Informatica (Version 9.6.1 HotFix 3)

Upgrading from Version 9.1.0

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Table of Contents

**Preface** ................................................................. 9
Informatica Resources. .................................................. 9
Informatica My Support Portal. ......................................... 9
Informatica Documentation. ............................................ 9
Informatica Product Availability Matrixes. .......................... 9
Informatica Web Site. .................................................... 9
Informatica How-To Library. ........................................... 10
Informatica Knowledge Base. .......................................... 10
Informatica Support YouTube Channel. .............................. 10
Informatica Marketplace. ................................................ 10
Informatica Velocity. ..................................................... 10
Informatica Global Customer Support. ............................... 10

**Chapter 1: Upgrade Overview** ........................................ 11
Informatica Upgrade. ..................................................... 11
Upgrade Process. .......................................................... 13
  Changing the Node Configuration. .................................... 14
Upgrade Tasks. ............................................................. 14

**Chapter 2: Before You Upgrade the Domain** ...................... 16
Read the Release Notes. ................................................ 16
Review the Windows Requirements. ................................... 17
  Review the Patch Requirements. .................................... 17
  Verify the Domain Upgrade Requirements. .......................... 17
  Verify Application Service Hardware Requirements. ................. 18
  Review the Environment Variables. .................................. 19
  Review the Maximum Heap Size. .................................... 20
  Extract the Installer Files. ........................................... 20
  Run the Pre-Installation (i9Pi) System Check Tool. ................. 21
Review the UNIX Requirements. ....................................... 23
  Review the Patch Requirements. .................................... 23
  Install the Java Development Kit. ................................... 24
  Verify the Domain Upgrade Requirements. .......................... 25
  Verify Application Service Hardware Requirements. ................. 26
  Review the Environment Variables. .................................. 27
  Set the File Descriptor Limit. ....................................... 28
  Review the Maximum Heap Size. .................................... 28
  Extract the Installer Files. ........................................... 29
  Run the Pre-Installation (i9Pi) System Check Tool. ................. 29
Back Up the Data Transformation Files. ............................. 32
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepare the PowerCenter Repository</td>
<td>32</td>
</tr>
<tr>
<td>Prepare the Model Repository</td>
<td>32</td>
</tr>
<tr>
<td>Back Up the Repository</td>
<td>33</td>
</tr>
<tr>
<td>Verify the Database User Account Requirements</td>
<td>33</td>
</tr>
<tr>
<td>Verify the Maximum Heap Size Setting</td>
<td>33</td>
</tr>
<tr>
<td>Prepare the Reporting and Dashboards Service</td>
<td>34</td>
</tr>
<tr>
<td>Export the Jaspersoft Resources</td>
<td>34</td>
</tr>
<tr>
<td>Configure the Database User for the Jaspersoft Repository</td>
<td>35</td>
</tr>
<tr>
<td>Prepare the Profiling Warehouse</td>
<td>35</td>
</tr>
<tr>
<td>Back Up the Database</td>
<td>35</td>
</tr>
<tr>
<td>Prepare the Reference Data Directories</td>
<td>36</td>
</tr>
<tr>
<td>Prepare the Staging Database</td>
<td>36</td>
</tr>
<tr>
<td>Prepare Metadata Manager</td>
<td>36</td>
</tr>
<tr>
<td>Back Up the Metadata Manager Warehouse</td>
<td>37</td>
</tr>
<tr>
<td>Back Up the Metadata Manager Properties File</td>
<td>37</td>
</tr>
<tr>
<td>Prepare Data Analyzer</td>
<td>37</td>
</tr>
<tr>
<td>Assign Roles to Users and Groups</td>
<td>37</td>
</tr>
<tr>
<td>Back Up the Repository</td>
<td>37</td>
</tr>
<tr>
<td>Prepare the Domain</td>
<td>38</td>
</tr>
<tr>
<td>Rename the Administrator Group</td>
<td>38</td>
</tr>
<tr>
<td>Verify Database User Account Requirements</td>
<td>38</td>
</tr>
<tr>
<td>Shut Down the Domain</td>
<td>38</td>
</tr>
<tr>
<td>Back Up the Domain</td>
<td>39</td>
</tr>
<tr>
<td>Prepare to Change the Node Configuration</td>
<td>40</td>
</tr>
<tr>
<td>Migrating to a Different Database</td>
<td>40</td>
</tr>
<tr>
<td>Migrating the Installation to a Different Machine</td>
<td>41</td>
</tr>
<tr>
<td><strong>Chapter 3: Domain Upgrade</strong></td>
<td>46</td>
</tr>
<tr>
<td>Domain Upgrade Overview</td>
<td>46</td>
</tr>
<tr>
<td>Secure Directory for the Encryption Key and Configuration Files</td>
<td>46</td>
</tr>
<tr>
<td>Upgrading in Graphical Mode</td>
<td>47</td>
</tr>
<tr>
<td>Upgrading in Console Mode</td>
<td>51</td>
</tr>
<tr>
<td>Upgrading in Silent Mode</td>
<td>54</td>
</tr>
<tr>
<td>Creating the Properties File</td>
<td>54</td>
</tr>
<tr>
<td>Running the Silent Installer</td>
<td>56</td>
</tr>
<tr>
<td>Secure the Passwords in the Properties File</td>
<td>57</td>
</tr>
<tr>
<td>Upgrading with Changes to the Node Configuration</td>
<td>57</td>
</tr>
<tr>
<td>Upgrading in Graphical Mode</td>
<td>57</td>
</tr>
<tr>
<td>Upgrading in Console Mode</td>
<td>63</td>
</tr>
<tr>
<td>Upgrading in Silent Mode</td>
<td>70</td>
</tr>
<tr>
<td>Troubleshooting the Domain Upgrade</td>
<td>74</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Verify the Reference Data Warehouse.</td>
<td>94</td>
</tr>
<tr>
<td>Set Privileges and Roles for Reference Table Data.</td>
<td>94</td>
</tr>
<tr>
<td>Restart Services.</td>
<td>95</td>
</tr>
<tr>
<td>Data Integration Service.</td>
<td>95</td>
</tr>
<tr>
<td>Reset the HTTP Proxy Server Password.</td>
<td>95</td>
</tr>
<tr>
<td>Enable Jobs to Run in Separate Processes.</td>
<td>95</td>
</tr>
<tr>
<td>Analyst Service.</td>
<td>96</td>
</tr>
<tr>
<td>Verify the Flat File Cache Location.</td>
<td>96</td>
</tr>
<tr>
<td>Verify the Human Task Properties.</td>
<td>96</td>
</tr>
<tr>
<td>Assign Privileges.</td>
<td>96</td>
</tr>
<tr>
<td>Recycle the Analyst Service.</td>
<td>97</td>
</tr>
<tr>
<td>Search Service.</td>
<td>97</td>
</tr>
<tr>
<td>Metadata Manager Agent.</td>
<td>97</td>
</tr>
<tr>
<td>Metadata Manager Service.</td>
<td>98</td>
</tr>
<tr>
<td>Copy JDBC Drivers for Netezza Resources.</td>
<td>98</td>
</tr>
<tr>
<td>Update the Metadata Manager Properties File.</td>
<td>98</td>
</tr>
<tr>
<td>Update the Metadata Manager File Location.</td>
<td>98</td>
</tr>
<tr>
<td>Configure Domain SMTP Configuration Settings.</td>
<td>99</td>
</tr>
<tr>
<td>Migrate and Reload Metadata Manager Resources.</td>
<td>99</td>
</tr>
<tr>
<td>Verify Load Privileges and Permissions for Metadata Manager Users.</td>
<td>101</td>
</tr>
<tr>
<td>Reporting and Dashboards Service.</td>
<td>102</td>
</tr>
<tr>
<td>Upgrade to Jaspersoft 4.7.</td>
<td>102</td>
</tr>
<tr>
<td>Informatica Developer.</td>
<td>102</td>
</tr>
<tr>
<td>Update the Data Transformation Studio Eclipse Plug-In File.</td>
<td>102</td>
</tr>
<tr>
<td>Reference Data.</td>
<td>103</td>
</tr>
<tr>
<td>Copy the Reference Data Directories.</td>
<td>103</td>
</tr>
<tr>
<td>Merge Address Reference Data Configuration Files in PowerCenter.</td>
<td>103</td>
</tr>
<tr>
<td>Exception Record Management.</td>
<td>103</td>
</tr>
<tr>
<td>Update Exception Mapping Objects.</td>
<td>103</td>
</tr>
<tr>
<td>Profiles.</td>
<td>104</td>
</tr>
<tr>
<td>Migrate Profile and Scorecard Results.</td>
<td>104</td>
</tr>
<tr>
<td>Import Data Domains.</td>
<td>104</td>
</tr>
<tr>
<td>Upgrade the Informatica Drivers for SQL Data Services.</td>
<td>104</td>
</tr>
<tr>
<td>User Authentication.</td>
<td>104</td>
</tr>
<tr>
<td>Read the Release Guide.</td>
<td>104</td>
</tr>
<tr>
<td>Update ODBC Data Sources.</td>
<td>105</td>
</tr>
<tr>
<td>Copy the Data Transformation Files.</td>
<td>105</td>
</tr>
<tr>
<td>Appendix A: Updating the DynamicSections Parameter of a DB2 Database</td>
<td>106</td>
</tr>
<tr>
<td>DynamicSections Parameter Overview.</td>
<td>106</td>
</tr>
<tr>
<td>Updating the DynamicSections Parameter.</td>
<td>106</td>
</tr>
<tr>
<td>Downloading and Installing the DataDirect Connect for JDBC Utility.</td>
<td>106</td>
</tr>
<tr>
<td>Running the Test for JDBC Tool.</td>
<td>107</td>
</tr>
</tbody>
</table>
### Appendix B: Upgrade Checklist

