glossary Desktop Installation and Configuration Guide

Contains information about installing and configuring Business Glossary Desktop.

Informatica Business Glossary API Guide

Contains information about the Business Glossary API, which developers can use to integrate lookups to the business glossary in other applications.
CHAPTER 18

Changes to Informatica Data Explorer (9.5.1)

This chapter includes the following topics:

- Filter Preview, 166
- Connections, 166
- Enterprise Discovery Results Layout, 166
- Mapplet and Mapping Profiling, 167
- Profiling Service Module Log Files, 167
- Scorecards, 167

Filter Preview

Effective in version 9.5.1 HotFix 2, when you create or edit a filter in Informatica Analyst, you can preview the first 100 rows matching the filter condition.

Previously, the filter preview displayed all the matching rows.

Connections

Effective in version 9.5.1, you can use the Developer tool to define the owner name and schema name for a Microsoft SQL Server connection to the profiling warehouse database or staging database.

Previously, you could not define or view these connection properties in the Developer tool. You had to define and view the properties in the Administrator tool.

Enterprise Discovery Results Layout

Effective in version 9.5.1, the enterprise discovery results layout includes the following changes:

- When you open a profile model, the Developer tool displays the Results Summary view by default.
• The Run button on the Profile tab of the Properties view is renamed to Configure. Click the button to configure global settings for the profile run. Previously, you clicked the Run button to configure the global settings.

• When you select external relational connections for enterprise discovery in the Select Resources dialog box, the views and synonyms of the resources do not appear by default. Select the Show Views and Synonyms check box to display all the views and synonyms. Previously, the views and synonyms were selected by default.

Mapplet and Mapping Profiling

Effective in version 9.5.1, you can run a profile on a mapplet or mapping object with multiple groups of output ports.

Previously, you ran a profile on a mapplet or mapping object with a single group of output ports.

Profiling Service Module Log Files

Effective in version 9.5.1, you can identify when a Profiling Service Module job was run from its log file name. The Profiling Service Module log files have timestamps appended to the file names.

The log files for profile run, export, and drill-down job types have the following naming format changes:

Profile run

The current format is `<ProfileName>_Mapping_<N>_YYYYMMDD_<HHMMSS>_Milliseconds`

where N is the mapping sequence number. Previously, the naming format was `<ProfileName>_CurrentTimeInNanoseconds`.

Exporting profile results or drilldown results

The current format is `ExportMapping_<ProfileName>_YYYYMMDD_<HHMMSS>_Milliseconds`. Previously, the naming format was `<ProfileName>_CurrentTimeInNanoseconds`.

Drilldown task

The current format is `DrilldownMapping_<ProfileName>_YYYYMMDD_<HHMMSS>_Milliseconds`. Previously, the naming format was `DrilldownMapping_CurrentTimeInNanoseconds`.

Scorecards

Effective in version 9.5.1, scorecards include the following changes:

• You need to migrate scorecards results from version 9.1.0 or 9.5.0 before you can start using existing scorecards. To view the results of scorecards, run the infacmd ps migrateScorecards command.

• You can add a metric to a scorecard if the number of valid values exceeds 200. You can view the number of valid values at the top of the Available Values panel. The Data Integration Service property Maximum # Value Frequency Pairs determines the maximum number of valid values in a metric. Previously, you could not add a metric to a scorecard if the valid values exceeded 200.
Changes to Informatica Data Quality (9.5.1)

This chapter includes the following topics:

- Accelerators, 168
- Address Validator Transformation, 169
- Applications, 169
- Classifier Models, 170
- Connections, 170
- Consolidation Transformation, 170
- Export to PowerCenter, 170
- Import From PowerCenter, 170
- Match Transformation, 171
- Probabilistic Models, 171
- Reference Tables, 171
- Run Mappings, 172
- Workflows, 172

Accelerators

The following changes apply to accelerators in version 9.5.1 HotFix 1:

- The Rule_Classify_Language rule generates a classifier score for each row of input data. Find the rule in the Core Accelerator.
  
  A classifier score represents the degree of similarity between the input data and the classifier model that the transformation uses to analyze the input data.

  Previously, the rule did not generate a classifier score.

- The Core Accelerator includes the data file associated with the classifier model that the Rule_Classify_Language rule reads. The data file contains the source data for the classifier model.

  Previously, the Core Accelerator did not contain the data file.

- The reference tables and reference data files in use in the accelerators contain additional data.

  The reference tables contain additional data for city names, country names, and telephone area codes.
Address Validator Transformation

The following changes apply to the Address Validator transformation in version 9.5.1 HotFix 2:

- The Address Validator transformation uses version 5.3.1 of the Address Doctor software engine. Previously, the transformation used version 5.3.0 of the Address Doctor software engine.

- The following Address Validator transformation ports return data:
  - Choumei Aza. Returns an 11-digit code that uniquely identifies a Japanese address.
  - New Choumei Aza. Returns an 11-digit code that uniquely identifies a Japanese address.
  - Supplementary JP Status. Verifies that the transformation can use enhanced address reference data to validate a Japanese address.

  Previously, the ports did not return data.

The following changes apply to the Address Validator transformation in version 9.5.1 HotFix 1:

- The Address Validator transformation uses version 5.3.0 of the Address Doctor software engine. The Address Doctor 5.3.0 engine extends the address status reporting capabilities of the Address Validator transformation. Address Doctor 5.3.0 also includes address validation enhancements for New Zealand addresses.

  Previously, the transformation used version 5.2.9 of the Address Doctor software engine.

- The Address Validator transformation reads separate reference data sets for the following countries:
  - Bonaire, Saint Eustatius, and Saba
  - Curacao
  - Montenegro
  - Saint Maarten
  - Serbia
  - South Sudan

  Previously, the Address Validator transformation read a single reference data set for Montenegro and Serbia.

Applications

Effective in version 9.5.1, when you use the Developer tool to update or replace an application that is running, you must choose to stop the application. When you stop an application, the Data Integration Service aborts all running objects in the application. If you do not want to abort running objects, you can rename the application or deploy the application to a different service.

Previously, when you updated or replaced an application that was running, the Data Integration Service stopped the application and aborted any running objects.
Classifier Models

Effective in version 9.5.1 HotFix 1, a classifier model displays the path to the model data file in the default view of the model. Open the model in the Developer tool to view the path.

Previously, a classifier model did not display the path to the data file.

Connections

Effective in version 9.5.1, you can use the Developer tool to define the owner name and schema name for a Microsoft SQL Server connection to the profiling warehouse database or staging database.

Previously, you could not define or view these connection properties in the Developer tool. You had to define and view the properties in the Administrator tool.

Consolidation Transformation

Effective in version 9.5.1, the Consolidation transformation uses data from the record with the highest row ID by default when it creates a consolidated record.

Previously, the transformation used the most frequent non-blank data values in each column by default to create a consolidated record.

When you upgrade a repository that contains a Consolidation transformation configured with the default settings, the transformation continues to use the most frequent non-blank option. The transformation maintains the most frequent non-blank option when you upgrade a Model repository or a PowerCenter repository.

If you import a mapping to PowerCenter that contains a Consolidation transformation that uses the default 9.5.1 settings, the transformation uses the highest row ID to identify the consolidated record.

Export to PowerCenter

Effective in version 9.5.1, you do not need to specify a Data Integration Service when you export a mapping that uses reference table data to PowerCenter.

Previously, if you exported a mapping that used reference table data to PowerCenter, you needed to specify the Data Integration Service on which the reference table staging database ran.

Import From PowerCenter

Effective in version 9.5.1, for a PowerCenter mapping that overrides source and target properties, the import process creates a data object with the same override property values as the PowerCenter mapping.
import process appends a number to the name of the original PowerCenter source or target and creates the
data object.

Previously, the import process ignored the override properties set for a PowerCenter mapping.

**Match Transformation**

The following changes apply to the Match transformation in version 9.5.1:

- Effective in version 9.5.1, the Match transformation performs match performance and match cluster
  analysis on all data in a data set.
  Previously, the transformation performed match performance and match cluster analysis on a maximum of
  16,000 records in a data set.

- Effective in version 9.5.1, you can export all value frequency pairs from the match analysis results to a
  file.
  Previously, you exported a maximum of 16,000 value frequency pairs from the match analysis results.

**Probabilistic Models**

Effective in version 9.5.1 HotFix 1, a probabilistic model displays the path to the model data file in the default
view of the model. Open the model in the Developer tool to view the path.

Previously, a probabilistic model stored the path to the data file as an advanced property of the model.

Effective in version 9.5.1, Informatica Data Quality uses updated engine logic to compile a probabilistic
model.

If you upgrade from version 9.5.0 to version 9.5.1 or later, compile any probabilistic model in the upgraded
Model repository to validate it for use.

PowerCenter 9.5.1 and later versions use the updated engine logic to read probabilistic model data. If you
exported a probabilistic model to PowerCenter from a 9.5.0 Model repository, complete the following steps
after you upgrade PowerCenter:

- Compile the probabilistic model in a 9.5.1 Model repository or a later repository.
- Export the model to PowerCenter.

**Reference Tables**

The following changes apply to reference tables in version 9.5.1:

- Effective in version 9.5.1 you can view metadata properties for a reference table in the Developer tool and
  Analyst tool. The properties include the data column names, descriptions, precision values, the valid
  column in the reference table, and the reference database connection name.

  Previously, you viewed metadata properties for a reference table in the Analyst tool only.
• Effective in version 9.5.1, Informatica Data Quality updates the underlying models for reference table metadata in the Model repository.

If you upgrade to version 9.5.1 and open a reference table that you created in an earlier version, the table opens in an unsaved state. Save and close the table to verify the metadata model update. You do not need to open or edit a reference table in an upgraded environment to use the reference table in a transformation.

• Effective in version 9.5.1, you can assign privileges on the Content Management Service that apply to reference tables. You can assign the following privileges:
  - Create reference tables
  - Edit reference table data

Use the Security tab options on the Administrator tool to assign privileges to users and groups in the domain.

Previously, all users had full access to reference tables.

If you upgrade to version 9.5.1, assign privileges to ensure that users can continue to create and edit reference tables.

Run Mappings

Effective in version 9.5.1 HotFix 1, you cannot run a mapping from the Data Viewer view in the Developer tool. You can run a mapping through the Run dialog box in the Developer tool or from the command line.

Previously, you could run a mapping from the Data Viewer view, through the Run dialog box, or from the command line.

Workflows

This section describes changes to workflows.

Human Tasks

Effective in version 9.5.1 HotFix 4, a Human task can assign task instances to users based on values from a column with a precision of 65.

Previously, a Human task assigned task instances based on values from a column with a maximum precision of 20.

Effective in version 9.5.1 HotFix 2, you can work on a Human task that you created before you upgraded the Informatica services. Use the workflow recovery features to restart the task after you upgrade the Informatica services to HotFix 2.

Previously, you could not restart a Human task after an upgrade.

Version 9.5.1 HotFix 2 upgrades the Human task database structure. When you upgrade to 9.5.1 HotFix 2, log in to the Administrator tool to perform the database upgrade. Select the Data Integration Service that identifies the Human task database, and use the Actions menu to upgrade the Human task database structure.
Effective in version 9.5.1, you can configure a workflow to notify a user by email when a step in a Human task changes status. The workflow can send an email in the following cases:

- A Human task creates a task instance and assigns it to a user or group.
- A user or group completes a task instance.
- An administrator reassigns a task instance to another user.
- A user or group does not complete a task instance on time.

Previously, you configured a workflow to notify a user when users or groups completed the task instances associated with a step in a Human task.

**Task Output**

Effective in version 9.5.1, the general task output that indicates whether the task ran successfully is named `Is Successful`.

Previously, this general task output was named Task Status.

**Tracing Level**

Effective in version 9.5.1, you can set the workflow tracing level to ERROR or WARNING in the Developer tool to display error or warning messages in the workflow log. The ERROR tracing level logs error messages that caused the workflow instance to fail. The WARNING tracing level logs the error level messages in addition to warning messages that do not cause the workflow instance to fail.

Previously, you set the workflow tracing level to ERROR to display both error and warning messages.
Applications

Effective in version 9.5.1, when you use the Developer tool to update or replace an application that is running, you must choose to stop the application. When you stop an application, the Data Integration Service aborts all running objects in the application. If you do not want to abort running objects, you can rename the application or deploy the application to a different service.

Previously, when you updated or replaced an application that was running, the Data Integration Service stopped the application and aborted any running objects.

Connections

Effective in version 9.5.1, you can use the Developer tool to define the owner name and schema name for a Microsoft SQL Server connection to the data object cache database.

Previously, you could not define or view these connection properties in the Developer tool. You had to define and view the properties in the Administrator tool.
Data Masking

Sequential Number Generation

Effective in version 9.5.1 HotFix 4, the Data Masking transformation can sequentially generate numbers to retrieve a dictionary row.

Previously, the Data Masking transformation generated a number to retrieve a dictionary row by the serial number.

Import from PowerCenter

Effective in version 9.5.1, importing PowerCenter objects in the Developer tool includes the following changes:

• For a PowerCenter mapping that overrides source and target properties, the import process creates a data object with the same override property values as the PowerCenter mapping. The import process appends a number to the name of the original PowerCenter source or target and creates the data object. Previously, the import process ignored the override properties set for a PowerCenter mapping.

• The import process imports the transformation scope for a Java transformation. Previously, the import process ignored the transformation scope value.

• The import process ignores the Lookup source type in a Lookup transformation. Previously, the import succeeded if the Lookup source was static and failed if the Lookup source was not static.

Mapping Specification

Effective in version 9.5.1, the Analyst tool has the following behavior changes:

• You cannot grant users the Execute permission on a connection in the Analyst tool. You can contact an administrator to grant the Execute permission on a connection from the Administrator tool. Previously, you could grant users the Execute permission on a connection in the Analyst tool. The Execute permission enabled users to preview data in mapping specifications, profiles, and scorecards and run profiles and scorecards created with the connection.

Run Mappings

Effective in version 9.5.1 HotFix 1, you cannot run a mapping from the Data Viewer view in the Developer tool. You can run a mapping through the Run dialog box in the Developer tool or from the command line.

Previously, you could run a mapping from the Data Viewer view, through the Run dialog box, or from the command line.
Web Service Consumer Transformation

Effective in version 9.5.1, the Web Service Consumer transformation has the following behavior changes:

- The Web Service Consumer transformation advanced property **Treat Fault as Error** is enabled by default. Previously, it was disabled by default. When you upgrade, the upgrade process retains the existing property configuration.
- When the Web Service Consumer transformation is configured to validate the schema and it receives SOAP 1.2 fault messages, the Data Integration Service validates that the faultcode value conforms to the enumerations defined in the SOAP 1.2 envelop schema. Previously, the Data Integration Service did not validate that faultcode value conformed to enumerations defined in the SOAP 1.2 envelop schema when it validated the schema.
- When the Web Service Consumer transformation receives SOAP 1.2 fault messages, the Data Integration Service updates the prefix of the fault code value to infassoapns. Previously, the Web Service Consumer transformation returned the fault code value with the prefix that is defined in the SOAP response.
- You can configure the anyType element to use a complex type or the xs:string type. Previously, you could configure the anyType element to use a complex type.
- The anyType element uses xs:string by default when there is no complex type defined for the anyType element in the WSDL or schema. Previously, when the WSDL or schema of the web service did not define a complex type, the Developer tool processed the element without a type defined.

Web Services

Effective in version 9.5.1, web services includes the following behavior changes:

- You can configure the anyType element to use a complex type or the xs:string type. Previously, you could configure the anyType element to use a complex type.
- The anyType element uses xs:string by default when there is no complex type defined for the anyType element in the WSDL or schema. Previously, when the WSDL or schema of the web service did not define a complex type, the Developer tool processed the element without a type defined.
- The **Schema** view of schema objects displays groups and attribute groups when you select the **Design** option or the **Schema** option. Previously, the groups and attribute groups displayed when you selected the **Schema** option.
- The **WSDL** view of WSDL data objects displays groups and attribute groups when you select the **Design** option or the **Schema** option. Previously, the groups and attribute groups displayed when you selected the **Schema** option.
- When you monitor a web service request, you can terminate the request by selecting the option to abort the request. Then, the web service request state is set to Aborted. Previously, you could terminate the request by selecting the option to cancel the request. Then, the web service request state was set to Cancelled.
Changes to Informatica Data Transformation (9.5.1)

This chapter includes the following topics:

- **Licenses**, 177
- **RunXMap Action for Scripts**, 177
- **Document Processors**, 177

**Licenses**

Effective in version 9.5.1, you do not need a separate license file to run Data Transformation on the Data Integration Service.

Previously, in version 9.5, Data Transformation required a separate license file.

**RunXMap Action for Scripts**

Effective in version 9.5.1, when you create a transformation, you can call an XMap object from a script object such as a parser, mapper, or serializer.

Previously, you called an XMap object from another XMap object, but could not include a call to an XMap object within a script.

**Document Processors**

**XmlToDocument**

Effective in version 9.5.1, the preprocessor `XmlToDocument` that supports BIRT version 2.3 is deprecated. The IntelliScript editor still displays the `XmlToDocument` preprocessor in existing scripts, but you can no longer add the preprocessor to new scripts. Use the `XmlToDocument_372` preprocessor instead.
The `XmlToDocument_372` preprocessor has the same functionality as the `XmlToDocument` preprocessor and supports BIRT versions up to 3.7.2.

`PdfToTxt_2_02`

Effective in version 9.5.1 HF1, the preprocessor `PdfToTxt_2_02` is deprecated.
CHAPTER 22

Changes to Informatica Domain (9.5.1)

This chapter includes the following topics:

- Content Management Service, 179
- Datatype Mappings for MySQL, 180
- Data Integration Service, 180
- Informatica Administrator, 180
- Monitor Workflows, 180

Content Management Service

The following changes apply to the Content Management Service in version 9.5.1:

- Effective in version 9.5.1, you can set the default locations of the cache directory and index directory for identity match analysis on the Content Management Service. You can also set the cache directory and index directory locations in the Match transformation. When you set the directory locations in the transformation, the Data Integration Service uses the transformation settings for the current transformation only.

  Previously, you set the directory locations when you configured a Match transformation in the Developer tool.

- Effective in version 9.5.1, you set the location of the identity population files on the Content Management Service.

  Previously, you set the location in the Match transformation in the Developer tool.

  **Note**: When you upgrade to Informatica Data Quality 9.5.1, the upgrade process sets the cache directory, index directory, and identity population locations to the current default locations.

- Effective in version 9.5.1, you can update the amount of Java memory allocated to the Content Management Service.

  Previously, you could not change the Java memory allocation.
Datatype Mappings for MySQL

Effective in version 9.5.1, some datatype mappings have changed for the DataDirect ODBC MySQL driver.

The following table shows how the MySQL datatypes are mapped to the standard datatypes for ODBC 6.1 and ODBC 7.0:

<table>
<thead>
<tr>
<th>MySQL Datatype</th>
<th>ODBC 6.1 Datatype for previous Informatica versions</th>
<th>ODBC 7.0 Datatype for Informatica 9.5.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tinyblob</td>
<td>binary(255)</td>
<td>longvarbinary(255)</td>
</tr>
<tr>
<td>Tinytext</td>
<td>varchar(255)</td>
<td>text(255)</td>
</tr>
<tr>
<td>Year2</td>
<td>date(10)</td>
<td>smallint(5)</td>
</tr>
<tr>
<td>Year4</td>
<td>date(10)</td>
<td>smallint(5)</td>
</tr>
</tbody>
</table>

Existing sources and targets keep the ODBC 6.1 datatype mappings. New sources and targets will use the ODBC 7.0 datatype mappings.

Data Integration Service

Effective in version 9.5.1, the Launch Jobs as Separate Processes property is enabled by default.

Previously, it was disabled by default. The upgrade process retains the existing property configuration.

Informatica Administrator

Effective in version 9.5.1, the Administrator tool has the following behavior changes:

- The Administrator tool opens the Change Password application to change the password. Previously, you could change the password within the Administrator tool.
- PowerCenter Options license property has been renamed to Service Options.
- HTTP Client Filter Properties in Data Integration Properties has been renamed to HTTP Configuration Properties.
- HTTP Client Filter Process Properties in Data Integration Properties has been renamed to HTTP Configuration Process Properties.

Monitor Workflows

Effective in version 9.5.1 HotFix 1, the recovery settings for a workflow determine the workflow and task states when the workflow instance is interrupted. Previously, only the type of interruption determined the workflow and task states.
The recovery settings for a workflow determine the workflow and task states when the workflow instance encounters the following interruptions:

**Task encounters an error.**

When the workflow is enabled for recovery and a task with a restart recovery strategy encounters a recoverable error, the Data Integration Service aborts the task and workflow instance. When a task with a restart strategy encounters a non-recoverable error or when a task with a skip strategy encounters any error, the Data Integration Service fails the task and workflow instance.

When the workflow is not enabled for recovery and a task encounters any error, the Data Integration Service fails the task and workflow instance.

Previously, when a task encountered any error, the Data Integration Service failed the task and workflow instance.

**You abort the workflow instance.**

When the workflow is enabled for recovery and the interrupted task has a restart recovery strategy, the Data Integration Service aborts the task and workflow instance. When the interrupted task has a skip recovery strategy, the Data Integration Service fails the task and aborts the workflow instance.

When the workflow is not enabled for recovery, the Data Integration Service aborts the interrupted task and workflow instance.

Previously, when you aborted a workflow instance, the Data Integration Service aborted the interrupted task and workflow instance.

**Service process shuts down unexpectedly.**

When the workflow is enabled for recovery and the interrupted task has a restart recovery strategy, the Data Integration Service aborts the task and workflow instance. When the interrupted task has a skip recovery strategy, the Data Integration Service fails the task and aborts the workflow instance.

When the workflow is not enabled for recovery, the Data Integration Service displays an Unknown state for the interrupted task and workflow instance.

Previously, when a Data Integration Service process shut down unexpectedly, the service displayed an Unknown state for the interrupted task and workflow instance.

**You redeploy the application while the workflow instance has an aborted or canceled state.**

The workflow is enabled for recovery and the workflow instance has an aborted or canceled state. You change the workflow definition in the Developer tool and redeploy the application that contains the workflow. Because the workflow metadata has changed, the workflow instance is no longer recoverable. As a result, the Data Integration Service updates the state of the workflow instance to Unknown.

The workflow is not enabled for recovery and the workflow instance has an aborted or canceled state. You change the workflow definition in the Developer tool and redeploy the application that contains the workflow. The workflow instance state remains aborted or canceled.

Previously, if a workflow instance had an aborted or canceled state and you changed the workflow definition and redeployed the application, the workflow instance state remained aborted or canceled.

Recovery settings do not determine the workflow and task states if you cancel the workflow instance or if the workflow encounters an error. If you cancel a workflow instance, the Data Integration Service completes the task and cancels the workflow instance regardless of recovery settings. If the workflow encounters an error, the Data Integration Service immediately fails the workflow instance regardless of recovery settings.
CHAPTER 23

Changes to PowerCenter (9.5.1)

This chapter includes the following topics:

- DataDirect Driver for Microsoft SQL Server, 182
- Data Masking, 182
- Pushdown Optimization, 183

DataDirect Driver for Microsoft SQL Server

Effective in version 9.5.1, a session with a Microsoft SQL Server source can fail when the number of columns in the SELECT statement in the query is less than the number of ports in the Source Qualifier transformation. The session fails with the following error:

```
SQL Error [FnName: Fetch Optimize -- [Informatica][ODBC SQL Server Wire Protocol driver] Number of bound columns exceeds the number of result columns.].
```

Previously, the same session succeeded when the number of result ports in the SQL query did not match the number of ports in the Source Qualifier transformation.

Data Masking

This section describes changes to data masking.

Dictionary Files

Effective in version 9.5.1 HotFix 4, the maximum port size for a dictionary file is 600 characters.

Previously, the maximum port size for a dictionary file was 256 characters.

Sequential Number Generation

Effective in version 9.5.1 HotFix 2, the Data Masking transformation can sequentially generate numbers to retrieve a dictionary row.

Previously, the Data Masking transformation generated a number to retrieve a dictionary row by the serial number.
**Bigint Datatype**

Effective in version 9.5.1 HotFix 1, the Data Masking transformation includes bigint values for the random, key, substitution, expression, and no masking types. The bigint datatype has a precision of 19 and supports values between \(-9,223,372,036,854,775,808\) and \(9,223,372,036,854,775,807\).

Previously, you could use the bigint datatype for the expression and no masking types in the Data Masking transformation.

---

**Pushdown Optimization**

This section describes changes to pushdown optimization.

**Sequential Number Generation**

Effective in version 9.5.1, the PowerCenter Integration Service does not push double or decimal implicit conversions linked to string fields or CONCAT() conversion functions that contain double or decimal arguments to Teradata.

Previously, the PowerCenter Integration Service incorrectly pushed double or decimal implicit conversions linked to string fields or CONCAT() conversion functions that contain double or decimal arguments to Teradata.
## Changes to Metadata Manager (9.5.1)

This chapter includes the following topics:

- Business Glossary Resources, 184
- Cognos Resources, 185
- Deprecated Resources, 185
- Display Date Format, 185
- License Updates, 185
- `mcmd` Command Changes, 186
- Teradata Resources, 187

### Business Glossary Resources

Metadata Manager contains behavior changes related to business glossary resources.

**Business Glossary Resources Created with a Load Template XConnect**

Effective in version 9.5.1 HotFix 3, when you create business glossary resources with a load template XConnect, you must include an additional attribute in the load template. You must add the idDelimiter attribute to the loadTemplate element and set the attribute value to the tilde (~) character.

The following example shows a loadTemplate element configured for a business glossary resource:

```
<loadTemplate name="BusinessGlossaryDefault" targetModel="BusinessGlossary"
  templateSpecVersion="1.0" idDelimiter="~"/>
```

Previously, you did not need to include this attribute in the load template.

**Exporting Business Glossary Resources**

Effective in version 9.5.1, when you export business glossary resources to Microsoft Excel or to XML, Metadata Manager exports the Element ID property for business terms.

Previously, Metadata Manager did not export the element ID for business terms.
Cognos Resources

Effective in version 9.5.1 HotFix 2, resources from the following Cognos source versions are deprecated:

- Cognos 8.3
- Cognos 8.1 to 8.2
- Cognos ReportNet 1.x

Therefore, you cannot create or edit resources that are based on these Cognos source versions. However, you can view the resources and view existing data lineage for the resources.

Deprecated Resources

Effective in version 9.5.1, you can run the rmu resource migration utility to migrate a deprecated resource. Previously, for each deprecated resource, you had to manually create an equivalent new resource.

Display Date Format

Effective in version 9.5.1 HotFix 2, Metadata Manager displays dates in the browser locale date format. Previously, Metadata Manager displayed dates in the U.S. English date format.

License Updates

Effective in version 9.5.1, Metadata Manager checks the Metadata Exchange Option (XConnect) license at the start of each resource load.

Metadata Manager only executes a resource load when the license for the source type of the resource is present. If the license is not present, Metadata Manager fails the resource load.

The load log displays the following message:

Metadata Exchange Option [Metadata Exchange for <source type>] is required in order to load metadata for resource <resource name>.

Previously, Metadata Manager did not check licenses for Metadata Exchange Options.
Effective in version 9.5.1 HotFix 1, some mmcmd commands have changes.

The following table lists the changed mmcmd commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>createLinkRuleSet</td>
<td>Creates a linking rule set for a pair of resources, a rule set definition for a pair of models, or a rule set parameter definition for a pair of resources in the Metadata Manager repository.</td>
<td>The -file option is changed. You can create linking rules from a rule set file, a rule set definition file, or a rule set parameter file. Previously, you could create linking rules from a rule set file only.</td>
</tr>
<tr>
<td>createResource</td>
<td>Creates a resource using the properties in the specified resource configuration file.</td>
<td>The -rcf option is changed. You can create a resource from a resource configuration file (.rcf file). Alternately, you can create a resource from a resource configuration file that also contains the rule sets and rule set parameter definitions associated with the resource (.rcz file). Previously, you could create a resource from a resource configuration file (.rcf file) only.</td>
</tr>
<tr>
<td>deleteLinkRuleSet</td>
<td>Removes a linking rule set for a pair of resources or a rule set definition for a pair of models from the Metadata Manager repository.</td>
<td>The -force option is added. You can delete a rule set definition and all parameters associated with it.</td>
</tr>
<tr>
<td>exportLinkRuleSetDefs</td>
<td>Exports all linking rule set definitions for a model to XML files.</td>
<td>New command.</td>
</tr>
<tr>
<td>exportLinkRuleSets</td>
<td>Exports all linking rule sets for a resource to XML files.</td>
<td>The -includeDefs option is added. You can export rule set parameter definitions in addition to rule set definitions.</td>
</tr>
<tr>
<td>exportModel</td>
<td>Exports a model from the Metadata Manager repository.</td>
<td>The -includeRuleSets option is added. You can export all rule set definitions associated with the model.</td>
</tr>
<tr>
<td>getResource</td>
<td>Writes all properties for the specified resource to a resource configuration file.</td>
<td>The -includeRuleSets option is added. You can export the resource configuration file with all rule sets and rule set parameter definitions associated with the resource.</td>
</tr>
<tr>
<td>importModel</td>
<td>Imports a model from a file into the Metadata Manager repository.</td>
<td>The --file option is changed. The import file can be a model export XML file or a zip file that contains the model export XML file plus the associated rule set definitions. Previously, the import file could be a model export XML file only.</td>
</tr>
<tr>
<td>updateLinkRuleSet</td>
<td>Updates a linking rule set for a pair of resources or a rule set definition for a pair of models in the Metadata Manager repository.</td>
<td>The -file option is changed. You can update linking rules from a rule set file, a rule set definition file, or a rule set parameter file. Previously, you could update linking rules from a rule set file only.</td>
</tr>
</tbody>
</table>
Teradata Resources

Effective in 9.5.1, you must download and install the Teradata JDBC driver before you create or update a Teradata resource.

Previously, you did not have to install the driver to create or update a Teradata resource.
Changes to Adapters for PowerCenter (9.5.1)

This chapter includes the following topics:

- PowerExchange for Salesforce, 188
- PowerExchange for Facebook, 190
- PowerExchange for LinkedIn, 190
- PowerExchange for Twitter, 190
- PowerExchange for Teradata Parallel Transporter API, 191
- PowerExchange for SAP NetWeaver BI, 191

PowerExchange for Salesforce

PowerExchange for Salesforce includes the following changes.

PowerExchange for Salesforce 9.5.1.4.2

PowerExchange for Salesforce uses version 31.0 of the Salesforce API.