- Upgrade Checklist Overview ........................................... 108
- Before You Upgrade the Domain ........................................ 108
- Domain Upgrade ............................................................... 110
- Before You Upgrade the Application Services ....................... 110
- Application Service Upgrade ............................................ 111
- Informatica Client Upgrade .............................................. 111
- After You Upgrade ........................................................... 112

### Index

- Index ................................................................................. 115
Preface

Upgrading from Version 9.1.0 is written for the system administrator who is responsible for upgrading the Informatica product. This guide assumes that you have knowledge of operating systems, relational database concepts, and the database engines, flat files, or mainframe systems in your environment. This guide also assumes that you are familiar with the interface requirements for your supporting applications.

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

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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

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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.

Upgrade Overview

This chapter includes the following topics:

- Informatica Upgrade, 11
- Upgrade Process, 13
- Upgrade Tasks, 14

Informatica Upgrade

The Informatica platform consists of a server component and one or more client components. Informatica provides separate installers to upgrade the Informatica services and clients.

If the product version that is currently installed cannot be upgraded to Informatica 9.6.1, you must first upgrade to a supported version. To determine the Informatica product version that is currently installed, click Help > About Informatica Administrator in the Informatica Administrator header area.

The following table describes the Informatica product versions from which you can upgrade:

<table>
<thead>
<tr>
<th>Informatica Product Version</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>PowerCenter 8.1.x</td>
<td>You must first upgrade to Informatica PowerCenter 9.1.0. If the PowerCenter 8.1.x domain includes Metadata Manager or Data Analyzer, you must first upgrade to PowerCenter 8.6.1 and then upgrade to Informatica PowerCenter 9.1.0.</td>
</tr>
<tr>
<td>PowerCenter 8.5.x</td>
<td>You must first upgrade to Informatica PowerCenter 9.1.0. If the PowerCenter 8.5.x domain includes the Metadata Manager Service or Reporting Service, you must first upgrade to PowerCenter 8.6.1 and then upgrade to Informatica PowerCenter 9.1.0.</td>
</tr>
<tr>
<td>PowerCenter 8.6</td>
<td>You must first upgrade to Informatica PowerCenter 9.1.0. If the PowerCenter 8.6 domain includes the Metadata Manager Service, Reporting Service, or Reference Table Manager Service, you must first upgrade to PowerCenter 8.6.1 and then upgrade to Informatica PowerCenter 9.1.0.</td>
</tr>
<tr>
<td>PowerCenter 8.6.1</td>
<td>You must first upgrade to Informatica PowerCenter 9.1.0.</td>
</tr>
<tr>
<td>Informatica Product Version</td>
<td>Comments</td>
</tr>
<tr>
<td>-----------------------------</td>
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</tr>
<tr>
<td>Data Quality 8.6.2</td>
<td>You can migrate the contents of the Informatica Data Quality 8.6.2 repository to the Informatica Data Quality 9.0.1 Model repository. See the 9.0.1 Data Quality migration documentation for details. After you migrate the contents to the Informatica 9.0.1 Model repository, upgrade to Informatica Data Quality 9.0.1 and then upgrade to Informatica Data Quality 9.1.0.</td>
</tr>
<tr>
<td>Data Explorer Advanced Edition 9.0</td>
<td>You must first upgrade to Data Explorer Advanced Edition 9.0.1. See the Informatica Data Quality 9.0.1 upgrade documentation. Complete the steps to upgrade Informatica Data Quality 9.0 unless an exception is specified. After you upgrade to Informatica Data Explorer Advanced Edition 9.0.1, upgrade to Informatica Data Explorer 9.1.0.</td>
</tr>
<tr>
<td>Data Quality 9.0</td>
<td>You must first upgrade to Informatica Data Quality 9.0.1, and then upgrade to Informatica Data Quality 9.1.0.</td>
</tr>
<tr>
<td>Data Services 9.0</td>
<td>You must first upgrade to Informatica Data Services 9.0.1, and then upgrade to Informatica Data Services 9.1.0.</td>
</tr>
<tr>
<td>Data Transformation 9.0.1 or earlier versions</td>
<td>You must uninstall Data Transformation and then install Informatica Data Transformation 9.6.1. See the Data Transformation 9.6.1 installation and upgrade documentation.</td>
</tr>
<tr>
<td>PowerCenter 9.0</td>
<td>You must first upgrade to Informatica PowerCenter 9.1.0.</td>
</tr>
<tr>
<td>Informatica Data Explorer Advanced Edition 9.0.1</td>
<td>You must first upgrade to Informatica Data Explorer 9.1.0.</td>
</tr>
<tr>
<td>Informatica Data Quality 9.0.1</td>
<td>You must first upgrade to Informatica Data Quality 9.1.0.</td>
</tr>
<tr>
<td>Informatica Data Services 9.0.1</td>
<td>You must first upgrade to Informatica Data Services 9.1.0.</td>
</tr>
<tr>
<td>Informatica PowerCenter 9.0.1</td>
<td>You must first upgrade to Informatica PowerCenter 9.1.0.</td>
</tr>
<tr>
<td>Informatica Data Explorer 9.1.0</td>
<td>You can upgrade to version 9.6.1.</td>
</tr>
<tr>
<td>Informatica Data Quality 9.1.0</td>
<td>You can upgrade to version 9.6.1.</td>
</tr>
<tr>
<td>Informatica Data Services 9.1.0</td>
<td>You can upgrade to version 9.6.1.</td>
</tr>
<tr>
<td>Informatica Data Transformation 9.1.0</td>
<td>You can upgrade to version 9.6.1.</td>
</tr>
<tr>
<td>Informatica PowerCenter 9.1.0</td>
<td>If the PowerCenter 9.1.0 domain includes the Metadata Manager Service and Metadata Manager contains business glossaries, you must first upgrade to version 9.5.1 HotFix 4.</td>
</tr>
<tr>
<td>Informatica Data Explorer 9.5.0</td>
<td>You can upgrade to version 9.6.1.</td>
</tr>
<tr>
<td>Informatica Data Quality 9.5.0</td>
<td>You can upgrade to version 9.6.1.</td>
</tr>
<tr>
<td>Informatica Data Services 9.5.0</td>
<td>You can upgrade to version 9.6.1.</td>
</tr>
<tr>
<td>Informatica Data Transformation 9.5.0</td>
<td>You can upgrade to version 9.6.1.</td>
</tr>
<tr>
<td>Informatica Product Version</td>
<td>Comments</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>Informatica PowerCenter 9.5.0</td>
<td>You can upgrade to version 9.6.1.</td>
</tr>
<tr>
<td>Informatica Data Explorer 9.5.1</td>
<td>You can upgrade to version 9.6.1.</td>
</tr>
<tr>
<td>Informatica Data Quality 9.5.1</td>
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<tr>
<td>Informatica Data Services 9.5.1</td>
<td>You can upgrade to version 9.6.1.</td>
</tr>
<tr>
<td>Informatica Data Transformation 9.5.1</td>
<td>You can upgrade to version 9.6.1.</td>
</tr>
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<td>Informatica PowerCenter 9.5.1</td>
<td>You can upgrade to version 9.6.1.</td>
</tr>
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<td>Informatica Data Quality 9.6.0</td>
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</tr>
<tr>
<td>Informatica Data Services 9.6.0</td>
<td>You can upgrade to version 9.6.1.</td>
</tr>
<tr>
<td>Informatica Data Transformation 9.6.0</td>
<td>You can upgrade to version 9.6.1.</td>
</tr>
<tr>
<td>Informatica PowerCenter 9.6.0</td>
<td>You can upgrade to version 9.6.1.</td>
</tr>
</tbody>
</table>