To use the latest version of the Salesforce API, create an application connection. You can also update the service URL in an application connection. To use version 31.0 of the Salesforce API, use the following Salesforce service URL:

https://www.salesforce.com/services/Soap/u/31.0

If a Salesforce object has a different structure than a previous version of the object, import the Salesforce object again. After you import the object, analyze associated mappings to determine if you need to update the mappings.

PowerExchange for Salesforce 9.5.1.4.1

PowerExchange for Salesforce 9.5.1.4.1 includes the following changes.

Java Requirements for Bulk API Target Sessions

For Bulk API target sessions, configure at least 10 to 50 MB of space for the Java temporary directory on the PowerCenter Integration Service machine.
Previously, the Bulk API did not use the Java temporary directory when writing to Salesforce targets.

End of Life for Salesforce API Versions

PowerExchange for Salesforce does not support the following Salesforce API versions:

- 7.0
- 8.0
- 16.0

Previously, PowerExchange for Salesforce supported these Salesforce API versions.

Related Object Fields No Longer Available for Import

You can no longer import fields from objects related to the following Salesforce objects:

- ActivityHistory
- EmailStatus
- Name
- OpenActivity
- OwnedContentDocument

Previously, you could import fields from objects related to these objects.

Error Logging

The PowerCenter Integration Service writes error messages to the error log for the session.

Previously, the PowerCenter Integration Service wrote error messages to both the error log and the session log.

SOAP Request Logging

For sessions that read from Salesforce with the standard API, the PowerCenter Integration Service no longer includes SOAP requests in the session log.

Previously, you could view SOAP requests in session logs when you configured the session for verbose tracing.

Salesforce API Version

PowerExchange for Salesforce uses version 30.0 of the Salesforce API.

Use the Salesforce service URL to configure connections to Salesforce. To use the latest version of the Salesforce API, create an application connection or update the service URL in an existing application connection.

Use the following version of the Salesforce service URL:

https://www.salesforce.com/services/Soap/u/30.0

If the new version of a Salesforce object has a different structure than the previous version of the object, re-import the Salesforce object. After you re-import the object, analyze the associated mapping to determine if you need to update the mapping.

Note: You cannot import the following Salesforce objects that are newly available with version 30.0 of the Salesforce API:

- AttachedContentDocument
- CombinedAttachment

Previously, PowerExchange for Salesforce used version 27.0 of the Salesforce API.
PowerExchange for Salesforce 9.5.1 HotFix 1

PowerExchange for Salesforce 9.5.1 HotFix 1 includes the following change.

Salesforce API Version

Effective in version 9.5.1 HotFix 1, PowerExchange for Salesforce uses version 27.0 of the Salesforce API.

Use the Salesforce service URL to configure connections to Salesforce. To use the latest version of the Salesforce API, create an application connection or update the service URL in an existing application connection.

Use the following version of the Salesforce service URL:

https://www.salesforce.com/services/Soap/u/27.0

If the new version of a Salesforce object has a different structure than the previous version of the object, re-import the Salesforce object. After you re-import the object, analyze the associated mapping to determine if you need to update the mapping.

Previously, PowerExchange for Salesforce used version 26.0 of the Salesforce API.

PowerExchange for Facebook

Effective in version 9.5.1 HotFix 4, Informatica is not shipping PowerExchange for Facebook for PowerCenter. Informatica dropped support for PowerExchange for Facebook versions 9.1.0, 9.5.0, and 9.5.1. You cannot upgrade from versions 9.1.0, 9.5.0, 9.5.1, and the hotfix versions. Sessions will fail in versions 9.1.0, 9.5.0, and 9.5.1, and the hotfix versions.

You can use PowerExchange for Facebook in the Developer tool.

For more information, see the End of Life (EOL) document at the following location:

PowerExchange for LinkedIn

Effective in version 9.5.1 HotFix 4, Informatica is not shipping PowerExchange for LinkedIn for PowerCenter. Informatica dropped support for PowerExchange for LinkedIn versions 9.1.0, 9.5.0, and 9.5.1. You cannot upgrade from versions 9.1.0, 9.5.0, 9.5.1, and the hotfix versions. Sessions will fail in versions 9.1.0, 9.5.0, and 9.5.1, and the hotfix versions.

You can use PowerExchange for LinkedIn in the Developer tool.

For more information, see the End of Life (EOL) document at the following location:

PowerExchange for Twitter

Effective in version 9.5.1 HotFix 4, Informatica is not shipping PowerExchange for Twitter for PowerCenter. Informatica dropped support for PowerExchange for Twitter versions 9.1.0, 9.5.0, and 9.5.1. You cannot
upgrade from versions 9.1.0, 9.5.0, 9.5.1, and the hotfix versions. Sessions will fail in versions 9.1.0, 9.5.0, and 9.5.1, and the hotfix versions.

You can use PowerExchange for Twitter in the Developer tool.

For more information, see the End of Life (EOL) document at the following location: https://mysupport.informatica.com/docs/DOC-10512.

### PowerExchange for Teradata Parallel Transporter API

When you upgrade to PowerExchange for Teradata Parallel Transporter API version 9.5.1 HotFix 1, you must register the TeradataPT.xml file with the PowerCenter repository to use the new features introduced in version 9.5.1 HotFix 1. When you install PowerCenter, the installer copies the TeradataPT.xml file to the following directory:

<PowerCenter Installation Directory>\server\bin\native

### PowerExchange for SAP NetWeaver BI

Effective in version 9.5.1, if you migrate 3.x data sources to 7.x DataSources in the SAP system, you must configure a data transfer process in the SAP system to load data from the Persistent Storage Area (PSA) to the SAP target. You can also continue to use the existing PowerCenter mappings and sessions with 3.x data sources.

Previously, you used a 3.x InfoSource when you created an InfoPackage to load data to the PSA. SAP BI created a data source when you activated the 3.x InfoSource. You then used the 3.x data source as the source when you created a transformation in SAP BI to load the data to an InfoProvider or any data target.
Changes to Adapters for Informatica (9.5.1)

This chapter includes the following topics:

- **PowerExchange for LinkedIn**, 192
- **PowerExchange for Salesforce**, 192
- **PowerExchange for Facebook**, 193
- **PowerExchange for Web Content-Kapow Katalyst**, 193

### PowerExchange for LinkedIn

Effective in version 9.5.1 HotFix 2, you can specify the Profile query parameter in new formats. Re-create the data objects to which you added Profile as a resource. Re-import the data object with Profile as a resource, create a data object read operation, and update the query parameter.

Previously, you could not specify the query parameter to extract the public profile of a user.

### PowerExchange for Salesforce

- Effective in version 9.5.1 HotFix 2, PowerExchange for Salesforce uses version 27.0 of the Salesforce API.
  
  Previously, application connections pointed to version 26.0 of the Salesforce service.

  To use the latest version of the Salesforce API, create a new application connection or update the service URL in an existing application connection.

  For information about the 27.0 version of the Salesforce service URL, see the Salesforce documentation.

  If the new version of a Salesforce object has a different structure than the previous version of the object, re-import the Salesforce object. After you re-import the object, analyze the associated mapping to determine if you need to update the mapping.

- Effective in version 9.5.1 HotFix 2, you can specify a file path that contains a custom query in the Custom SOQL property.
  
  Previously, you could only enter the custom query in the Custom SOQL property.
PowerExchange for Facebook

Effective in version 9.5.1, the Profile resource in PowerExchange for Facebook includes the comments_data column.

Previously, the Profile resource included the comments column. When you upgrade to PowerExchange for Facebook 9.5.1, re-import any mappings that include the Profile resource.

PowerExchange for Web Content-Kapow Katalyst

Effective in version 9.5.1, PowerExchange for Web Content-Kapow Katalyst installs with Informatica 9.5.1.

Previously, PowerExchange for Web Content-Kapow Katalyst had a separate installer.
Part IV: Version 9.5.0

This part contains the following chapters:

- New Features and Enhancements (9.5.0), 195
- Changes to Informatica Data Explorer (9.5.0), 215
- Changes to Informatica Data Quality (9.5.0), 217
- Changes to Informatica Data Services (9.5.0), 221
- Changes to Informatica Data Transformation (9.5.0), 227
- Changes to Informatica Domain (9.5.0), 232
- Changes to PowerCenter (9.5.0), 234
- Changes to Metadata Manager (9.5.0), 235
- Changes to Adapters for PowerCenter (9.5.0), 242
Chapter 27

New Features and Enhancements (9.5.0)

This chapter includes the following topic:

- Version 9.5.0

Version 9.5.0

This section describes new features and enhancements in version 9.5.0.

Informatica Installer

This section describes new features and enhancements to the Informatica platform installer.

Install Application Client Components

You can specify the Informatica application client components that you want to install. For example, you can install all of the application clients or a subset of application clients.

Pre-Installation (i9Pi) System Check Tool

Before you install or upgrade the Informatica services, you can run the Pre-installation (i9Pi) System Check Tool to verify that the machine meets the minimum system and database requirements for the installation.

Uninstall Application Client Components

You can specify the Informatica application client components that you want to uninstall.

Informatica Data Explorer

This section describes new features and enhancements to Informatica Data Explorer.

Connections

Version 9.5.0 includes the following enhancements for connections:

- You can rename connections.
- You can configure advanced properties of a database connection when you create a database connection in the Analyst tool. You can edit database connections in the Analyst tool.
Connectivity to SAP HANA
You can connect to an SAP HANA database using ODBC.

Data Domain Discovery
You can identify critical data characteristics within the enterprise so that you can apply further data management policies, such as data masking or data quality, to the data. Run a profile to identify all the data domains for a column based either on its values or name. A data domain is the logical datatype of a column or a set of allowed values it may have. The name of the data domain helps you find the functional meaning of the column data.

You can perform data domain discovery in both Analyst tool and Developer tool.

Enterprise Discovery
You can run multiple data discovery tasks on a large number of data sources across multiple connections and generate a consolidated results summary of the profile results. This data discovery method includes running a column profile, data domain discovery, and discovering primary key and foreign key relationships. You can view the results in both graphical and tabular formats.

You can run enterprise discovery from a profile model in the Developer tool.

Find in Editor
In the Developer tool, you can search for attributes, columns, expressions, groups, ports, or transformations in any type of mapping editor, in a logical data object editor, in a mapplet editor, or in a workflow editor.

Project Permissions
You can assign read, write, and grant permissions to users and groups when you create a project and when you edit project details.

Scorecards
- You can configure a third-party application to get the scorecard results and run reports. The profiling warehouse stores the scorecard metrics and configuration information.
- You can attach a read-only view of the scorecard metrics to a web application or portal. Copy the scorecard URL from the Developer tool and add it to the source code of external applications or portals. You can also drill down into source rows and view trend charts from external applications.

Informatica Data Quality
This section describes new features in Informatica Data Quality.

Address Validator Transformation
The Address Validator transformation can perform consumer marketing and segmentation analysis on address data. Select the CAMEO options in the transformation to perform consumer marketing and segmentation analysis.

The Address Validator transformation can add Enhanced Line of Travel (eLOT) data to a United States address. Mail carriers use eLOT data to sort mail items in the order in which they are likely to be delivered on a mail route. The Address Validator transformation runs in Certified mode when it creates eLOT output.

Connections
Version 9.5.0 includes the following enhancements for connections:
- You can rename connections.
You can configure advanced properties of a database connection when you create a database connection in the Analyst tool. You can edit database connections in the Analyst tool.

Connectivity to SAP HANA

You can connect to an SAP HANA database using ODBC.

Content Management Service

The Content Management Service has the following features:

- The Content Management Service identifies the location of files that store probabilistic model data. You set the path to the probabilistic model files in the on each Content Management Service.
- You can configure a master Content Management Service for an Informatica domain or grid. You specify a master Content Management Service when you want to run a mapping that reads probabilistic model data on multiple nodes.
  
  When you use a master Content Management Service, any probabilistic model file that you create or update on the master service host machine is copied from the master service machine to the locations specified by the other Content Management Services on the domain or grid.
- The Content Management Service enables dynamic configuration updates for the Address Validator transformation and the Match transformation.
  
  The Content Management Service updates the input port list in the Address Validator transformation each time you open the transformation. You can install an address validation engine update from Informatica without performing a product reinstall.
- The Content Management Service updates the list of identity population files in the Match transformation each time you open the transformation.

Data Masking Transformation

The Data Masking transformation contains the following data masking techniques:

- Expression masking. Applies an expression to a source column to create or mask data.
- Substitution masking. Replaces source data with repeatable values. The Data Masking transformation produces deterministic results for the same source data, masking rules, and seed value.
- Dependent masking. Replaces the values of one source column based on the values of another source column.

Find in Editor

In the Developer tool, you can search for attributes, columns, expressions, groups, ports, or transformations in any type of mapping editor, in a logical data object editor, in a mapplet editor, or in a workflow editor.

Import from PowerCenter

You can import objects from a PowerCenter repository to a Model repository. You can connect to a PowerCenter repository from the Developer tool and select objects to import into a target location in the Model repository. The import process validates and converts the PowerCenter objects to Model repository objects based on compatibility. You can check feasibility of the import before the final import. The Developer tool creates a final summary report with the results of the import.

Decision Transformation

The Decision transformation handles integer values in IF/ELSE statements in addition to boolean values. The transformation processes a 0 value as False and other integer values as True.

Informatica Data Director for Data Quality

Informatica Data Director for Data Quality is a web-based application that you use to review the bad record and duplicate record output from an Exception transformation. You can edit bad records, and you can
consolidate duplicate records into a single master record. You use Informatica Data Director for Data Quality to complete a Human task in a workflow. When you log on to the application, Informatica Data Director for Data Quality connects to the database tables specified in the workflow and displays the tasks to perform.

**Mapping and Mapplet Editors**

The following table lists Developer tool options for mapping and mapplet editors:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift + resize an object</td>
<td>After you resize the object, the Developer tool arranges all objects so that no objects are overlapping.</td>
</tr>
<tr>
<td>Align All to Grid</td>
<td>The Developer tool aligns all objects in the editor based on data flow.</td>
</tr>
<tr>
<td>Restore All</td>
<td>When an editor contains iconized objects, the Developer tool restores the objects to their original sizes without overlapping them.</td>
</tr>
</tbody>
</table>

**Project Permissions**

You can assign read, write, and grant permissions to users and groups when you create a project and when you edit project details.

**Probabilistic Models**

A probabilistic model is a content set that you can use to identify data values on input ports that contain one or more values in a delimited string. A probabilistic model uses probabilistic matching logic to identify data values by the types of information the values contain. You can use a probabilistic model in Labeler and Parser transformations.

You create a probabilistic model in the Developer tool. You select the model from a project folder in the Model repository. The Developer tool writes probabilistic model data to a file you specify in the Content Management Service.

**Reference Tables**

You can create a reference table object in the Model repository that reads reference data values from a non-default database.

The Content Management Service identifies the connection to the default database for reference table data. When you create a reference table, you can select a different database as the location of the reference data values.

A reference table that reads reference data values from the default database is a managed database. A reference table that reads reference data values from a non-default database is an unmanaged database. You can edit the values of a managed reference table in the Analyst tool and the Developer tool. You cannot edit the values of an unmanaged reference table in the Analyst tool or the Developer tool.

**Scorecards**

- You can configure a third-party application to get the scorecard results and run reports. The profiling warehouse stores the scorecard metrics and configuration information.
- You can attach a read-only view of the scorecard metrics to a web application or portal. Copy the scorecard URL from the Developer tool and add it to the source code of external applications or portals. You can also drill down into source rows and view trend charts from external applications.

**System Mapping Parameters**

System mapping parameters are constant values that define the directories where the Data Integration Service stores cache files, reject files, source files, target files, and temporary files. You define the values of
the system parameters on a Data Integration Service process in the Administrator tool. By default, the system parameters are assigned to flat file directory, cache file directory, and temporary file directory fields.

Workflows

A workflow is a graphical representation of a set of events, tasks, and decisions that define a business process. You use the Developer tool to add objects to a workflow and to connect the objects with sequence flows. The Workflow Service Module is the component in the Data Integration Service that uses the instructions configured in the workflow to run the objects.

A workflow can contain the following objects:

- Start event that represents the beginning of the workflow.
- End event that represents the end of the workflow.
- Mapping task that runs a mapping.
- Command task that runs a single shell command.
- Human task that involves user interaction with an application. For example, you view bad or duplicate records in Informatica Data Director for Data Quality in a Human task.
- Notification task that sends an email notification to specified recipients. Before you configure a Notification task to send emails, you must use the Administrator tool to configure the email server properties for the Data Integration Service.
- Assignment task that assigns a value to a user-defined workflow variable.
- Exclusive gateway that makes a decision to split and merge paths in the workflow.

A sequence flow connects workflow objects to specify the order that the Data Integration Service runs the objects. You can create a conditional sequence flow to determine whether the Data Integration Service runs the next object.

You can define and use workflow variables and parameters to make workflows more flexible. A workflow variable represents a value that records run-time information and that can change during a workflow run. A workflow parameter represents a constant value that you define in a parameter file before running a workflow.

After you validate a workflow to identify errors, you add the workflow to an application and deploy the application to a Data Integration Service. You run an instance of the workflow from the deployed application using the infacmd wfs command line program. You monitor the workflow instance run in the Monitoring tool.

Informatica Data Services

This section describes new features and enhancements to Informatica Data Services.

Business Intelligence Tools

You can query published data services with the OBIEE 11.1.1.5 or 11.1.13, Toad for Data Analysts, and MS Sql Server Reporting Service business intelligence tools.

Connections

Version 9.5.0 includes the following enhancements for connections:

- You can rename connections.
- You can configure advanced properties of a database connection when you create a database connection in the Analyst tool. You can edit database connections in the Analyst tool.

Connectivity to SAP HANA

You can connect to an SAP HANA database using ODBC.
Data Processor Transformation

You can configure a Data Transformation service in the Developer tool by configuring it in a Data Processor transformation. Create a script in the IntelliScript editor or configure an XMap to map input XML to output XML in the transformation. Add a Data Processor transformation to a mapping or export the transformation as a service to a Data Transformation repository.

Find in Editor

In the Developer tool, you can search for attributes, columns, expressions, groups, ports, or transformations in any type of mapping editor, in a logical data object editor, in a mapplet editor, or in a workflow editor.

Import from PowerCenter

You can import objects from a PowerCenter repository to a Model repository. You can connect to a PowerCenter repository from the Developer tool and select objects to import into a target location in the Model repository. The import process validates and converts the PowerCenter objects to Model repository objects based on compatibility. You can check feasibility of the import before the final import. The Developer tool creates a final summary report with the results of the import.

Mapping and Mapplet Editors

The following table lists Developer tool options for mapping and mapplet editors:

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<td>Restore All</td>
<td>When an editor contains iconized objects, the Developer tool restores the objects to their original sizes without overlapping them.</td>
</tr>
</tbody>
</table>

Mapping Specifications

Version 9.5.0 includes the following enhancements for mapping specifications in the Analyst tool:

- You can select multiple source columns and drag these to insert between target columns in a mapping specification.
- When you edit a mapping specification, all objects appears as a single tabbed dialog. Analysts can select sources, joins, lookups, reusable rules, expressions, filters, aggregators, and a target from a tab and edit these objects.
- You can run a profile on a source, source columns, or target columns in a mapping specification to better understand the data in a mapping specification.
- You can add SQL queries to source and target columns in a mapping specification and run the query to view the query results as a data preview in a mapping specification.
- The data preview for a mapping specification appears on tabs for mapping specification objects such as lookups, filters, joins, and aggregators.
- You can create join types or use a join object as a source object in a mapping specification. You can also create a join between two join objects.
- When you create a join between two sources, the Analyst tool recommends join conditions for a join between two sources.
- The Analyst tool updates a mapping specification when you open a mapping specification again after deleting a column or after modifying a mapping specification.
• In the Analyst tool, you can map source and target columns based on naming conventions and column positions.

Performance

Version 9.5.0 includes the following performance enhancements:

• You can configure early selection and push-into optimization with the Java transformation, Web Service Consumer transformation, and the SQL transformation.

• You can add hints to a source SQL query to pass instructions to a database optimizer. The optimizer uses the hints to choose a query run plan to access the source. The source database must be Oracle, Sybase, IBM DB2, or Microsoft SQL Server.

Project Permissions

You can assign read, write, and grant permissions to users and groups when you create a project and when you edit project details.

Row Level Security

Administrators can assign security predicates on virtual tables to restrict access to rows of data when users query the tables.

Scorecards

• You can configure a third-party application to get the scorecard results and run reports. The profiling warehouse stores the scorecard metrics and configuration information.

• You can attach a read-only view of the scorecard metrics to a web application or portal. Copy the scorecard URL from the Developer tool and add it to the source code of external applications or portals. You can also drill down into source rows and view trend charts from external applications.

SQL Data Services

Version 9.5.0 includes the following enhancements for SQL data services:

• You can issue a correlated subquery in a query against an SQL data service if the correlated subquery meets a specific set of criteria. You can submit correlated subqueries from an ODBC, JDBC client, or from the query plan window in the Developer tool.

• You can connect to an SQL data service through a default ODBC or JDBC connection specified in the SQL data service and then create and drop local temporary tables in a relational database.

System Mapping Parameters

System mapping parameters are constant values that define the directories where the Data Integration Service stores cache files, reject files, source files, target files, and temporary files. You define the values of the system parameters on a Data Integration Service process in the Administrator tool. By default, the system parameters are assigned to flat file directory, cache file directory, and temporary file directory fields.

Web Services

Web Service Consumer Transformation

Version 9.5.0 includes the following enhancements for the Web Service Consumer transformation:

• You can enable the Web Service Consumer transformation to create multiple concurrent connections to a web service so that it can send multiple web service requests in parallel. When you enable the Web Service Consumer transformation to create multiple concurrent connections to the web service, you can set the memory consumption limit and the number of concurrent connection limits.

• The Web Service Consumer transformation can process SOAP 1.2 messages with document/literal encoding. You can create a Web Service Consumer transformation with a SOAP 1.2 binding. The fault output ports for SOAP 1.2 are code, reason, node, role, and detail.
Generic Fault

You can define a generic fault to return an error message to a web service client when an error is not defined by a fault element in the WSDL. Create a Fault transformation to return a generic error message.

Schema Objects

Version 9.5.0 includes the following enhancements for schema objects:

- You can add multiple root .xsd files to a schema object. You can also remove .xsd files from a schema object.
- You can update a schema object when elements, attributes, types, or other schema components change. When you update a schema object, the Developer tool updates objects that use the schema. The following table describes the methods that you can use to update a schema object:

<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synchronize the schema.</td>
<td>Synchronize a schema object when you update the schema files outside the Developer tool. The Developer tool re-imports all of the schema XSD files that contain changes.</td>
</tr>
<tr>
<td>Edit a schema file.</td>
<td>Edit a schema file when you want to update a file from within the Developer tool. The Developer tool opens the file in your XSD file editor or in an editor that you select.</td>
</tr>
</tbody>
</table>

Hierarchy Level of Elements

You can change the hierarchy of the elements in an operation mapping.

Operations

You can create and configure operations in the web service Overview view. After you manually create a web service, you can create an operation from a reusable object.

SOAP 1.2

The Data Integration Service can process SOAP 1.2 messages with document/literal encoding. Each web service can have an operation that uses a SOAP 1.2 binding. When you create a fault using SOAP 1.2, the wizard creates the code, reason, node, and role elements.

WSDL Synchronization

You can synchronize a WSDL data object when the WSDL files change. When you synchronize a WSDL data object, the Developer tool re-imports the object metadata from the WSDL files. The Developer tool also updates objects that reference the WSDL or marks them as changed when you open them.

Informatica Data Transformation

Effective in version 9.5.0, Data Transformation moved to the Informatica platform. You can now create and test a Data Transformation service in the Developer tool. Create a Data Processor transformation that include script objects or XMAP objects to transform data. Create a script in the Data Processor transformation Script editor. A script can contain Parsers, Serializers, Mappers, Transformers, and Streamer components. Define an XMap in the transformation XMap editor. Define an XMap to map input XML to output XML. You can add a Data Processor transformation to a mapping or export the transformation as a service to a Data Transformation repository.

You can import a Data Transformation project into a Data Processor transformation to upgrade a script from Data Transformation version 9.1.0. You can also deploy a Data Transformation project as a service, and then import the service to a Data Processor transformation.
Informatica Development Platform

This section describes new features and enhancements to Informatica Development Platform.

Design API

Version 9.5.0 includes the following enhancements for the Design API:

- You can read data from source tables that contain periods in the table name.
- You can connect to the following mainframe and midrange data sources and targets through PowerExchange:
  - IMS
  - Adabas
  - VSAM
  - Datacom
  - IDMS
- You can read or write CLOB and BLOB data.
- You can generate transformation metadata for the XML Generator transformation and XML Parser transformation.

Informatica Domain

This section describes new features and enhancements to the Informatica domain.

Connection Management

You can rename connections.

Data Director Service

The Informatica Data Director Service is an application service that runs Informatica Data Director for Data Quality in the Informatica domain. Create and enable an Informatica Data Director Service on the Domain tab of Informatica Administrator.

When you enable the Informatica Data Director Service, the Service Manager starts Informatica Data Director for Data Quality. You can open Informatica Data Director for Data Quality in a web browser.

Data Integration Service

Directories for Data Integration Service Files

You can configure the Data Integration Service process properties that define where the service stores files.

The following table describes the Data Integration Service process properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Directory</td>
<td>Root directory accessible by the node. This is the root directory for other service process variables. Default is <code>&lt;Informatica Services Installation Directory&gt;/tomcat/bin</code>.</td>
</tr>
<tr>
<td>Log Directory</td>
<td>Directory for log files. Default is <code>&lt;home directory&gt;/disLogs</code>.</td>
</tr>
</tbody>
</table>
### Property Description

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cache Directory</td>
<td>Directory for index and data cache files for transformations. Default is <code>&lt;home directory&gt;/Cache</code>.</td>
</tr>
<tr>
<td>Source Directory</td>
<td>Directory for source flat files used in a mapping. Default is <code>&lt;home directory&gt;/source</code>.</td>
</tr>
<tr>
<td>Target Directory</td>
<td>Default directory for target flat files used in a mapping. Default is <code>&lt;home directory&gt;/target</code>.</td>
</tr>
<tr>
<td>Rejected Files Directory</td>
<td>Directory for reject files. Reject files contain rows that were rejected when running a mapping. Default is <code>&lt;home directory&gt;/reject</code>.</td>
</tr>
</tbody>
</table>

### Out of Process Execution

You can run each Data Integration Service job as a separate operating system process. Each job can run separately without affecting other jobs running on the Data Integration Service. For optimal performance, run batch jobs and long jobs out of process, such as preview, profile, scorecard, and mapping jobs.

### Email Server Properties

You can configure email server properties for the Data Integration Service. The email server properties configure the SMTP server that the Data Integration Service uses to send email notifications from a workflow.

### Grid

You can run the Data Integration Service on a grid. When you run an object on a grid, you improve scalability and performance by distributing the work across multiple DTM processes running on nodes in the grid.

### Human Task Service Module

The Human Task Service Module is the component in the Data Integration Service that manages requests to run a Human task in a workflow.

### Logical Data Object Properties

If you want to manage the data object cache with an external tool, specify a cache table name for each logical data object. When you specify a cache table name, the external tool that you configure populates, purges, and refreshes the cache.

### Logical Data Object Column Property

You can configure the Data Integration Service to generate indexes for the cache table based on columns in a logical data object. The indexes can increase the performance of queries on the cache database.

### Optimizer Level

You can configure the optimizer level in Data Integration Service application properties for an SQL data service or a web service. The optimizer level determines which optimization methods the Data Integration Service applies to the SQL data service query or to the web service request at run time.

### SQL Properties

You can configure the SQL properties for the Data Integration Service.
The following table describes the SQL properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTM Keep Alive Time</td>
<td>Number of milliseconds that the DTM process stays open after it completes the last request. Identical SQL queries can reuse the open process. You can set this property globally or for each SQL data service that is deployed to the Data Integration Service.</td>
</tr>
<tr>
<td>Table Storage Connection</td>
<td>Relational database connection that stores temporary tables for SQL data services.</td>
</tr>
<tr>
<td>Skip Log Files</td>
<td>Prevents the Data Integration Service from generating log files when the SQL data service request completes successfully and the tracing level is set to INFO or higher.</td>
</tr>
</tbody>
</table>

**Virtual Table Properties**

If you want to manage the data object cache with an external tool, specify a cache table name for each virtual table. When you specify a cache table name, the external tool that you configure populates, purges, and refreshes the cache.

**Virtual Table Column Property**

You can configure the Data Integration Service to generate indexes for the cache table based on columns in a virtual table. The indexes can increase the performance of queries on the cache database.

**Web Service Properties**

You can configure the web service properties for the Data Integration Service.

The following table describes the web service properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTM Keep Alive Time</td>
<td>Number of milliseconds that the DTM process stays open after it completes the last request. Web service requests that are issued against the same operation can reuse the open process. You can set this property globally or for each web service that is deployed to the Data Integration Service.</td>
</tr>
<tr>
<td>Logical URL</td>
<td>Prefix for the WSDL URL if you use an external HTTP load balancer.</td>
</tr>
<tr>
<td>Skip Log Files</td>
<td>Prevents the Data Integration Service from generating log files when the web service request completes successfully and the tracing level is set to INFO or higher.</td>
</tr>
</tbody>
</table>

**Workflow Service Module**

The Workflow Service Module is the component in the Data Integration Service that manages requests to run workflows.

**Monitoring**

You can monitor a workflow instance run in the Monitoring tab of the Administrator tool. You can view the status of running workflow and workflow object instances. You can abort or cancel a running workflow instance. You can also view workflow reports, workflow logs, and mapping logs for mappings run by Mapping tasks in the workflow.
PowerExchange Listener Service

You can configure PowerExchange so that Data Integration Service workflows connect to a PowerExchange Listener through a PowerExchange Listener Service.

If the NODE statement in the DBMOVER configuration file on a Data Integration Service node includes the service_name parameter, the Data Integration Service ignores the host_name parameter on the NODE statement and uses the service_name and port parameters to connect to the Listener Service that manages the PowerExchange Listener process.

The function of the NODE statement did not change for PowerCenter Integration Service workflows.

Profile Privilege

Assign the Manage Data Domains Model Repository Service privilege to enable a user to create, edit, and delete data domains in the data domain glossary.

Security

- The Model Repository Service includes the Show Security Details privilege. When you disable this privilege, error and warning message details do not display the names of projects for which users do not have read permission.
- The Informatica domain locks out a user if they exceed the maximum number of failed logins. The administrator can configure the maximum number of failed logins. The administrator can also unlock an account.

Command Line Programs

This section describes new commands and options for the Informatica command line programs.