**Upgrade Process**

The upgrade consists of the following phases:

- Upgrading the domain. To upgrade the domain, run the Informatica server installer and select the upgrade option. The domain upgrade wizard installs the server files and configures the domain. If the domain has multiple nodes, you must upgrade all nodes.

The following table describes the actions that the installer performs when you upgrade the domain:

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installs Informatica.</td>
<td>Installs Informatica directories and files into the new directory.</td>
</tr>
<tr>
<td>Copies infa_shared directory.</td>
<td>Copies the contents of the infa_shared directory from the existing installation directory into the new installation directory.</td>
</tr>
<tr>
<td>If the existing domain uses the Metadata Manager Service, copies mm_files directory.</td>
<td>Copies the contents of the mm_files directory from the default location in the existing installation directory into the new installation directory.</td>
</tr>
<tr>
<td>Upgrades the domain.</td>
<td>Upgrades the domain to run version 9.6.1 application services. The upgrade retains the user and administrator accounts in the domain.</td>
</tr>
<tr>
<td>Starts Informatica Services.</td>
<td>Starts Informatica Services on the node.</td>
</tr>
</tbody>
</table>
• Upgrading the application services. After you upgrade the domain, log in to the Administrator tool and upgrade the application services. The service upgrade wizard provides a list of all application services that must be upgraded. It upgrades the services based on the order required by the dependent objects.

• Upgrading the Informatica client. To upgrade the Informatica client, run the Informatica client installer and select the upgrade option. If the client is installed on multiple machines, upgrade the client on all machines.

Changing the Node Configuration

When you upgrade each node in the domain, you can choose to change the node configuration to allow changes to the node host name, port numbers, or domain configuration repository database.

Change the node configuration during the upgrade for the following reasons:

You migrate the Informatica installation to a different machine.

If Informatica is installed on an operating system that is no longer supported, you must migrate the installation to a different machine before you upgrade the domain.

When you upgrade the migrated node, select the Allow changes to the node host name and port number option. When you select this option, you can update the configuration of the node on the new machine. When you upgrade other nodes in the domain that you did not migrate to different machines, clear the Allow changes to the node host name and port number option.

You migrate the domain configuration repository to a different database.

If the domain configuration repository database type or version is no longer supported, you must migrate the repository to a different database. Migrate the repository to the different database before you upgrade the domain.

When you upgrade a gateway node, select the Allow changes to the node host name and port number option. When you select this option, you can configure the gateway node to connect to the new domain configuration repository database. All gateway nodes must have a connection to the domain configuration repository to retrieve and update domain configuration. When you upgrade a worker node, clear the Allow changes to the node host name and port number option.

If you choose to change the node configuration, you must perform additional upgrade steps. There are additional steps before you upgrade the domain, and before you upgrade the application services.

Upgrade Tasks

To upgrade Informatica services, complete the following tasks:

1. Complete the pre-upgrade tasks for the domain to ensure that you can successfully run the installer.
2. Upgrade the Informatica domain. Use the server installer to upgrade the Informatica domain and server files on each node. If the domain contains multiple nodes, upgrade the gateway node before you upgrade the worker nodes. After you upgrade the first gateway node, verify that the upgrade was successful before you upgrade the other nodes in the domain.
3. Complete the pre-upgrade tasks for the application services.
4. Upgrade the application services. After installation, log in to the Administrator tool and upgrade the application services.
5. Upgrade the Informatica client. Use the client installer to upgrade the following Informatica client tools:
   - PowerCenter Client
   - Informatica Developer

   Upgrade Informatica Developer to the Informatica version, including the hotfix version, of the domain upgrade. Upgrading Informatica Developer also installs or upgrades Data Transformation Studio. If you have Data Transformation 9.1.0 or later installed, upgrading Informatica Developer also upgrades Data Transformation Studio. If you do not have Data Transformation installed, upgrading Informatica Developer installs Data Transformation Studio.

   **Note:** You cannot connect to the Informatica domain using the Developer tool from a previous version.

6. Perform the post-upgrade tasks.

   **Note:** If you upgrade the Informatica installation on more than one machine, complete the first upgrade using the detailed instructions in this guide. You can use the upgrade checklist in the appendix to perform subsequent upgrades.
This chapter includes the following topics:

- **Read the Release Notes, 16**
- **Review the Windows Requirements, 17**
- **Review the UNIX Requirements, 23**
- **Back Up the Data Transformation Files, 32**
- **Prepare the PowerCenter Repository, 32**
- **Prepare the Model Repository, 32**
- **Prepare the Reporting and Dashboards Service, 34**
- **Prepare the Profiling Warehouse, 35**
- **Prepare the Reference Data Directories, 36**
- **Prepare the Staging Database, 36**
- **Prepare Metadata Manager, 36**
- **Prepare Data Analyzer, 37**
- **Prepare the Domain, 38**
- **Prepare to Change the Node Configuration, 40**

Read the Release Notes

Read the Informatica Release Notes for updates to the installation and upgrade process. You can also find information about known and fixed limitations for the release.
Review the Windows Requirements

Before you upgrade the Informatica domain, set up the machine to meet the requirements to upgrade Informatica. If the machine where you upgrade Informatica is not configured correctly, the upgrade can fail.

Review the Patch Requirements

Before you upgrade the Informatica domain, verify that the machine has the required operating system patches and libraries.

The following table lists the patches and libraries that the Informatica services require on a Windows platform:

<table>
<thead>
<tr>
<th>Platform</th>
<th>Operating System</th>
<th>Operating System Patch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows x64</td>
<td>2012</td>
<td>None required</td>
</tr>
<tr>
<td>Windows x64</td>
<td>2008 R2 64-bit</td>
<td>None required</td>
</tr>
<tr>
<td>Windows x64</td>
<td>2008 64-bit</td>
<td>SP2</td>
</tr>
<tr>
<td>Windows x86</td>
<td>2008 32-bit</td>
<td>SP2</td>
</tr>
</tbody>
</table>

Verify the Domain Upgrade Requirements

Verify that your machine meets the minimum system requirements to upgrade the Informatica domain.

The following table lists the minimum memory and disk space required to upgrade the Informatica domain:

<table>
<thead>
<tr>
<th>RAM</th>
<th>Disk Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 GB</td>
<td>7 GB</td>
</tr>
</tbody>
</table>

**Note:** When you upgrade, the installer requires an additional 4 GB disk space plus the amount of disk space used by the existing infa_shared directory.