**infacmd cms Commands**

The following table describes new infacmd cms commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CreateAuditTables</td>
<td>Creates audit trail tables that record any change made to probabilistic model content sets.</td>
</tr>
<tr>
<td>DeleteAuditTables</td>
<td>Deletes audit trail tables that record any change made to probabilistic model content sets.</td>
</tr>
<tr>
<td>ResyncData</td>
<td>Synchronizes the probabilistic model content set files on a Content Management Service machine with the files on the master Content Management Service machine.</td>
</tr>
<tr>
<td>Upgrade</td>
<td>Updates a Content Management Service to version 9.5.0. When you run infacmd cms upgrade, the command updates the following properties on the service: Master CMS, Model Repository Service, Reference Data Location.</td>
</tr>
</tbody>
</table>
The following table describes an updated infacmd cms command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CreateService</td>
<td>Contains the following new options:</td>
</tr>
<tr>
<td></td>
<td>- RepositoryService (-rs). Specifies a Model Repository Service to associate with the Content Management Service.</td>
</tr>
<tr>
<td></td>
<td>- ReferenceDataLocation (-rdl). Connection name of the database that stores data values for the reference tables defined in the Model repository.</td>
</tr>
<tr>
<td><strong>Note</strong>:</td>
<td>-RepositoryService and -ReferenceDataLocation are required options. Update scripts that use the CreateService command before you run them in an Informatica 9.5.0 environment.</td>
</tr>
</tbody>
</table>

infacmd dis Commands

The following table describes updated commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CreateService</td>
<td>Contains the following new options:</td>
</tr>
<tr>
<td></td>
<td>- GridName (-gn). The name of the grid on which the Data Integration Service runs.</td>
</tr>
<tr>
<td></td>
<td>- HttpsPort. Unique HTTPS port number used for each Data Integration Service process.</td>
</tr>
<tr>
<td></td>
<td>- KeystoreFile (-kf). Path and file name of the keystore file that contains the keys and certificates required if you use the HTTPS protocol for the Data Integration Service.</td>
</tr>
<tr>
<td></td>
<td>- KeystorePassword (-kp). Password for the keystore file.</td>
</tr>
<tr>
<td>PurgeDataObjectCache</td>
<td>Deletes all cache for a logical data object, including the latest cache run if the latest cache run has exceeded the cache refresh period. Previously, this command deleted all cache for a logical data object except the latest cache run.</td>
</tr>
<tr>
<td></td>
<td>Contains new option -PurgeAll (-pa). This option deletes all cache for a logical data object.</td>
</tr>
<tr>
<td>UpdateDataObjectOptions</td>
<td>Contains new data object option DataObjectOptions.RefreshDisabled. This option specifies the name of the table that the Data Integration Service uses to cache the logical data object.</td>
</tr>
<tr>
<td>UpdateServiceOptions</td>
<td>Contains the following new options:</td>
</tr>
<tr>
<td></td>
<td>- NodeName (-nn). The name of the node on which the Data Integration Service runs.</td>
</tr>
<tr>
<td></td>
<td>- GridName (-gn). The name of the grid on which the Data Integration Service runs.</td>
</tr>
<tr>
<td></td>
<td>Contains the following changed option:</td>
</tr>
<tr>
<td></td>
<td>- Option (-o). This argument is optional. Previously, this argument was required.</td>
</tr>
<tr>
<td></td>
<td>Contains the following new Data Integration Service options:</td>
</tr>
<tr>
<td></td>
<td>- HTTPConfigurationOptions.HTTPProtocolType. Security protocol that the Data Integration Service uses: HTTP, HTTPS, or Both.</td>
</tr>
<tr>
<td></td>
<td>- WSServiceOptions.DTMKeepAliveTime. Sets the keepalive time for all web services that are deployed to the Data Integration Service.</td>
</tr>
<tr>
<td></td>
<td>Contains the following changed Data Integration Service options:</td>
</tr>
<tr>
<td></td>
<td>- WSServiceOptions.&lt;option name&gt;. Specifies the web service options. Previously, the web service options were named &quot;WebServiceOptions.&lt;option name&gt;.*&quot;</td>
</tr>
<tr>
<td></td>
<td>- WebServiceOptions.RequestResourceBufferSize. This option is removed.</td>
</tr>
</tbody>
</table>

If you created scripts that use the changed Data Integration Service options, you must update the scripts.

infacmd idd Commands

infacmd idd commands manage the Data Director Service. The Data Director Service runs the Informatica Data Director for Data Quality web application.
The following table describes new infacmd idd commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CreateService</td>
<td>Creates an Informatica Data Director Service in the domain.</td>
</tr>
<tr>
<td>ListServiceOptions</td>
<td>Lists the options for a Data Director Service.</td>
</tr>
<tr>
<td>ListServiceProcessOptions</td>
<td>Lists the options for a Data Director Service process.</td>
</tr>
<tr>
<td>RemoveService</td>
<td>Removes the Data Director Service from the domain.</td>
</tr>
<tr>
<td>UpdateServiceOptions</td>
<td>Updates service options for the Data Director Service.</td>
</tr>
<tr>
<td>UpdateServiceProcessOptions</td>
<td>Updates service process options for the Data Director Service.</td>
</tr>
</tbody>
</table>

**infacmd ipc Commands**

The following table describes a new command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ImportFromPC</td>
<td>Converts a PowerCenter repository object XML file to a Model repository object XML file.</td>
</tr>
</tbody>
</table>

The following table describes an updated command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CreateConnection</td>
<td>Contains new option -ConnectionId (-cid). This option specifies the string that the Data Integration Service uses to identify the connection.</td>
</tr>
</tbody>
</table>

**infacmd isp Commands**

The following table describes new commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RenameConnection</td>
<td>Renames a connection.</td>
</tr>
<tr>
<td>ValidateFeature</td>
<td>Validates that the feature in the specified plug-in file is registered in the domain.</td>
</tr>
</tbody>
</table>

The following table describes an updated command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ImportDomainObjects</td>
<td>The merge conflict resolution strategy for option -ConflictResolution (-cr) is removed. You can still specify the merge strategy for groups in the import control file. If you created scripts that use the merge conflict resolution strategy, you must update the scripts.</td>
</tr>
</tbody>
</table>
### infacmd oie Commands

The following table describes updated commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export Import</td>
<td>Contain new option <code>-OtherOptions (-oo)</code>. This option specifies the options you can set when you import or export data files. You can set an option for a probabilistic model file in the rtm group. The possible values are &quot;full&quot; or &quot;trainedOnly.&quot; The following options select trained probabilistic model files: rtm:disName=ds,codePage=UTF-8,refDataFile=/folder1/data.zip,pm=trainedOnly</td>
</tr>
</tbody>
</table>

### infacmd ps Commands

The following table describes new commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>cancelProfileExecution</td>
<td>Cancels the profile model run.</td>
</tr>
<tr>
<td>executeProfile</td>
<td>Runs the profile model.</td>
</tr>
<tr>
<td>getProfileExecutionStatus</td>
<td>Gets the run-time status of a profile model.</td>
</tr>
<tr>
<td>migrateScorecards</td>
<td>Migrates scorecard results from Informatica 9.1.0 to 9.5.0.</td>
</tr>
</tbody>
</table>

### infacmd rtm Commands

The following table describes updated commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DeployImport</td>
<td>Contains the following changed options:</td>
</tr>
<tr>
<td></td>
<td>- <code>-ConflictResolution (-cr)</code>. This option is removed.</td>
</tr>
<tr>
<td></td>
<td>- <code>-DataIntegrationService (-ds)</code>. Identifies the Data Integration Service. Previously, you used the <code>-DsServiceName (-dsn)</code> option.</td>
</tr>
<tr>
<td></td>
<td>- <code>-Folder (-f)</code>. Identifies a folder on the machine that runs the command. Previously, this option identified a folder on a Data Integration Service machine.</td>
</tr>
<tr>
<td></td>
<td>- <code>-StagingDbName (-sdb)</code>. This option is removed.</td>
</tr>
<tr>
<td>Export</td>
<td>Contain changed option <code>-Folder (-f)</code>. This option identifies a folder on the machine that runs the command. Previously, this option identified a folder on a Data Integration Service machine.</td>
</tr>
<tr>
<td>Import</td>
<td>Contains the following changed options:</td>
</tr>
<tr>
<td></td>
<td>- <code>-Folder (-f)</code>. Identifies a folder on the machine that runs the command. Previously, this option identified a folder on a Data Integration Service machine.</td>
</tr>
<tr>
<td></td>
<td>- <code>-ImportType (-it)</code>. Specifies the type of content to import. The DataOnly argument is deprecated for this option. Use the MetadataAndData argument with the <code>-ImportType</code> option to import reference data into the Model repository and reference data database. Use the infacmd oie ImportObjects command to import data to the reference data database only.</td>
</tr>
</tbody>
</table>
If you created scripts that use the changed options, you must update the scripts.

**infacmd sql Commands**

The following table describes updated commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UpdateSQLDataServiceOptions</td>
<td>Contains the following new options:</td>
</tr>
<tr>
<td></td>
<td>- SQLDataServiceOptions.DTMKeepAliveTime. This option sets the keepalive time for one SQL data service that is deployed to the Data Integration Service.</td>
</tr>
<tr>
<td></td>
<td>- SQLDataServiceOptions.optimizeLevel. This option sets which optimization methods the Data Integration Service applies to SQL data service queries.</td>
</tr>
<tr>
<td>UpdateTableOptions</td>
<td>Contains new data object option VirtualTableOptions.RefreshDisabled. This option specifies the name of the table that the Data Integration Service uses to cache the virtual table.</td>
</tr>
</tbody>
</table>

**infacmd wfs Commands**

The following table describes new infacmd wfs commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ListWorkflowParams</td>
<td>Lists the parameters for a workflow and creates a parameter file that you can use when you run a workflow.</td>
</tr>
<tr>
<td>StartWorkflow</td>
<td>Starts an instance of a workflow.</td>
</tr>
</tbody>
</table>

**infacmd ws Commands**

The following table describes an updated command:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UpdateWebServiceOptions</td>
<td>Contains the following new options:</td>
</tr>
<tr>
<td></td>
<td>- WebServiceOptions.DTMKeepAliveTime. This option sets the keepalive time for one web service that is deployed to the Data Integration Service.</td>
</tr>
<tr>
<td></td>
<td>- WebServiceOptions.optimizeLevel. This option sets which optimization methods the Data Integration Service applies to web service requests.</td>
</tr>
</tbody>
</table>

**pmrep**

The following table describes updated commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ExecuteQuery</td>
<td>Contain new option -y. This option displays the database type of sources and targets.</td>
</tr>
<tr>
<td>FindCheckout</td>
<td></td>
</tr>
<tr>
<td>ListObjects</td>
<td></td>
</tr>
<tr>
<td>ListObjectDependencies</td>
<td></td>
</tr>
<tr>
<td>Validate</td>
<td></td>
</tr>
</tbody>
</table>
PowerCenter

This section describes new features and enhancements to PowerCenter.

Datatypes

PowerCenter supports the Microsoft SQL Server datetime2 datatype. Datetime2 datatype has a precision of 27 and scale of 7.

Transformation Language

Use the optional argument, match_from_start, with the REG_EXTRACT function to return the substring if a match is found from the start of the string.

The REG_EXTRACT function uses the following syntax:

```
REG_EXTRACT( subject, 'pattern', subPatternNum, match_from_start )
```

Connectivity to SAP HANA

You can connect to an SAP HANA database using ODBC.

Metadata Manager

This section describes new features and enhancements to Metadata Manager.

Resources

SAP BW Resource

You can create and configure a SAP BW resource to extract metadata from SAP NetWeaver Business Warehouse.

Custom Resource

You can create and configure custom resources to extract metadata from custom files such as comma separated files. You can create load template files that contain all mapping rules and rule sets used to load the custom resources.

Rule-based Links

Use rule-based links to define rules that Metadata Manager uses to link matching elements between a custom resource type and another custom, packaged, or business glossary resource type. You can also configure rule-based links between a business glossary and a packaged resource type. Configure rule-based links so that you can run data lineage analysis across metadata sources.

Command Line Programs

The following table describes new Metadata Manager commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>createloadtemplate</td>
<td>Creates a load template file.</td>
</tr>
<tr>
<td>generatedefaultloadtemplate</td>
<td>Generates a default load template to load all top level classes for the specified model.</td>
</tr>
<tr>
<td>getloadtemplate</td>
<td>Exports a load template file.</td>
</tr>
<tr>
<td>deleteloadtemplate</td>
<td>Deletes a load template file.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>listloadtemplate</td>
<td>Lists all the load template files for a custom resource.</td>
</tr>
<tr>
<td>updateloadtemplate</td>
<td>Updates a load template file.</td>
</tr>
<tr>
<td>createlinkruleset</td>
<td>Creates a linking rule set based on a rule set XML file.</td>
</tr>
<tr>
<td>updatelinkruleset</td>
<td>Updates a linking rule set based on a modified rule set XML file. If the rule set does not exist, the command creates the rule set.</td>
</tr>
<tr>
<td>deletelinkruleset</td>
<td>Deletes a linking rule set.</td>
</tr>
<tr>
<td>exportlinkruleset</td>
<td>Exports all linking rule sets for a resource to XML files. You can import the rule sets into another Metadata Manager repository.</td>
</tr>
<tr>
<td>importlinkruleset</td>
<td>Imports all linking rule sets from XML files in the specified path into the Metadata Manager repository.</td>
</tr>
</tbody>
</table>

**PowerExchange Adapters**

This section describes new features and enhancements to PowerExchange adapters in version 9.5.

**Adapters for PowerCenter**

**PowerExchange for Greenplum**

- You can parameterize the following PowerExchange for Greenplum session properties:
  - Greenplum Target Table
  - Match Columns
  - Update Columns
  - Update Condition
  - Delimiter
  - Escape Character
  - Null As
  - Quote
  - Error Table
  - Greenplum Pre SQL
  - Greenplum Post SQL

**PowerExchange for Microsoft Dynamics CRM**

- You can use PowerExchange for Microsoft Dynamics CRM for online deployment with passport authentication.
- You can use Power Exchange for Microsoft Dynamics CRM for Internet-facing deployment with claims-based authentication.
- You can read and write PartyList datatype from Microsoft Dynamics CRM.
- Intersect entities are writable.
PowerExchange for Salesforce

- You can use an encrypted HTTP proxy account password for PowerExchange for Salesforce. Use the PowerCenter command line program, pmpasswd, to encrypt the password.

PowerExchange for SAP NetWeaver

- PowerExchange for SAP NetWeaver uses SAP RFC SDK 7.2 libraries.

PowerExchange for Teradata Parallel Transporter API

- You can use the serialize mechanism for columns with the Stream system operator.

PowerExchange for Ultra Messaging

- You can connect to Informatica Ultra Messaging Queuing sources and targets to process messages.
- You can read and write Ultra Messaging JMS messages.
- You can configure pass-through partitioning for an Ultra Messaging source and target.
- You can run PowerExchange for Ultra Messaging workflows concurrently.
- You can configure PowerExchange for Ultra Messaging for high availability.
- You can configure PowerExchange for Ultra Messaging to use any Ultra Messaging transport protocol.

Adapters for Informatica

PowerExchange for Facebook

- You can extract social media data such as friends and posts from Facebook.
- You can use Open Authentication to connect to Facebook.
- You can use Informatica Developer to create a Facebook data object, specify resources, and create a data object operation. You can use the data object operation as a source in the mappings.
- You can use Facebook search operators in a query parameter to search for data.