The following table lists the minimum system requirements to run the Informatica client tools:

<table>
<thead>
<tr>
<th>Client</th>
<th>Processor</th>
<th>RAM</th>
<th>Disk Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>PowerCenter Client</td>
<td>1 CPU</td>
<td>512 MB</td>
<td>1.6 GB</td>
</tr>
<tr>
<td>Informatica Developer</td>
<td>1 CPU</td>
<td>512 MB</td>
<td>2.5 GB</td>
</tr>
<tr>
<td>Data Transformation Studio</td>
<td>1 CPU</td>
<td>512 MB</td>
<td>708 MB</td>
</tr>
</tbody>
</table>

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
Temporary Disk Space Requirements

The installer writes temporary files to the hard disk. Verify that you have enough available disk space on the machine to support the installation. When the installation completes, the installer deletes the temporary files and releases the disk space.

The Informatica services installer requires 1 GB of temporary disk space.

The Informatica clients installer also requires 1 GB of temporary disk space.

Verify Application Service Hardware Requirements

The Informatica version to which you are upgrading requires more memory and disk space than previous versions.

The following table lists the minimum system requirements for a domain with different node configurations:

<table>
<thead>
<tr>
<th>Services</th>
<th>Processor</th>
<th>Memory</th>
<th>Disk Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>One node runs the following services:</td>
<td>2 CPUs with multiple cores</td>
<td>12 GB</td>
<td>20 GB</td>
</tr>
<tr>
<td>- Analyst Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Content Management Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Data Integration Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Metadata Manager Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Model Repository Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- PowerCenter Integration Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- PowerCenter Repository Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Reporting Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Reporting and Dashboards Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Search Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Web Services Hub</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One node runs the following services:</td>
<td>2 CPUs with multiple cores</td>
<td>12 GB</td>
<td>20 GB</td>
</tr>
<tr>
<td>- Analyst Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Content Management Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Data Integration Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Model Repository Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Search Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One node runs the following service:</td>
<td>1 CPU with multiple cores</td>
<td>4 GB</td>
<td>n/a</td>
</tr>
<tr>
<td>- Analyst Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One node runs the following service:</td>
<td>1 CPU with multiple cores</td>
<td>4 GB</td>
<td>10 GB</td>
</tr>
<tr>
<td>- Search Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One node runs the following services:</td>
<td>1 CPU with multiple cores</td>
<td>4 GB</td>
<td>10 GB</td>
</tr>
<tr>
<td>- Analyst Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Search Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One node runs the following services:</td>
<td>2 CPUs with multiple cores</td>
<td>8 GB</td>
<td>10 GB</td>
</tr>
<tr>
<td>- Metadata Manager Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- PowerCenter Integration Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- PowerCenter Repository Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Reporting Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Services</td>
<td>Processor</td>
<td>Memory</td>
<td>Disk Space</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>---------------------------------</td>
<td>--------</td>
<td>------------</td>
</tr>
<tr>
<td>One node runs the following services:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Metadata Manager Service</td>
<td>2 CPUs with multiple cores</td>
<td>8 GB</td>
<td>10 GB</td>
</tr>
<tr>
<td>- PowerCenter Integration Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- PowerCenter Repository Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Reporting and Dashboards Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One node runs the following services:</td>
<td>1 CPU with multiple cores</td>
<td>4 GB</td>
<td>10 GB</td>
</tr>
<tr>
<td>- PowerCenter Integration Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- PowerCenter Repository Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One node runs the following services:</td>
<td>1 CPU with multiple cores</td>
<td>4 GB</td>
<td>10 GB</td>
</tr>
<tr>
<td>- Data Integration Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Model Repository Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One node runs the following services:</td>
<td>1 CPU with multiple cores</td>
<td>4 GB</td>
<td>10 GB</td>
</tr>
<tr>
<td>- Data Integration Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Content Management Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One node runs the following service:</td>
<td>1 CPU with multiple cores</td>
<td>4 GB</td>
<td>10 GB</td>
</tr>
<tr>
<td>- Metadata Manager Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One node runs the following service:</td>
<td>1 CPU with multiple cores</td>
<td>4 GB</td>
<td>10 GB</td>
</tr>
<tr>
<td>- Reporting Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One node runs the following service component:</td>
<td>1 CPU with multiple cores</td>
<td>4 GB</td>
<td>400 MB</td>
</tr>
<tr>
<td>- Metadata Manager Agent</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One node runs the following service:</td>
<td>1 CPU with multiple cores</td>
<td>4 GB</td>
<td>5 GB</td>
</tr>
<tr>
<td>- Web Services Hub</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Review the Environment Variables**

Configure the environment variables to work with the Informatica installation.

The following table describes environment variables to review on Windows:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>%TEMP%</td>
<td>Location of the temporary files created during installation. Informatica</td>
</tr>
<tr>
<td></td>
<td>requires 1 GB disk space for temporary files. Configure the environment</td>
</tr>
<tr>
<td></td>
<td>variable if you do not want to create temporary files in the default drive.</td>
</tr>
<tr>
<td>PATH</td>
<td>Verify that the PATH environment variables do not contain earlier versions</td>
</tr>
<tr>
<td></td>
<td>of Informatica.</td>
</tr>
<tr>
<td>Library path</td>
<td>Verify that the library path environment variables do not contain earlier</td>
</tr>
<tr>
<td></td>
<td>versions of Informatica.</td>
</tr>
<tr>
<td>INFA_HOME</td>
<td>Contains the location of the Informatica installation directory. Clear this</td>
</tr>
<tr>
<td></td>
<td>variable before you start the upgrade.</td>
</tr>
<tr>
<td>INFA_DOMAINS_FILE</td>
<td>Contains the location of the domains.infa file. Clear this variable before</td>
</tr>
<tr>
<td></td>
<td>you start the upgrade.</td>
</tr>
</tbody>
</table>
Review the Maximum Heap Size

Verify that Informatica Services uses the required maximum heap size for the number of users in the domain. The following table lists the minimum requirement for the maximum heap size settings, based on the number of users and services in the domain:

<table>
<thead>
<tr>
<th>Number of Domain Users</th>
<th>Maximum Heap Size (1-5 Services)</th>
<th>Maximum Heap Size (6-10 Services)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000 or less</td>
<td>512 MB (default)</td>
<td>1024 MB</td>
</tr>
<tr>
<td>5,000</td>
<td>2048 MB</td>
<td>3072 MB</td>
</tr>
<tr>
<td>10,000</td>
<td>3072 MB</td>
<td>5120 MB</td>
</tr>
<tr>
<td>20,000</td>
<td>5120 MB</td>
<td>6144 MB</td>
</tr>
<tr>
<td>30,000</td>
<td>5120 MB</td>
<td>6144 MB</td>
</tr>
</tbody>
</table>

**Note:** The maximum heap size settings in the table are based on the number of application services in the domain.

If the domain has more than 1,000 users, update the maximum heap size based on the number of users in the domain.

1. Extract the installation files.
2. Go to the following directory: `<installer files directory>/source/tomcat/bin`.
3. Use a text editor to open the infaservice file.
4. Search for the following text: `INFA_JAVA_OPTS=% INFA_JAVA_OPTS% -XX.`
5. Set the value for `-Xmx` to the maximum heap size required for the number of Informatica domain users.
   For example, to set the maximum heap size to 3072 MB, use the following configuration:
   ```
   set INFA_JAVA_OPTS=% INFA_JAVA_OPTS% -XX:GCTimeRatio=9 -Xmx3072m
   ```

Extract the Installer Files

The installer files are compressed and distributed as a zip file.

Use a zip utility to extract the installer files to a directory on your machine. Verify the zip utility version is compatible with the Windows operating system version. When you unzip the file, verify that the zip utility also extracts empty folders.

You can extract the installer files in the following ways:

- **Installation DVD.** Download the Informatica zip file from the installation DVD to a directory on your machine and then extract the installer files, or extract the installer files directly from the DVD to a directory on your machine. If you download the zip file to a directory on your machine, verify the length of the entire installation directory path, including the zip file name, is 60 characters or less.
- **FTP download.** Download the Informatica installation zip file from the Informatica Electronic Software Download site to a directory on your machine and then extract the installer files.

**Note:** Make sure that you download the file to a local directory or a shared network drive that is mapped on your machine. You can then extract the installer files. However, you cannot run the installer from a mapped file. Copy the extracted files to a local drive and then run the installer.
Run the Pre-Installation (i9Pi) System Check Tool

Run the Pre-installation (i9Pi) System Check Tool to verify whether the machine meets the system requirements for installation or upgrade.

1. Log in to the machine with a system user account.
2. Close all other applications.
3. Go to the root of the directory that contains the installation files and run install.bat as administrator.
   To run the file as administrator, right-click the install.bat file and select Run as administrator.
   **Note:** If you do not run the installer as administrator, the Windows system administrator might encounter issues when accessing files in the Informatica installation directory.
   The Informatica 9.6.1 HotFix 3 page appears.
4. Select **Install or upgrade Informatica**.
5. Select **Run the Pre-Installation (i9Pi) System Check Tool** to verify whether the machine meets the system requirements for the installation or upgrade.
6. Click **Start**.
   The Informatica Pre-Installation (i9Pi) System Check Tool **Welcome** page appears.
7. Click **Next**.
   The **System Information** page appears.
8. Enter the absolute path for the installation directory.
   The directory names in the path must not contain spaces or the following special characters: @ | * $ # ! % ( ) { } [ ] , ; '
   **Note:** Informatica recommends using alphanumeric characters in the installation directory path. If you use a special character such as à or €, unexpected results might occur at run time.
9. Enter the starting port number for the node that you will create or upgrade on the machine. The default port number for the node is 6005.
10. Click **Next**.
    The **Database and JDBC Connection Information** page appears.
11. Enter the information for the domain configuration repository database.
    The following table describes the database information for the domain configuration repository:

<table>
<thead>
<tr>
<th>Prompt</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database type</td>
<td>Database for the domain configuration repository. Select Oracle, IBM DB2,</td>
</tr>
<tr>
<td></td>
<td>Microsoft SQL Server, or Sybase ASE.</td>
</tr>
<tr>
<td>Database user ID</td>
<td>User ID for the database user account for the domain configuration repository.</td>
</tr>
<tr>
<td>Database user</td>
<td>Password for the database user account.</td>
</tr>
<tr>
<td>password</td>
<td></td>
</tr>
</tbody>
</table>

The domain configuration repository must be accessible to all gateway nodes in the domain.
12. Enter the JDBC connection information.
   • To enter the connection information using the JDBC URL information, select **Specify the JDBC connection properties** and specify the JDBC URL properties.
   
   The following table describes the JDBC URL properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database host name</td>
<td>Host name for the database server.</td>
</tr>
<tr>
<td>Database port number</td>
<td>Port number for the database server.</td>
</tr>
<tr>
<td>Database service name</td>
<td>Service name for Oracle and IBM DB2 databases or database name for Microsoft SQL Server and Sybase ASE.</td>
</tr>
</tbody>
</table>

   • To enter the connection information using a custom JDBC connection string, select **Custom JDBC connection string** and type the connection string.

   Use the following syntax for the JDBC connection string for the databases:

   **IBM DB2**
   ```
   jdbc:Informatica:db2://host_name:port_no;DatabaseName=
   ```

   **Oracle**
   ```
   jdbc:Informatica:oracle://host_name:port_no;ServiceName=
   ```

   **Microsoft SQL Server**
   ```
   jdbc:Informatica:sqlserver://host_name:port_no;SelectMethod=cursor;DatabaseName=
   ```

   **Sybase**
   ```
   jdbc:Informatica:sybase://host_name:port_no;DatabaseName=
   ```

   Verify that the connection string contains all the connection parameters required by your database system.

13. Click **Test Connection** to verify that you can connect to the database, and then click **OK** to continue.

14. Click **Next** to start the system check.

   The tool checks the settings of the hard drive, the availability of the ports, and the configuration of the database. After the system check is complete, the **System Check Summary** page appears, displaying the results of the system check.

15. Analyze the results of the system check.

   Each requirement is listed, along with one of the following check statuses:

   • [Pass] - The requirement meets the criteria for the Informatica installation or upgrade.

   • [Fail] - The requirement does not meet the criteria for the Informatica installation or upgrade. Resolve the issue before you proceed with the installation or upgrade.

   • [Information] - Verify the information and perform any additional tasks as outlined in the details.

   The results of the system check are saved to the following file: `.../Server/i9Pi/i9Pi/en/i9Pi_summary.txt`

16. Click **Done** to close the Pre-Installation (i9Pi) System Check Tool.

   If the Pre-Installation (i9Pi) System Check Tool finishes with failed requirements, resolve the failed requirements and run the Pre-Installation (i9Pi) System Check Tool again.
**Note:** If the Informatica Pre-Installation (i9Pi) System Check Tool check finishes with failed requirements, you can still perform the Informatica installation or upgrade. However, Informatica highly recommends that you resolve the failed requirements before you proceed.

---

**Review the UNIX Requirements**

Before you upgrade the Informatica domain, set up the machine to meet the requirements to upgrade Informatica. If the machine where you upgrade Informatica is not configured correctly, the upgrade can fail.

**Review the Patch Requirements**

Before you upgrade the Informatica domain, verify that the machine has the required operating system patches and libraries.

The following table lists the patches and libraries that the Informatica services require on a UNIX platform:

<table>
<thead>
<tr>
<th>Platform</th>
<th>Operating System</th>
<th>Operating System Patch</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIX</td>
<td>7.1 TL2</td>
<td>OS level: 7100-02&lt;br&gt;bos.adt.debug Version 7.1.2.0</td>
</tr>
<tr>
<td>AIX</td>
<td>6.1 TL8</td>
<td>OS level: 6100-08&lt;br&gt;bos.adt.debug Version 6.1.8.0</td>
</tr>
<tr>
<td>HP-UX</td>
<td>11.31</td>
<td>None required</td>
</tr>
<tr>
<td>Linux-x64</td>
<td>Red Hat Enterprise Linux 6.4</td>
<td>All of the following packages, where <code>&lt;version&gt;</code> is any version of the package:&lt;br&gt;- e2fsprogs-libs-&lt;version&gt;.el6&lt;br&gt;- keyutils-libs-&lt;version&gt;.el6&lt;br&gt;- libselinux-&lt;version&gt;.el6&lt;br&gt;- libsepol-&lt;version&gt;.el6</td>
</tr>
<tr>
<td>Linux-x64</td>
<td>Red Hat Enterprise Linux 5.9</td>
<td>All of the following packages, where <code>&lt;version&gt;</code> is any version of the package:&lt;br&gt;- e2fsprogs-libs-&lt;version&gt;.el5&lt;br&gt;- keyutils-libs-&lt;version&gt;.el5&lt;br&gt;- libselinux-&lt;version&gt;.el5&lt;br&gt;- libsepol-&lt;version&gt;.el5</td>
</tr>
<tr>
<td>Linux-x64</td>
<td>SUSE Linux Enterprise Server 11</td>
<td>None required</td>
</tr>
<tr>
<td>Solaris sp-64</td>
<td>11</td>
<td>None required</td>
</tr>
<tr>
<td>Solaris sp-64</td>
<td>10</td>
<td>5.10 Generic_147147-26</td>
</tr>
<tr>
<td>zLinux</td>
<td>Red Hat Enterprise Linux 6.1</td>
<td>All of the following packages, where <code>&lt;version&gt;</code> is any version of the package:&lt;br&gt;- e2fsprogs-libs-&lt;version&gt;.el6.s390&lt;br&gt;- keyutils-libs-&lt;version&gt;.el6.s390&lt;br&gt;- libselinux-&lt;version&gt;.el6.s390&lt;br&gt;- libsepol-&lt;version&gt;.el6.s390</td>
</tr>
</tbody>
</table>
Install the Java Development Kit

If you are upgrading Informatica on AIX, HP-UX, or zLinux, verify that the Informatica version you are upgrading to supports the Java Development Kit (JDK) version that is installed on your machine. If you do not have a supported JDK version installed, uninstall the current version, and then download and install the supported version.

The JDK is not bundled with the Informatica installer for AIX, HP-UX, or zLinux. The JDK is bundled with the Informatica installer for all other platforms.