PowerExchange for LinkedIn

- You can extract social media data such as connections and profiles from LinkedIn.
- You can use Open Authentication to connect to LinkedIn.
- You can use Informatica Developer to create a LinkedIn data object, specify resources, and create a data object operation. You can use the data object operation as a source in the mappings.
- You can use LinkedIn search operators in a query parameter to search for data.

PowerExchange for SAP NetWeaver

- PowerExchange for SAP NetWeaver uses SAP RFC SDK 7.2 libraries.

PowerExchange for Twitter

- You can extract social media data such as tweets and profiles from Twitter. You can extract Twitter data that is six to nine days old or extract data in real time.
- You can use Open Authentication to connect to Twitter.
- You can use Informatica Developer to create a Twitter data object, specify resources, and create a data object operation. You can use the data object operation as a source in the mappings.
- You can use Twitter search operators in a query parameter to search for data.
Documentation

This section describes new features and enhancements to the documentation.

Documentation DVD

The Informatica Documentation DVD contains product manuals in PDF format. Effective in 9.5.0, the documentation DVD uses a browser-based user interface. Supported browsers are Internet Explorer 7.0 or later and Mozilla Firefox 9.0 or later. Ensure that Javascript support is enabled and the Adobe Acrobat Reader plugin is installed in your browser.

Data Quality User Guide


Data Processor Transformation Guide


Data Services Performance Tuning Guide

The *Informatica Data Services Performance Tuning Guide* contains information that can help you identify and eliminate bottlenecks and tune the Administrator, Developer, and Analyst tools to improve data services performance.

Data Services User Guide


Developer Workflow Guide

The *Informatica Developer Workflow Guide* describes how to create and configure workflows in the Developer tool.
This chapter includes the following topics:

- **Edit Profile Action Menus, 215**
- **Foreign Key Discovery, 216**
- **Projects, 216**
- **Scorecards, 216**

## Edit Profile Action Menus

Effective in version 9.5.0, the actions menus to edit a profile in Informatica Analyst have changed. The following table describes tasks to edit a profile that have changed action menus:

<table>
<thead>
<tr>
<th>Task</th>
<th>Changed to</th>
<th>Changed from</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change the basic properties such as name, description, and profile type.</td>
<td>Actions &gt; General</td>
<td>Actions &gt; Edit Properties</td>
</tr>
<tr>
<td>Choose another matching data source for the profile.</td>
<td>Actions &gt; Data Source</td>
<td>Actions &gt; Edit Properties</td>
</tr>
<tr>
<td>Select the columns you want to run the profile on and configure the sampling and drill down options.</td>
<td>Actions &gt; Column Profiling</td>
<td>Actions &gt; Run Profile</td>
</tr>
<tr>
<td>Create, edit, and delete filters.</td>
<td>Actions &gt; Column Profiling Filter</td>
<td>Actions &gt; Manage Filters</td>
</tr>
<tr>
<td>Create rules or change current ones.</td>
<td>Actions &gt; Column Profiling Rules</td>
<td>Actions &gt; Add Rule</td>
</tr>
</tbody>
</table>
Foreign Key Discovery

Effective in version 9.5.0, the option to limit the total number of inferred foreign keys has changed. This option now determines the number of foreign keys identified between a child data object and a parent data object. The default value is 2.

The following table describes the change to the foreign key limiting option:

<table>
<thead>
<tr>
<th>Task</th>
<th>Changed to</th>
<th>Changed from</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limit the number of foreign keys identified between a child data object and a parent data object</td>
<td>Max foreign keys between data objects</td>
<td>Max foreign keys returned</td>
</tr>
</tbody>
</table>

Previously, the option determined the total number of foreign keys the Developer tool returned in the profile results and the default value was 500.

Projects

Effective in version 9.5.0, Model repository projects include the following changes:

- You can share project contents by assigning permissions to users and groups. You can assign read, write, and grant permissions when you create or edit a project. Previously, to share projects contents, you created a shared project. When you upgrade a shared project to version 9.5.0, all domain users inherit read permission on the project.

- The Developer tool hides the projects that you do not have read permission on. Previously, the Developer tool displayed all projects regardless of project permissions.

Scorecards

Effective in version 9.5.0, you need to migrate scorecards results from version 9.1.0 before you can start using existing scorecards. To view the results of scorecards, run the infacmd ps migrateScorecards command.
This chapter includes the following topics:

- Address Validator Transformation, 217
- Cost-Based Optimization, 217
- Edit Profile Action Menus, 218
- Export to PowerCenter, 218
- File Directory Fields for Mapping Objects, 219
- Exception Transformation, 219
- Mapping and Mapplet Editors, 220
- Match Transformation, 220
- Projects, 220
- Reference Tables, 220
- Scorecards, 220

Address Validator Transformation

Effective in version 9.5.0, the Address Validator transformation uses version 5.2.9 of the Address Doctor software engine.

Address Doctor 5.2.9 allows you to configure the Address Validator transformation to return the formal street name or the street alias in cases where a street has both a formal name and an alias. Previously, the transformation returned the formal name only.

Effective in 9.5.0, the Address Validator transformation refreshes the list of available input and output ports when you open the transformation. Previously, Informatica defined the port list in the product code.

Cost-Based Optimization

Effective in version 9.5, the Data Integration Service cost-based optimization method can use profiling statistics or database statistics to estimate the number or rows that pass through a transformation.
Previously, the Data Integration Service could use database statistics to estimate the number of rows that pass through a transformation.

### Edit Profile Action Menus

Effective in version 9.5.0, the actions menus to edit a profile in Informatica Analyst have changed. The following table describes tasks to edit a profile that have changed action menus:

<table>
<thead>
<tr>
<th>Task</th>
<th>Changed to</th>
<th>Changed from</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change the basic properties such as name, description, and profile type.</td>
<td>Actions &gt; General</td>
<td>Actions &gt; Edit Properties</td>
</tr>
<tr>
<td>Choose another matching data source for the profile.</td>
<td>Actions &gt; Data Source</td>
<td>Actions &gt; Edit Properties</td>
</tr>
<tr>
<td>Select the columns you want to run the profile on and configure the sampling and drill down options.</td>
<td>Actions &gt; Column Profiling</td>
<td>Actions &gt; Run Profile</td>
</tr>
<tr>
<td>Create, edit, and delete filters.</td>
<td>Actions &gt; Column Profiling Filter</td>
<td>Actions &gt; Manage Filters</td>
</tr>
<tr>
<td>Create rules or change current ones.</td>
<td>Actions &gt; Column Profiling Rules</td>
<td>Actions &gt; Add Rule</td>
</tr>
</tbody>
</table>

### Export to PowerCenter

Effective in version 9.5.0, the process to export Model repository objects to the PowerCenter repository writes log message files to the machine that performs the export operation. Previously, the export process did not write log files and displayed log messages for Developer tool export operations only.

If you export to a PowerCenter repository from a Developer tool machine, the export process writes log files to the following location:

```
[9.5.0_Install_Directory]\clients\DeveloperClient\infacmd\exporttopc_cli_logs
```

If you export to a PowerCenter repository from an Informatica services machine, the export process writes log files to the following location:

```
[9.5.0_Install_Directory]\tomcat\logs\exporttopc_cli_logs
```

You must have write access to the log directory. If you do not have write access, Informatica 9.5.0 displays a warning message to state that no logs are stored for the export.
File Directory Fields for Mapping Objects

Effective in version 9.5.0, system mapping parameters are the default values for flat file directory, cache file directory, and temporary file directory fields in mapping objects. System parameters are constant values that define the directories where the Data Integration Service stores cache files, reject files, source files, target files, and temporary files. You define the values of system parameters on a Data Integration Service process in the Administrator tool.

The following table lists the default values for these directories:

<table>
<thead>
<tr>
<th>Object</th>
<th>Directory Field</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat file data object</td>
<td>Source file directory</td>
<td>SourceDir</td>
</tr>
<tr>
<td>Flat file data object</td>
<td>Output file directory</td>
<td>TargetDir</td>
</tr>
<tr>
<td>Flat file data object</td>
<td>Reject file directory</td>
<td>RejectDir</td>
</tr>
<tr>
<td>Aggregator transformation</td>
<td>Cache directory</td>
<td>CacheDir</td>
</tr>
<tr>
<td>Joiner transformation</td>
<td>Cache directory</td>
<td>CacheDir</td>
</tr>
<tr>
<td>Lookup transformation</td>
<td>Cache directory</td>
<td>CacheDir</td>
</tr>
<tr>
<td>Rank transformation</td>
<td>Cache directory</td>
<td>CacheDir</td>
</tr>
<tr>
<td>Sorter transformation</td>
<td>Work directory</td>
<td>TempDir</td>
</tr>
</tbody>
</table>

Previously, the default value for all of these directories was ".", which stood for the following directory:

<Informatica Services Installation Directory>\tomcat\bin

When you upgrade, the upgrade process does not change the value of these directory fields. If you used the previous default value of ".", the upgrade process retains that value.

Exception Transformation

Effective in version 9.5.0, you can connect the bad record and duplicate record output from an Exception transformation to a data object in a mapping. You use the transformation to create the bad record and duplicate record tables and the data object.

Previously, you used the Exception transformation to write data to bad record or duplicate record tables that are not represented as repository objects.

If you upgrade to Data Quality 9.5.0 and the Model repository contains an Exception transformation, complete the following steps to use the transformation in Data Quality 9.5.0:

1. Create a data object from the database table that contains the bad records or duplicate records.
2. Add the data object to the mapping canvas.
3. Connect the bad data or duplicate data ports output ports to the data object.

When you run a mapping with an Exception transformation in Data Quality 9.5.0, you can use Informatica Analyst or Informatica Data Director for Data Quality to review and edit the table records.
Mapping and Mapplet Editors

Effective in version 9.5.0, when you click **Layout > Arrange All** in any mapping or mapplet editor, the Developer tool aligns each object in the editor, but retains the object size.

Previously, the **Arrange All** option resized each object to a standard size.

Match Transformation

Effective in version 9.5.0, the Match transformation refreshes the list of identity population files that are installed on the Informatica services machine each time you open a strategy in the transformation.

Previously, the Match transformation read the list of identity population files when you started the Developer tool.

Projects

Effective in version 9.5.0, Model repository projects include the following changes:

- You can share project contents by assigning permissions to users and groups. You can assign read, write, and grant permissions when you create or edit a project. Previously, to share projects contents, you created a shared project. When you upgrade a shared project to version 9.5.0, all domain users inherit read permission on the project.
- The Developer tool hides the projects that you do not have read permission on. Previously, the Developer tool displayed all projects regardless of project permissions.

Reference Tables

Effective in 9.5.0, you can use the Developer tool and Analyst tool to create, edit, and delete reference tables in the Model repository.

Previously, you used the Analyst tool to perform reference table operations.

Scorecards

Effective in version 9.5.0, you need to migrate scorecards results from version 9.1.0 before you can start using existing scorecards. To view the results of scorecards, run the infacmd ps migrateScorecards command.
Chapter 30

Changes to Informatica Data Services (9.5.0)

This chapter includes the following topics:

- Cost-Based Optimization, 221
- Edit Profile Action Menus, 221
- Export to PowerCenter, 222
- File Directory Fields for Mapping Objects, 222
- Flat File Data Object, 223
- Mapping and Mapplet Editors, 223
- Projects, 224
- Scorecards, 224
- Web Service Consumer Transformation, 224
- Web Services, 224

Cost-Based Optimization

Effective in version 9.5, the Data Integration Service cost-based optimization method can use profiling statistics or database statistics to estimate the number or rows that pass through a transformation.

Previously, the Data Integration Service could use database statistics to estimate the number of rows that pass through a transformation.

Edit Profile Action Menus

Effective in version 9.5.0, the actions menus to edit a profile in Informatica Analyst have changed.
The following table describes tasks to edit a profile that have changed action menus:

<table>
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<td>Actions &gt; General</td>
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<tr>
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<td>Actions &gt; Data Source</td>
<td>Actions &gt; Edit Properties</td>
</tr>
<tr>
<td>Select the columns you want to run the profile on and configure the sampling and drill down options.</td>
<td>Actions &gt; Column Profiling</td>
<td>Actions &gt; Run Profile</td>
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<td>Create, edit, and delete filters.</td>
<td>Actions &gt; Column Profiling Filter</td>
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<td>Actions &gt; Column Profiling Rules</td>
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</table>

Export to PowerCenter

Effective in version 9.5.0, the process to export Model repository objects to the PowerCenter repository writes log message files to the machine that performs the export operation. Previously, the export process did not write log files and displayed log messages for Developer tool export operations only.

If you export to a PowerCenter repository from a Developer tool machine, the export process writes log files to the following location:

\[9.5.0_{Install\_Directory}\]\clients\DeveloperClient\infacmd\exporttopc_cli_logs

If you export to a PowerCenter repository from an Informatica services machine, the export process writes log files to the following location:

\[9.5.0_{Install\_Directory}\]\tomcat\logs\exporttopc_cli_logs

You must have write access to the log directory. If you do not have write access, Informatica 9.5.0 displays a warning message to state that no logs are stored for the export.

File Directory Fields for Mapping Objects

Effective in version 9.5.0, system mapping parameters are the default values for flat file directory, cache file directory, and temporary file directory fields in mapping objects. System parameters are constant values that define the directories where the Data Integration Service stores cache files, reject files, source files, target files, and temporary files. You define the values of system parameters on a Data Integration Service process in the Administrator tool.
The following table lists the default values for these directories:

<table>
<thead>
<tr>
<th>Object</th>
<th>Directory Field</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat file data object</td>
<td>Source file directory</td>
<td>SourceDir</td>
</tr>
<tr>
<td>Flat file data object</td>
<td>Output file directory</td>
<td>TargetDir</td>
</tr>
<tr>
<td>Flat file data object</td>
<td>Reject file directory</td>
<td>RejectDir</td>
</tr>
<tr>
<td>Aggregator transformation</td>
<td>Cache directory</td>
<td>CacheDir</td>
</tr>
<tr>
<td>Joiner transformation</td>
<td>Cache directory</td>
<td>CacheDir</td>
</tr>
<tr>
<td>Lookup transformation</td>
<td>Cache directory</td>
<td>CacheDir</td>
</tr>
<tr>
<td>Rank transformation</td>
<td>Cache directory</td>
<td>CacheDir</td>
</tr>
<tr>
<td>Sorter transformation</td>
<td>Work directory</td>
<td>TempDir</td>
</tr>
</tbody>
</table>

Previously, the default value for all of these directories was ".", which stood for the following directory:

```plaintext
<Informatica Services Installation Directory>\tomcat\bin
```

When you upgrade, the upgrade process does not change the value of these directory fields. If you used the previous default value of ".", the upgrade process retains that value.

**Flat File Data Object**

Effective in version 9.5, you can use the flat file data object to read a directory of files with the same file properties.

Previously, you could not read a directory of files.

**Mapping and Mapplet Editors**

Effective in version 9.5.0, when you click **Layout > Arrange All** in any mapping or mapplet editor, the Developer tool aligns each object in the editor, but retains the object size.

Previously, the **Arrange All** option resized each object to a standard size.
Projects

Effective in version 9.5.0, Model repository projects include the following changes:

• You can share project contents by assigning permissions to users and groups. You can assign read, write, and grant permissions when you create or edit a project.
  Previously, to share projects contents, you created a shared project. When you upgrade a shared project to version 9.5.0, all domain users inherit read permission on the project.
• The Developer tool hides the projects that you do not have read permission on.
  Previously, the Developer tool displayed all projects regardless of project permissions.

Scorecards

Effective in version 9.5.0, you need to migrate scorecards results from version 9.1.0 before you can start using existing scorecards. To view the results of scorecards, run the infacmd ps migrateScorecards command.