The required JDK version depends on the following platforms:

AIX

Informatica services on AIX is certified with JDK version 7.1.2.10 (build pap6470_27sr2fp10ifix-20150313_01(SR2 FP10+IV70681)). Use your IBM ID to download the JDK for AIX from the following web site:

http://www-933.ibm.com/support/fixcentral/swg/downloadFixes?
parent=IBM-WebSphere&product=IBM/IBM+SDKs+for+Java+Technology/Java+Standard+Edition+(Java
+SE)&release=7.1.2.10&platform=AIX+64-bit.+pSeries&function=fixId&fixids=7.1.2.10-JavaTech-
JavaSE-AIXpSeries64-
ServiceRefresh2FP10&includeRequisites=1&includeSupersedes=0&downloadMethod=http

Download the following file: Java7r1_64.sdk.tar.gz

HP-UX

Informatica services on HP-UX is certified with JDK version 1.7.0.12. Download the JDK for HP-UX from the following web site:


zLinux

Informatica services on zLinux is certified with JDK version 7.1.3.0 (build pxz6470_27sr3-20150415_01(SR3)). Use your IBM ID to download the JDK for AIX from the following web site:

https://www-01.ibm.com/marketing/iwm/iwm/web/reg/download.do?source=swg-
sdk7v1&S_PKG=zseries64_7.1.3.0&S_TAC=105AGX05&S_CMP=JDK&lang=en_US&cp=UTF-8&dlmet-
 hod=http

Download the files ibm-java-s390x-sdk-7.1-3.0.bin and ibm-java-s390x-jre-7.1-3.0.binibm-java-s390x-
sdk-7.1-0.0.s390x.rpm.

If you have problems installing the JDK, contact the JDK vendor.

<table>
<thead>
<tr>
<th>Platform</th>
<th>Operating System</th>
<th>Operating System Patch</th>
</tr>
</thead>
<tbody>
<tr>
<td>zLinux</td>
<td>Red Hat Enterprise Linux 5.3</td>
<td>All of the following packages, where &lt;version&gt; is any version of the package: - e2fsprogs-libs-&lt;version&gt;.el5.s390 - keyutils-libs-&lt;version&gt;.el5.s390 - libselinux-&lt;version&gt;.el5.s390 - libsepol-&lt;version&gt;.el5.s390</td>
</tr>
<tr>
<td>zLinux</td>
<td>SUSE Linux Enterprise Server 11</td>
<td>None required</td>
</tr>
</tbody>
</table>
The software available for download at the referenced links belongs to a third party or third parties, not Informatica Corporation. The download links are subject to the possibility of errors, omissions or change. Informatica assumes no responsibility for such links and/or such software, disclaims all warranties, either express or implied, including but not limited to, implied warranties of merchantability, fitness for a particular purpose, title and non-infringement, and disclaims all liability relating thereto.

**Verify the Domain Upgrade Requirements**

Verify that your machine meets the minimum system requirements to upgrade the Informatica domain.

The following table lists the minimum memory and disk space required to upgrade the Informatica domain:

<table>
<thead>
<tr>
<th>Operating System</th>
<th>RAM</th>
<th>Disk Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIX or HP-UX</td>
<td>4 GB</td>
<td>10 GB</td>
</tr>
<tr>
<td>Linux</td>
<td>4 GB</td>
<td>7 GB</td>
</tr>
<tr>
<td>zLinux</td>
<td>4 GB</td>
<td>3 GB</td>
</tr>
</tbody>
</table>

**Note:** When you upgrade, the installer requires an additional 4 GB disk space plus the amount of disk space used by the existing infa_shared directory.

For more information about product requirements and supported platforms, see the Product Availability Matrix on the Informatica My Support Portal:


**Temporary Disk Space Requirements**

The installer writes temporary files to the hard disk. Verify that you have enough available disk space on the machine to support the installation. When the installation completes, the installer deletes the temporary files and releases the disk space.

The installer requires 1 GB of temporary disk space.
Verify Application Service Hardware Requirements

The Informatica version to which you are upgrading requires more memory and disk space than previous versions.

The following table lists the minimum system requirements for a domain with different node configurations:

<table>
<thead>
<tr>
<th>Services</th>
<th>Processor</th>
<th>Memory</th>
<th>Disk Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>One node runs the following services:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Analyst Service</td>
<td>2 CPUs with multiple cores</td>
<td>12 GB</td>
<td>20 GB</td>
</tr>
<tr>
<td>- Content Management Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Data Integration Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Metadata Manager Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Model Repository Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- PowerCenter Integration Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- PowerCenter Repository Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Reporting Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Reporting and Dashboards Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Search Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Web Services Hub</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One node runs the following services:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Analyst Service</td>
<td>2 CPUs with multiple cores</td>
<td>12 GB</td>
<td>20 GB</td>
</tr>
<tr>
<td>- Content Management Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Data Integration Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Model Repository Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Search Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One node runs the following service:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Analyst Service</td>
<td>1 CPU with multiple cores</td>
<td>4 GB</td>
<td>n/a</td>
</tr>
<tr>
<td>- Search Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One node runs the following services:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Analyst Service</td>
<td>1 CPU with multiple cores</td>
<td>4 GB</td>
<td>10 GB</td>
</tr>
<tr>
<td>- Search Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One node runs the following services:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Analyst Service</td>
<td>1 CPU with multiple cores</td>
<td>4 GB</td>
<td>10 GB</td>
</tr>
<tr>
<td>- Search Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One node runs the following services:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Metadata Manager Service</td>
<td>2 CPUs with multiple cores</td>
<td>8 GB</td>
<td>10 GB</td>
</tr>
<tr>
<td>- PowerCenter Integration Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- PowerCenter Repository Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Reporting Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One node runs the following services:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Metadata Manager Service</td>
<td>2 CPUs with multiple cores</td>
<td>8 GB</td>
<td>10 GB</td>
</tr>
<tr>
<td>- PowerCenter Integration Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- PowerCenter Repository Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Reporting and Dashboards Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One node runs the following services:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- PowerCenter Integration Service</td>
<td>1 CPU with multiple cores</td>
<td>4 GB</td>
<td>10 GB</td>
</tr>
<tr>
<td>- PowerCenter Repository Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One node runs the following services:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Data Integration Service</td>
<td>1 CPU with multiple cores</td>
<td>4 GB</td>
<td>10 GB</td>
</tr>
<tr>
<td>- Model Repository Service</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Review the Environment Variables

Configure the environment variables to work with the Informatica installation.

Set the environment variables before you install Informatica.

The following table describes the environment variables to review on UNIX:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IATEMPDIR</td>
<td>Location of the temporary files created during installation. Informatica requires 1 GB disk space for temporary files. Configure the environment variable if you do not want to create temporary files in the /tmp directory.</td>
</tr>
<tr>
<td>INFA_DOMAINS_FILE</td>
<td>Contains the location of the domains.infa file. Clear this variable before you start the upgrade.</td>
</tr>
<tr>
<td>INFA_HOME</td>
<td>Contains the location of the Informatica installation directory. Clear this variable before you start the upgrade.</td>
</tr>
<tr>
<td>INFA_JDK_HOME</td>
<td>Location of the folder containing the supported Java Development Kit (JDK). Set the INFA_JDK_HOME environment variable if you are installing Informatica on AIX, HP-UX, or zLinux. In the configuration file for your shell, for example the .bashrc file, set the INFA_JDK_HOME environment variable to the directory that contains the JDK. Verify that the login shell can access the INFA_JDK_HOME environment variable.</td>
</tr>
<tr>
<td>JRE_HOME</td>
<td>If you install the Informatica services on a Linux machine, clear the JRE_HOME environment variable before you start the installation.</td>
</tr>
<tr>
<td>LANG and LC_ALL</td>
<td>Change the locale to set the appropriate character encoding for the terminal session. For example, set the encoding to Latin1 or ISO-8859-1 for French, EUC-JP or Shift JIS for Japanese, or UTF-8 for Chinese or Korean. The character encoding determines the types of characters that appear in the UNIX terminal.</td>
</tr>
<tr>
<td>Variable</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>LD_PRELOAD</td>
<td>On HP-UX, the environment variable selects the Data Transformation libjvm shared object of the JRE. Unset the LD_PRELOAD environment variable, if you are upgrading Informatica on HP-UX.</td>
</tr>
<tr>
<td>Library path</td>
<td>Verify that the library path environment variables do not contain earlier versions of Informatica.</td>
</tr>
<tr>
<td>PATH</td>
<td>Verify that the PATH environment variables do not contain earlier versions of Informatica.</td>
</tr>
</tbody>
</table>

### Set the File Descriptor Limit

Verify that the operating system meets the file descriptor requirement.

Informatica service processes can use a large number of files. Set the file descriptor limit per process to 16,000 or higher. The recommended limit is 32,000 file descriptors per process.

To verify the file descriptor limit, run the following command:

**C Shell**

```bash
limit
```

**Bash Shell**

```bash
ulimit -a
```

To set the file descriptor limit, run the following command:

**C Shell**

```bash
limit -h filesize <value>
```

**Bash Shell**

```bash
ulimit -n <value>
```

### Review the Maximum Heap Size

Verify that Informatica Services uses the required maximum heap size for the number of users in the domain.

The following table lists the minimum requirement for the maximum heap size settings, based on the number of users and services in the domain:

<table>
<thead>
<tr>
<th>Number of Domain Users</th>
<th>Maximum Heap Size (1-5 Services)</th>
<th>Maximum Heap Size (6-10 Services)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000 or less</td>
<td>512 MB (default)</td>
<td>1024 MB</td>
</tr>
<tr>
<td>5,000</td>
<td>2048 MB</td>
<td>3072 MB</td>
</tr>
<tr>
<td>10,000</td>
<td>3072 MB</td>
<td>5120 MB</td>
</tr>
</tbody>
</table>
### Number of Domain Users Maximum Heap Size (1-5 Services) Maximum Heap Size (6-10 Services)

<table>
<thead>
<tr>
<th>Number of Domain Users</th>
<th>Maximum Heap Size (1-5 Services)</th>
<th>Maximum Heap Size (6-10 Services)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20,000</td>
<td>5120 MB</td>
<td>6144 MB</td>
</tr>
<tr>
<td>30,000</td>
<td>5120 MB</td>
<td>6144 MB</td>
</tr>
</tbody>
</table>

**Note:** The maximum heap size settings in the table are based on the number of application services in the domain.

If the domain has more than 1,000 users, update the maximum heap size based on the number of users in the domain.

1. Extract the installation files.
2. Go to the following directory: `<installer files directory>/source/tomcat/bin`.
3. Use a text editor to open the `infaservice` file.
4. Search for the following text: `INFA_JAVA_OPTS=%INFA_JAVA_OPTS% -XX`.
5. Set the value for `-Xmx` to the maximum heap size required for the number of Informatica domain users. For example, to set the maximum heap size to 3072 MB, use the following configuration:
   ```
   set INFA_JAVA_OPTS=%INFA_JAVA_OPTS% -XX:GCTimeRatio=9 -Xmx3072m
   ```

### Extract the Installer Files

The installer files are compressed and distributed as a tar file.

Use a native tar or GNU tar utility to extract the installer files to a directory on your machine. The user that runs the installer must have read and write permissions on the installer files directory and execute permissions on install.sh.

You can extract the installer files in the following ways:

- Installation DVD. Download the Informatica tar file from the installation DVD to a directory on your machine and then extract the installer files, or extract the installer files directly from the DVD to a directory on your machine.
- FTP download. Download the Informatica installation tar file from the Informatica Electronic Software Download site to a directory on your machine and then extract the installer files.

### Run the Pre-Installation (i9Pi) System Check Tool

Run the Pre-installation (i9Pi) System Check Tool to verify whether the machine meets the system requirements for installation or upgrade.

1. Log in to the machine with a system user account.
2. Close all other applications.
3. On a shell command line, run the `install.sh` file from the root directory.
   - The installer displays the message to verify that the locale environment variables are set.
4. If the environment variables are not set, press **n** to exit the installer and set them as required.
   - If the environment variables are set, press **y** to continue.
5. Press **1** to install or upgrade Informatica.
6. Press 1 to run the Pre-Installation (i9Pi) System Check Tool that verifies whether the machine meets the system requirements for the installation or upgrade.

7. From the Informatica Pre-Installation (i9Pi) System Check Tool Welcome section, press Enter.
   The System Information section appears.

8. Type the absolute path for the installation directory.
   The directory names in the path must not contain spaces or the following special characters: @|* $ #! % ( ) [ ] , ; '
   Note: Informatica recommends using alphanumeric characters in the installation directory path. If you use a special character such as á or €, unexpected results might occur at run time.


10. Enter the starting port number for the node that you will create or upgrade on the machine. The default port number for the node is 6005.

11. Press Enter.
   The Database and Connection Information section appears.

12. To enter the JDBC connection information using a custom JDBC connection string, press 1. To enter the JDBC connection information using the JDBC URL information, press 2.
   To connect to a secure database, you must enter the JDBC connection using a custom JDBC connection string.

13. Enter the JDBC connection information.
    - To enter the connection information using a custom JDBC connection string, type the connection string and specify the connection parameters.
      Use the following syntax for the JDBC connection string for the databases:
      IBM DB2
      
      jdbc:Informatica:db2://host_name:port_no;DatabaseName=
      
      Oracle
      
      jdbc:Informatica:oracle://host_name:port_no;ServiceName=
      
      Microsoft SQL Server
      
      jdbc:Informatica:sqlserver://host_name:port_no;SelectMethod=cursor;DatabaseName=
      
      Sybase
      
      jdbc:Informatica:sybase://host_name:port_no;DatabaseName=
      
      Verify that the connection string contains all the connection parameters required by your database system.
    - To enter the connection information using the JDBC URL information, specify the JDBC URL properties.
The following table describes the connection information:

<table>
<thead>
<tr>
<th>Prompt</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database type</td>
<td>Type of database for the domain configuration repository. Select from the following database types:</td>
</tr>
<tr>
<td></td>
<td>- 1 - Oracle</td>
</tr>
<tr>
<td></td>
<td>- 3 - IBM DB2</td>
</tr>
<tr>
<td>Database user ID</td>
<td>User ID for the database user account for the domain configuration repository.</td>
</tr>
<tr>
<td>Database user password</td>
<td>Password for the database user account.</td>
</tr>
<tr>
<td>Database host name</td>
<td>Host name for the database server.</td>
</tr>
<tr>
<td>Database port number</td>
<td>Port number for the database.</td>
</tr>
<tr>
<td>Database service name</td>
<td>Service name for Oracle and IBM DB2 databases or database name for Microsoft SQL Server and Sybase ASE.</td>
</tr>
</tbody>
</table>

The tool checks the settings of the hard drive, the availability of the ports, and the configuration of the database. After the system check is complete, the **System Check Summary** section displays the results of the system check.

14. Analyze the results of the system check.
   Each requirement is listed, along with one of the following check statuses:
   - [Pass] - The requirement meets the criteria for the Informatica installation or upgrade.
   - [Fail] - The requirement does not meet the criteria for the Informatica installation or upgrade. Resolve the issue before you proceed with the installation or upgrade.
   - [Information] - Verify the information and perform any additional tasks as outlined in the details.
   The results of the system check are saved to the following file: `..../Server/19PI/19PI/en/i9Pi_summary.txt`

15. Press **Enter** to close the Pre-Installation (i9Pi) System Check Tool.
   You can continue to the Informatica service installation or upgrade immediately or end the system check and continue with the installation or upgrade later. If you continue to the installation or upgrade immediately, you do not have to restart the installer.

16. To continue to the Informatica service installation or upgrade immediately, press **y**.
   To end the system check and continue with the installation or upgrade later, press **n**.
   If the Pre-Installation (i9Pi) System Check Tool finishes with failed requirements, resolve the failed requirements and run the Pre-Installation (i9Pi) System Check Tool again.
   **Note:** If the Informatica Pre-Installation (i9Pi) System Check Tool check finishes with failed requirements, you can still perform the Informatica installation or upgrade. However, Informatica highly recommends that you resolve the failed requirements before you proceed.
Back Up the Data Transformation Files

Before you upgrade a new version of Data Transformation, you must back up the Data Transformation files that were created under previous versions. After you complete the upgrade, copy the files to the new installation directories to get the same workspace, repository, custom global components, and library files as in the previous version.