Web Service Consumer Transformation

Effective in version 9.5.0, you can create a Web Service Consumer transformation for a SOAP 1.2 binding from a single WSDL object. For a SOAP 1.2 binding, the Data Integration Service returns the fault message, code, reason, node, and role elements for the fault.
  Previously, you could only create a Web Service Consumer transformation for a SOAP 1.1 binding. The Data Integration Service returned the fault elements defined for a SOAP 1.1 binding.

Web Services

This section describes changes to web services.

Fault Transformation

Effective in version 9.5.0, you can configure a Fault transformation to return a generic error message when the error is not defined by a fault element in the WSDL. When you create a Fault transformation for a generic fault in a web service, you must define the operation mapping logic that returns the error condition.
  Previously, you could create a Fault Transformation to return a predefined fault from a fault element. The web service used a fault element to define the fault. You could configure a Fault transformation to return a custom error message.
Fault Terminology

Effective in version 9.5.0, the fault handling terminology changed. Faults can be of the following types:

- System defined
- User-defined
  - Predefined
  - Generic

The following table shows the terminology changes:

<table>
<thead>
<tr>
<th>9.5 Term</th>
<th>Previous Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>System defined fault.</td>
<td>Generic fault.</td>
</tr>
<tr>
<td>User-defined fault.</td>
<td>-</td>
</tr>
<tr>
<td>Predefined fault.</td>
<td>User-defined fault.</td>
</tr>
<tr>
<td>Generic fault.</td>
<td>-</td>
</tr>
</tbody>
</table>

Manual Web Services

Effective in version 9.5.0, the Developer tool contains behavior changes for web services that you create manually.

The Developer tool contains the following behavior changes:

- When you change an element type from complex to simple, the Developer tool clears the location of the associated port. Previously, the Developer tool deleted the associated port.
- When you change an element type from simple to complex, the Developer tool marks the port as not valid. Previously, the Developer tool cleared the location of the associated port.

SOAP 1.2

Effective in version 9.5.0, the following changes are implemented for SOAP 1.2:

- Each web service can have one or more operations that use either a SOAP 1.1 binding or a SOAP 1.2 binding but not both.
- The SOAP request can be of SOAP 1.1 or SOAP 1.2 format. The SOAP request is based on the type of binding that is used by the binding operation associated with the operation mapping.
- When you create a fault in an operation that has a SOAP 1.2 binding, the wizard creates the code, reason, node, and role elements.

Previously, you could only create an operation with a SOAP 1.1 binding and create a fault in an operation with a SOAP 1.1 binding.

Transport Layer Security

Effective in version 9.5.0, if you enable Transport Layer Security (TLS) for a web service, you must set the Data Integration Service HTTP protocol type property to HTTPS or Both. Then, you must set the HTTPS port for each Data Integration Service process.
Previously, if you enabled TLS for a web service, you had to enable TLS for the Data Integration Service process and then set the HTTPS port for the process.

When you upgrade, the upgrade process sets the HTTP protocol type property to one of the following values:

- **HTTP** if only the HTTP port was set for the Data Integration Service process.
- **HTTPS** if only the HTTPS port was set for the Data Integration Service process.
- **Both** if both the HTTP and the HTTPS ports were set for the Data Integration Service process.
CHAPTER 31

Changes to Informatica Data Transformation (9.5.0)

This chapter includes the following topics:

- Data Transformation Platform, 227
- Deprecated Script Components, 228
- IntelliScript Editor, 228
- Model Repository, 228
- Obsolete Script Components and Options, 229
- Script Objects, 229
- Transformation, 230
- Views, 230
- XML Validation, 231

Data Transformation Platform

Effective in version 9.5.0, Data Transformation moved to the Informatica platform. You can create a Data Processor transformation that includes XMap objects and script objects.

Previously, you could use Data Transformation Studio to create scripts. Data Transformation Studio is still available to edit Data Transformation library projects and validation rule files.
Deprecated Script Components

Effective in version 9.5.0, some Intelliscript components are deprecated. The Intelliscript editor displays deprecated components in scripts that were created in previous Data Transformation versions, but you can no longer add them to scripts.

The following table describes the deprecated components and suggestions for replacements:

<table>
<thead>
<tr>
<th>Component</th>
<th>Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>ExternalJavaPreProcessor document processor</td>
<td>Develop a custom Java component.</td>
</tr>
<tr>
<td>ExternalPreProcessor document processor</td>
<td>Develop a custom C++ component.</td>
</tr>
<tr>
<td>ExternalTransformer transformer</td>
<td>Develop a custom C++ component.</td>
</tr>
<tr>
<td>JavaTransformer transformer</td>
<td>Develop a custom Java component.</td>
</tr>
<tr>
<td>EDIFACTValidation transformer</td>
<td>Use other validation components.</td>
</tr>
</tbody>
</table>

IntelliScript Editor

Effective in version 9.5.0, the IntelliScript editor opens in the Developer tool. The IntelliScript editor uses new icons and a new font. Script components now appear in black letters.

Previously, the IntelliScript editor opened in Data Transformation Studio. Script components appeared in brown letters. The IntelliScript editor also had a separate panel to display the example source document for the main input.

Model Repository

Effective in version 9.5.0, you store schemas, example sources, and other project files in the Model repository. You can also import a Data Transformation project or service into the Model repository.

Previously, you stored schemas, example sources, and project files in a workspace folder in the file system. You could import projects or services into the workspace folder, or you could copy the files manually to the workspace folder.
Obsolescent Script Components and Options

Effective in version 9.5.0, some script components are obsolete. The IntelliScript editor does not load scripts that contain any of these components or options.

The following table describes the obsolete components and options and their replacements:

<table>
<thead>
<tr>
<th>Obsolete Component</th>
<th>Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>DownloadFile action</td>
<td>Use a custom component.</td>
</tr>
<tr>
<td>EDIValidation validator</td>
<td>Use other validation components.</td>
</tr>
<tr>
<td>ExcelToHtml document processor</td>
<td>Use theExcelToXml_03_07_10 document processor.</td>
</tr>
<tr>
<td>ExcelToTextML document processor</td>
<td>Use theExcelToXml_03_07_10 document processor.</td>
</tr>
<tr>
<td>ExcelToTxt document processor</td>
<td>Use theExcelToXml_03_07_10 document processor.</td>
</tr>
<tr>
<td>HtmlForm anchor</td>
<td>Use a custom component.</td>
</tr>
<tr>
<td>IBANValidation validator</td>
<td>Use other validation components.</td>
</tr>
<tr>
<td>JavaScriptFunction action</td>
<td>Use other components that define complex behavior.</td>
</tr>
<tr>
<td>MSMQOutput option of WriteValue action</td>
<td>Use a custom component.</td>
</tr>
<tr>
<td>MSMQOutput option of WriteSegment action</td>
<td>Use a custom component.</td>
</tr>
<tr>
<td>PowerpointToHtml document processor</td>
<td>Use a custom component.</td>
</tr>
<tr>
<td>SubmitForm action</td>
<td>Use a custom component.</td>
</tr>
<tr>
<td>SubmitFormGet action</td>
<td>Use a custom component.</td>
</tr>
<tr>
<td>WordToRTF document processor</td>
<td>Use theWordToXml document processor.</td>
</tr>
<tr>
<td>WordToTxt document processor</td>
<td>Use theWordToXml document processor.</td>
</tr>
<tr>
<td>WordToHTML document processor</td>
<td>Use theWordToXml document processor.</td>
</tr>
<tr>
<td>WordToTextML document processor</td>
<td>Use theWordToXml document processor.</td>
</tr>
<tr>
<td>WordperfectToTextML document processor</td>
<td>Use a custom component.</td>
</tr>
</tbody>
</table>

Script Objects

Effective in version 9.5.0, you create scripts in the Developer tool.

Previously, you used Data Transformation Studio to create TGP file scripts.
Transformation

Effective in version 9.5.0, transformations include the following changes:

- Data Transformation moved to the Informatica platform. You can create a Data Processor transformation in the Developer tool. Create scripts and XMap objects in the transformation instead of the DT Studio.

- Set the startup component of a Data Processor transformation in the Overview tab. If the startup component is a component of a script, you can set it in the IntelliScript editor. Previously, you could set the startup component of a TGP file in the IntelliScript editor.

- Add a schema object to a project in the Model repository, and then reference a schema in the Data Processor transformation. Previously, you added a schema to the XSD node in the Data Transformation Explorer view of Data Transformation Studio.

- The Output panel of the Data Viewer view displays the main output of a Data Processor transformation or the output of an additional output port. Previously, you could view the main output and output for additional output ports in a separate view in the editor area.

- View an example source in the Input panel of the Data Viewer view. You can view example source data for the main input and for additional input ports. Previously, you could view the example sources for the main input in the Input panel of the IntelliScript editor, and you could view the example source for additional input ports in a separate view.

- Configure document encodings and other settings in the Data Processor transformation Settings view. Previously, you configured document encodings and other settings in the Studio project properties.

- You can no longer use the VarPostData, VarFormAction, and VarFormData system variables. The IntelliScript editor continues to display them in scripts that were created in previous Data Transformation versions.

Views

Effective in 9.5.0, views in the Developer tool replaced views in Data Transformation Studio.

The following table describes the changes in the views:

<table>
<thead>
<tr>
<th>Developer Tool View</th>
<th>Studio View</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Processor Events</td>
<td>Events</td>
<td>Shows information about events that occur when you run the transformation. Shows initialization, execution, and summary events.</td>
</tr>
<tr>
<td>Data Processor Script Help</td>
<td>Help</td>
<td>Displays context-sensitive help for components and properties selected in the IntelliScript editor.</td>
</tr>
<tr>
<td>Data Processor Hex</td>
<td>Binary Source</td>
<td>Displays the example source documents in hexadecimal format.</td>
</tr>
<tr>
<td>Developer Tool View</td>
<td>Studio View</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Data Viewer</td>
<td>IntelliScript editor example panel and other components</td>
<td>View example input data, run the transformation, and view output results.</td>
</tr>
<tr>
<td>Help</td>
<td>No equivalent</td>
<td>Displays context-sensitive help for tabs selected in the Data Processor transformation.</td>
</tr>
<tr>
<td>Objects</td>
<td>No equivalent</td>
<td>Add, modify, or delete script and XMap objects from the transformation.</td>
</tr>
<tr>
<td>Overview</td>
<td>No equivalent</td>
<td>Configure ports and define the startup component.</td>
</tr>
<tr>
<td>References</td>
<td>No equivalent</td>
<td>Add or remove schemas from the transformation.</td>
</tr>
<tr>
<td>Settings</td>
<td>Project Properties dialog box</td>
<td>Configure transformation settings for encoding, output control, and XML generation.</td>
</tr>
<tr>
<td>Validation Log</td>
<td>Problems</td>
<td>Displays details of syntax errors in the Data Transformation project or Data Processor transformation.</td>
</tr>
<tr>
<td>No equivalent</td>
<td>Data Transformation Explorer</td>
<td>Displayed all project files in a hierarchical tree.</td>
</tr>
<tr>
<td>No equivalent</td>
<td>Schema</td>
<td>Displayed all schemas available in the project, together with system variables and user-defined variables.</td>
</tr>
<tr>
<td>No equivalent</td>
<td>Repository</td>
<td>Displayed information about services in the ServiceDB folder on the local computer.</td>
</tr>
<tr>
<td>No equivalent</td>
<td>Component</td>
<td>Displayed all the components of a TGP file in a hierarchical tree.</td>
</tr>
<tr>
<td>No equivalent</td>
<td>Intelliscript Assistant</td>
<td>Displayed additional information about the value of the component or property selected in the IntelliScript editor.</td>
</tr>
</tbody>
</table>

**XML Validation**

Effective in version 9.5.0, the lexical space of the simple type `gmonth` is --MM, in accordance with W3C erratum E2-12.

Previously, the lexical space of the simple type `gmonth` was --MM--, in accordance with the original W3C XML Schema recommendation.
This chapter includes the following topics:

- Connection Management, 232
- Content Management Service, 232
- Data Integration Service, 233
- Pass-through Security, 233
- Web Services, 233

**Connection Management**

Effective in version 9.5.0, the Data Integration Service identifies each connection by the connection ID. Therefore, you can rename a connection.

Previously, the Data Integration Service identified each connection by the connection name. You could not rename a connection.

If you upgrade to version 9.5.0, the upgrade process sets the connection ID for each connection to the connection name.

**Content Management Service**

Effective in version 9.5.0, you set the connection to the default database for reference table values on the Content Management Service. Use the Reference Data Location property on the Content Management Service to identify the database connection.

Previously, you set the database connection on the Analyst Service. The Staging Database property on the Analyst Service identified the database that stored the reference data values.

When you upgrade from an earlier version, the upgrade operations copy the database connection name from the Analyst Service to the Content Management Service.
Data Integration Service

Effective in version 9.5, the Data Integration Service includes the following behavior changes:

- When the Data Integration Service restarts, the state of each application associated with the Data Integration Service is restored.
  Previously, when the Data Integration Service restarted, each application associated with the Data Integration Service was restarted as well.

- Configure the Temporary Directories property to specify the location where the Result Set Cache Manager stores cache files when there is not enough space for the cache in memory.
  Previously, you configured the Storage Directory property to specify the location where the Result Set Cache Manager stored cache files when there was not enough space for the cache in memory.

Pass-through Security

Effective in version 9.5.0, you configure pass-through security in the connection properties of a domain.

Previously, you configured pass-through security in the Data Integration Service.

Web Services

Effective in version 9.5.0, you can set the keepalive interval for web services through the Administrator tool.

You can also set the keepalive interval through the following infacmd command options:

- infacmd dis UpdateServiceOptions command, WSServiceOptions.DTMKeepAliveTime option
- infacmd ws UpdateWebServiceOptions command, WebServiceOptions.DTMKeepAliveTime option

Previously, you set the keepalive interval for all web services through the infacmd dis UpdateServiceOptions command, WebServiceOptions.DTMKeepAlive option. If you created scripts that use this command option, you must update the scripts.
Changes to PowerCenter (9.5.0)

This chapter includes the following topics:

- Control File Configuration, 234
- Exporting Metadata to Excel, 234
- Pushdown Optimization, 234

Control File Configuration

Effective in version 9.5.0, you can access the export or import schema files as part of the oie-util.jar in the following installation directory:

\(<\text{InformaticaInstallationDir}/\text{services}/\text{shared}/\text{jars/shapp}\>

Previously, you accessed the schema files from the following installation directory:

\(<\text{InformaticaInstallationDir}/\text{isp/bin}\>

Exporting Metadata to Excel

Effective in version 9.5.0, the PowerCenter Repository Service does not export the Domains,Enumerations, Joins, Lookups, Filter, and Rules worksheet when you export metadata to Excel. The export of metadata to Excel is a reporting activity that represents a summary of the data lineage. The PowerCenter Repository Service exports the Models, Packages, and Mapping worksheets when you export metadata to Excel.

Previously, the PowerCenter Repository Service exported the worksheets by including the worksheets that do not have summary lineage, when you export metadata to Excel. The worksheets exported were Models, Packages, Domains, Enumerations, Mappings, Joins, Lookups, Filter, and Rules worksheet.

Pushdown Optimization

Effective in version 9.5.0, you can disable creation of temporary views for pushdown optimization to Teradata when the Source Qualifier transformation contains source filter, user defined joins, or SQL override.

Previously, pushdown optimization on Teradata database would create and drop views when you have source filter, user defined joins, or SQL override at the Source Qualifier transformation.
CHAPTER 34

Changes to Metadata Manager (9.5.0)

This chapter includes the following topics:

- **Business Glossary Terms, 235**
- **Data Modeling and Business Intelligence Resources, 235**
- **Incremental Metadata Load, 236**
- **Java Virtual Machine Memory, 236**
- **Metadata Source Files for Resources, 236**
- **mmcmd Command Line Program, 236**
- **Resource Property Changes, 237**
- **Resource Types, 239**
- **Metadata Manager Service, 240**

**Business Glossary Terms**

Effective in version 9.5.0, the Business Glossary **Properties** area does not display business term properties that have no values. For example, if a business term has no description, the **Properties** area does not display the **Description** field.

Previously, the **Properties** area listed all business term properties, even if the properties had no values.

**Data Modeling and Business Intelligence Resources**

Effective in version 9.5.0, properties of the data modeling and business intelligence resources include all the properties available in the Metadata Manager Agent.

Previously, these resources included custom properties that were not available in the Metadata Manager Agent.
Incremental Metadata Load

Effective in version 9.5.0, when you configure any business intelligence resource except a Microsoft Analysis and Reporting Services resource, you can choose to incrementally load recent changes to the metadata instead of loading complete metadata. After the first successful load, the Metadata Manager Agent incrementally loads metadata that changed after the last successful load. By default, the incremental extraction option is enabled for all these resources. If you do not want to incrementally load a resource, you can edit the resource and disable the option.

Previously, you could incrementally load Business Object and Cognos resources.

Java Virtual Machine Memory

Effective in version 9.5.0, the Metadata Manager Agent allocates a larger maximum Java Virtual Machine (JVM) heap size. By default, the Metadata Manager Agent configures a 1 GB maximum heap size on a 32-bit machine, and it configures a 4 GB maximum heap size on a 64-bit machine.

Previously, you modified the MIRSetup.xml file to configure a JVM heap size of 1 GB or higher.

Metadata Source Files for Resources

Effective in version 9.5.0, you can add one metadata source file for each resource.

Previously, for all resources except ERwin resources, you could add multiple metadata files for a single resource.

mmcmd Command Line Program

Effective in version 9.5.0, specify two consecutive hyphens (--) before a long name option in the mmcmd commands.

Previously, you specified a hyphen (-) before a long name option in the commands.

For example, if the long name option in a command is user, specify --user <user name> instead of -user <user name>.
Resource Property Changes

Effective in version 9.5.0, resource properties for some resource types changed because the models are deprecated. Therefore, 9.1.0 resource properties might be renamed, might have value set changes, or might be deleted in version 9.5.0.

Renamed Resource Properties

Resource properties for some resource types are renamed in 9.5.0.

**Business Objects 5.x - 6.x**

The following table lists the renamed resource properties for Business Objects 5.x - 6.x:

<table>
<thead>
<tr>
<th>9.1.0 Property Name</th>
<th>9.5.0 Property Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incremental extract</td>
<td>Incremental import</td>
</tr>
</tbody>
</table>

**Business Objects 11.x**

The following table lists the renamed resource properties for Business Objects 11.x:

<table>
<thead>
<tr>
<th>9.1.0 Property Name</th>
<th>9.5.0 Property Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable standalone document extraction</td>
<td>Add specific objects</td>
</tr>
<tr>
<td>Select Models tab (&quot;extractOption&quot; in resource configuration file)</td>
<td>Repository subset</td>
</tr>
</tbody>
</table>

**Cognos**

The following table lists the renamed resource properties for Cognos:

<table>
<thead>
<tr>
<th>9.1.0 Property Name</th>
<th>9.5.0 Property Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incremental extract</td>
<td>Incremental import</td>
</tr>
<tr>
<td>Select Models tab (&quot;extractOption&quot; in resource configuration file)</td>
<td>Content</td>
</tr>
</tbody>
</table>

**MicroStrategy**

The following table lists the renamed resource properties for MicroStrategy:

<table>
<thead>
<tr>
<th>9.1.0 Property Name</th>
<th>9.5.0 Property Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Login project name</td>
<td>Project(s)</td>
</tr>
<tr>
<td>Login project source name</td>
<td>Project source</td>
</tr>
<tr>
<td>Password</td>
<td>Login password</td>
</tr>
<tr>
<td>User name</td>
<td>Login user</td>
</tr>
</tbody>
</table>
ERwin 7.x Data Modeler (Model Manager)
The following table lists the renamed resource properties for ERwin 7.x Data Modeler (Model Manager):

<table>
<thead>
<tr>
<th>9.1.0 Property Name</th>
<th>9.5.0 Property Name</th>
</tr>
</thead>
</table>
| Connection parameters | - Authentication
|                     | - Database name
|                     | - Database server
|                     | - Database type
|                     | - User name
|                     | - Password |

ERwin 7.3 Data Modeler (Model Manager on Oracle)
The following table lists the renamed resource properties for ERwin 7.3 Data Modeler (Model Manager on Oracle):

<table>
<thead>
<tr>
<th>9.1.0 Property Name</th>
<th>9.5.0 Property Name</th>
</tr>
</thead>
</table>
| Connection string   | - Database name
|                     | - Database server |

Resource Properties with Value Set Changes
Resource properties for some resource types have value set changes in 9.5.0.

Business Objects 11.x
The following table lists the resource properties with value set changes for Business Objects 11.x:

<table>
<thead>
<tr>
<th>Resource Property</th>
<th>9.1.0 Set of Values</th>
<th>9.5.0 Set of Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repository subset</td>
<td>Universe name</td>
<td>ID</td>
</tr>
</tbody>
</table>
| Add specific objects  | null                | - None
|                       |                     | - Universe independent documents |

ERwin 3.x (ERX)
The following table lists the resource properties with value set changes for ERwin 3.x (ERX):

<table>
<thead>
<tr>
<th>Resource Property</th>
<th>9.1.0 Set of Values</th>
<th>9.5.0 Set of Values</th>
</tr>
</thead>
</table>
| Import subject areas  | - Import as package
|                       | - Imported diagrams |
|                       | - As package and diagrams
|                       | - As diagrams |
ERwin 4.x Data Modeler

The following table lists the resource properties with value set changes for ERwin 4.x Data Modeler:

<table>
<thead>
<tr>
<th>Resource Property</th>
<th>9.1.0 Set of Values</th>
<th>9.5.0 Set of Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Import subject areas</td>
<td>- Import as package</td>
<td>- As package and diagrams</td>
</tr>
<tr>
<td></td>
<td>- Imported diagrams</td>
<td>- As diagrams</td>
</tr>
</tbody>
</table>

Deleted Resource Properties

Resource properties for some resource types are deleted in 9.5.0.

The following table lists the 9.1.0 resource properties that are deleted in 9.5.0:

<table>
<thead>
<tr>
<th>Resource Type</th>
<th>Deleted Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Objects 11.x</td>
<td>Encoding</td>
</tr>
<tr>
<td>Cognos</td>
<td>Encoding</td>
</tr>
<tr>
<td>Embarcadero ERStudio</td>
<td>Encoding</td>
</tr>
<tr>
<td>ERwin 4.x Data Modeler</td>
<td>Import views</td>
</tr>
<tr>
<td>MicroStrategy</td>
<td>- Encoding</td>
</tr>
<tr>
<td></td>
<td>- Report number limit</td>
</tr>
<tr>
<td>Sybase PowerDesigner PDM 7.x</td>
<td>Encoding</td>
</tr>
</tbody>
</table>

Resource Types

Effective in version 9.5.0, some of the resource types from Metadata Manager 9.1.0 are deprecated.

The following resource types are deprecated in Metadata Manager 9.5.0:

- Business Objects
- Cognos ReportNet
- Microsoft Analysis and Reporting Services
- MicroStrategy
- Oracle Business Intelligence Enterprise Edition
- Erwin
- ERStudio
- Oracle Designer
- Power Designer
- RationalER
- Generic JDBC Xconnect
When you upgrade to Metadata Manager 9.5.0, Metadata Manager appends (Deprecated_9.5.0) to the Metadata Manager 9.1.0 resource types. You can view resources of the deprecated resource type, but you cannot create or edit resources. You can also view the existing data lineage for the objects of the deprecated resource types. You must create and load resources with the corresponding new resource types in 9.5.0.

**Metadata Manager Service**

After you upgrade, complete the post-upgrade tasks for each Metadata Manager Service. Enable the Metadata Manager Service when you perform the post-upgrade tasks. You must upgrade to the Metadata Manager 9.1.0 before you upgrade to Metadata Manager 9.5.0.

**Convert Metadata Manager Resources**

The business intelligence, data modeling, and JDBC resources have new model and representation in Metadata Manager 9.5.0.

During the upgrade, Metadata Manager marks the existing business intelligence, data modeling, and JDBC resources as deprecated. You cannot edit or reload the deprecated resources. Instead, for each deprecated resource, you must create, configure and load an equivalent new resource. You will lose all the personalization in deprecated resources and must redo all personalization in the new resources. After you have converted a deprecated resource, you can delete the deprecated resource.

**Reload Metadata Manager Resources**

Before you can use Metadata Manager after the upgrade, you must reload all the resources.

To ensure that the connection assignments are proper, do resource conversion and load the resources in the following order:

1. Convert each deprecated JDBC resource to an equivalent new JDBC resource.
2. Reload all database management resources.
3. Convert each deprecated business intelligence or data modeling resource to an equivalent new resource.
4. Reload each of the business intelligence, data modeling, PowerCenter, ERP, and custom resources.
5. Recreate any personalization.
6. Delete the deprecated resources.

For example, suppose you have resources of the following types:

- Database management - JDBC, Oracle
- Data integration - PowerCenter
- Data modeling - ER/win
- Business intelligence - Cognos

After you upgrade to Metadata Manager 9.5.0, the JDBC, ER/win, and Cognos resources are marked as deprecated.

Perform resource conversion and load the resources in the following order:

1. Convert the JDBC resource.
2. Load JDBC and Oracle resources.
3. Convert ER/win and Cognos resources.
4. Load PowerCenter, ER/win, and Cognos resources.
5. Recreate any personalization.
6. Delete the deprecated resources.

**Update the Metadata Manager Properties File**

Compare the imm.properties file in the previous installation directory with the 9.5.0 version. Update the 9.5.0 version of the imm. properties file as required.

The 9.5.0 version of the imm.properties file is in the following directory:

```
<Informatica installation directory>\services\shared\jars\pc\classes
```

The changes take effect when you enable the Metadata Manager Service.
Chapter 35

Changes to Adapters for PowerCenter (9.5.0)

This chapter includes the following topics:

- PowerCenter Dual Load Option for Teradata, 242
- PowerExchange for HP Neoview Transporter, 242
- PowerExchange for JD Edwards EnterpriseOne (JD Edwards OneWorld), 243
- PowerExchange for Microsoft Dynamics CRM, 243
- PowerExchange for Salesforce, 243
- PowerExchange for Teradata Parallel Transporter API, 244
- PowerExchange for Ultra Messaging, 244

PowerCenter Dual Load Option for Teradata

Effective in version 9.5.0, Informatica dropped support for PowerCenter Dual Load Option for Teradata. If you upgrade to version 9.5.0, the sessions will fail.

PowerExchange for HP Neoview Transporter

Effective in version 9.5.0, Informatica dropped support for PowerExchange for HP Neoview Transporter. Hewlett Packard has discontinued selling Neoview.

Informatica continues to support PowerExchange for HP Neoview for previous releases. You can upgrade from version 9.1.0 to a 9.1.0 hotfix version. However, if you upgrade to version 9.5.0, the sessions will fail.
PowerExchange for JD Edwards EnterpriseOne (JD Edwards OneWorld)

Effective in version 9.5.0, PowerExchange for JD Edwards OneWorld is renamed PowerExchange for JD Edwards EnterpriseOne.

PowerExchange for Microsoft Dynamics CRM

Effective in version 9.5.0, PowerExchange for Microsoft Dynamics CRM includes the following changes:

- You can use PowerExchange for Microsoft Dynamics CRM for on-premise deployment with active directory and claims-based authentication.
  Previously, you could use PowerExchange for Microsoft Dynamics CRM for on-premise deployment with active directory authentication.
- Intersect entities are readable and writable.
  Previously, intersect entities were only readable.
- Endorsed jars are placed in the following location:
  `<PowerCenter Installation Directory>\server\bin\javlib\endorsed`  
  Previously, endorsed jars were placed in the following location:
  `<PowerCenter Installation Directory>\clients\java\jre\lib\Endorsed`

PowerExchange for Salesforce

Effective in version 9.5.0, PowerExchange for Salesforce uses version 24.0 of the Salesforce API.
Previously, application connections pointed to earlier versions of the Salesforce service.

To connect to the new version of a Salesforce object, change the service URL in existing application connections from the previous version to the new version.

The following table shows the service URLs for application connections created in the previous versions of PowerExchange for Salesforce:

<table>
<thead>
<tr>
<th>PowerExchange for Salesforce Version</th>
<th>Salesforce Service URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.1.0 HotFix 3, 9.1.0 HotFix 4</td>
<td><a href="https://www.salesforce.com/services/Soap/u/23.0">https://www.salesforce.com/services/Soap/u/23.0</a></td>
</tr>
<tr>
<td>9.1.0 HotFix 2</td>
<td><a href="https://www.salesforce.com/services/Soap/u/21.0">https://www.salesforce.com/services/Soap/u/21.0</a></td>
</tr>
<tr>
<td>9.1.0, 9.1.0 HotFix 1</td>
<td><a href="https://www.salesforce.com/services/Soap/u/20.0">https://www.salesforce.com/services/Soap/u/20.0</a></td>
</tr>
</tbody>
</table>

The 24.0 version of the Salesforce service URL is:

https://www.salesforce.com/services/Soap/u/24.0

If the new version of a Salesforce object has a different structure than the previous version of the object, re-import the Salesforce object. After you re-import the object, analyze the associated mapping to determine if you need to update transformations in the mapping. For example, if you re-import a source definition that is
based on a Salesforce object that contains a new field, you can modify your mapping to extract the new field and write the data to the target.

### PowerExchange for Teradata Parallel Transporter API

Effective in version 9.5.0, PowerExchange for Teradata Parallel Transporter API includes the following changes:

- PowerExchange for Teradata Parallel Transporter API will be installed along with Informatica 9.5.0 server. Previously, you needed to install PowerExchange for Teradata Parallel Transporter API separately.

### PowerExchange for Ultra Messaging

Effective in version 9.5.0, PowerExchange for Ultra Messaging includes the following changes:

#### Informatica Ultra Messaging Persistence sources and targets

You use PowerExchange for Ultra Messaging to connect to Ultra Messaging Queuing sources and targets.

Previously, you used PowerExchange for Ultra Messaging to connect to Ultra Messaging Persistence sources and targets.

#### Configuration files

You use one XML-based source and target configuration file to define the configuration options that the PowerCenter Integration Service must use to connect to Ultra Messaging sources and targets contained in one workflow.

Previously, you created a source configuration file to connect to Ultra Messaging sources and a target configuration file to connect to Ultra Messaging targets.

#### Ultra Messaging Connection

You specify the destination name, configuration file path, session ID, maximum number of session IDs, application name, and context name to create an Ultra Messaging connection.

Previously, you specified the destination name and configuration file path.

#### Flush latency

You configure the flush latency for an Ultra Messaging session in milliseconds.

Previously, you configured the flush latency in seconds. If you upgrade from an earlier version, you must manually configure the flush latency in milliseconds.