The following table lists the files or directories that you must back up:

<table>
<thead>
<tr>
<th>File or Directory</th>
<th>Default Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>License file</td>
<td>&lt;Informatica installation directory\DataTransformation\CDELicense.cfg</td>
</tr>
<tr>
<td>Library files</td>
<td>&lt;Informatica installation directory\DataTransformation\Libraries</td>
</tr>
</tbody>
</table>
| Library files         | The following files under \<Informatica installation directory\\DataTransformation\\eclipse3_3\plugins:  
                        | - com.informatica.libeditor.compare_<version>.jar                                |
                        | - com.informatica.libeditor.DigesterWrap_<version>.jar                           |
                        | - com.informatica.libeditor.gen_wiz_<version>.jar                                |
                        | - com.informatica.libeditor.launcher_<version>.jar                               |
                        | - com.informatica.libeditor.run_validations_<version>.jar                       |
                        | - com.informatica.libeditor_<version>.jar                                       |
                        | - All other plugins with names that start with com.informatica.libeditor_       |
| SWIFT library files   | com.informatica.libeditor.BicLookup_<version>.jar                               |
| FpML or SEPA library files | com.informatica.libeditor.propertypages_<version>.jar                   |
                        | com.informatica.libeditor.xsd_<version>.jar                                     |

Prepare the PowerCenter Repository

Before you upgrade the domain, back up the PowerCenter repository.

To back up a PowerCenter repository, select the PowerCenter Repository Service in the Administrator tool. On the Domain actions menu, select Repository Contents > Back Up.

Prepare the Model Repository

Before you upgrade the domain, complete the steps to prepare the Model repository.

1. Back up the repository.
2. Verify the database user account requirements.
3. Verify the maximum heap size.
Back Up the Repository

Before you upgrade the domain, back up the Model repository.

To back up each Model repository, select the Model Repository Service in the Administrator tool. Then, on the Domain Actions menu, click Repository Contents > Backup.

Verify the Database User Account Requirements

If the Model repository database is on Oracle, set the OPENCURSORS parameter to 4000 or higher.

If the Model repository database is on IBM DB2, set the DynamicSections parameter to 3000 or higher.

Verify the Maximum Heap Size Setting

Before you upgrade, verify that the maximum JVM heap size for the Model Repository Service meets the upgrade requirements.

The requirements for the maximum JVM heap size depend on the following platforms on which the Model Repository Service runs:

32-bit Windows

When the Model Repository Service runs on 32-bit Windows, verify that the maximum JVM heap size for the service does not exceed 768 MB.

Effective in version 9.6.0, the default maximum JVM heap size for the Model Repository Service is 768 MB. Previously, the default maximum JVM heap size was 1024 MB. When you upgrade, the upgrade process does not change the heap size for the Model Repository Service. When the Model Repository Service runs on 32-bit Windows, a heap size of 1024 MB can cause memory issues and prevent the service from starting.

All other platforms

If the Model repository is large, increase the maximum JVM heap size to increase performance during the Model repository upgrade process.

If the Model repository is less than 500 MB, the default maximum heap size is sufficient for the upgrade process. If the Model repository is larger than 500 MB, you might want to increase the maximum heap size for the upgrade process. For example, if the Model repository is 1 GB, increase the maximum heap size to 2048 MB. If the Model repository is larger than 1 GB, increase the maximum heap size to 4096.

To change the maximum heap size, select the Model Repository Service in the Administrator tool and select the Properties view. Click Edit in the Advanced Properties section, and then edit the Maximum Heap Size property.
Prepare the Reporting and Dashboards Service

Before you upgrade the domain, prepare the Reporting and Dashboards Service.

Export the Jaspersoft Resources

If you are upgrading Informatica and you have a Reporting and Dashboards Service, export the Jaspersoft repository resources before you upgrade the domain.

Verify that the default_master.properties file contains valid data.

1. When you upgrade from 9.1.0 HotFix 1 or 9.1.0 HotFix 2, navigate to the following directory:
   \<Informatica installation directory>\jasperreports-server-4.0.1-bin\buildomatic. When you upgrade from 9.1.0 HotFix 3 or later, navigate to the following directory: \<Informatica installation directory>\jasperreports-server\buildomatic

2. Export the Jaspersoft repository resources.
   - If you are upgrading from Informatica 9.5.0 or previous versions, enter the following command to export the Jaspersoft repository resources:

     js-ant export -DexportArgs="--roles <role name> --roles-users <user name> --uris /<Report_Folder_Name> --repository-permissions --report-jobs --include-access-events" -DexportFile=<File_Name>.zip

   - If you are upgrading from Informatica 9.5.1, enter the following command to export the Jaspersoft repository resources:

     js-ant export -DexportArgs="--roles <role name> --roles-users <user name> --uris /<Report_Folder_Name> --repository-permissions --report-jobs --include-access-events" -DdatabaseUser=<username> -DdatabasePass=<password> -DexportFile=<File_Name>.zip

The following table describes the options and arguments in the export command:

<table>
<thead>
<tr>
<th>Option</th>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>--roles</td>
<td>role name</td>
<td>Comma-separated list of roles that you want to export. If you do not specify a value, all roles are exported.</td>
</tr>
<tr>
<td>--roles-users</td>
<td>user name</td>
<td>Comma-separated list of users that you want to export. If you do not specify a value, all roles are exported.</td>
</tr>
<tr>
<td>--uris</td>
<td>/folder name</td>
<td>Name of the folder in the repository.</td>
</tr>
<tr>
<td>--repository-permissions</td>
<td>-</td>
<td>The permissions associated with the folder that you want to export.</td>
</tr>
<tr>
<td>--report-jobs</td>
<td>-</td>
<td>The scheduled jobs associated with the reports that you want to export.</td>
</tr>
<tr>
<td>--include-access-events</td>
<td>-</td>
<td>The access events that you want to export.</td>
</tr>
<tr>
<td>-DdatabaseUser</td>
<td>username</td>
<td>User account for the database.</td>
</tr>
<tr>
<td>-DdatabasePass</td>
<td>password</td>
<td>Password of the database user account.</td>
</tr>
</tbody>
</table>

3. Repeat this process for all report folders that you want to export.

   **Note:** After you export the Jaspersoft repository resources in Informatica 9.5.1, add the valid database user and password in the default_master.properties file.
Configure the Database User for the Jaspersoft Repository

Before you upgrade, configure the database user for the Jaspersoft repository.

Before you install Jaspersoft and import repository data from the previous JasperReports Server installation, ensure that the data source configured is available for the upgrade process.

1. Ensure that you have exported the Jaspersoft repository resources in the Reporting and Dashboard Service before you upgrade the domain.

2. Prepare the Reporting and Dashboard Service.
   - If you are upgrading from Informatica 9.1.0 HotFix 1 or 9.1.0 HotFix 2, complete the following steps:
     1. Uninstall the Reporting and Dashboard Service.
     2. Navigate to the `<Informatica installation directory>/tomcat/temp` directory and delete the Reporting and Dashboards Service `<service name>` directory.
     3. If the database user name in the Jaspersoft repository is the same in Jaspersoft 4.0.1 and 4.2, delete the database contents. Instead of using the same database user name, you might want to use different database user names.
   - If you are upgrading from Informatica 9.1.0 HotFix 3 or later, and you have a Reporting and Dashboards Service, complete the following steps:
     1. Disable the Reporting and Dashboard Service.
     2. Navigate to the following directory: `<Informatica installation directory>/jasperreports-server/buildomatic` directory.
     3. Add the valid database user and password in the default_master.properties file.

Prepare the Profiling Warehouse

Before you upgrade the domain, prepare the profiling warehouse.

1. Back up the database.
2. Verify database user account permissions.

Back Up the Database

Before you upgrade the domain, back up the profiling warehouse.

Use the native database back up option to back up the profiling warehouse.
Prepare the Reference Data Directories

Before you upgrade PowerCenter, verify the location of any reference data directory in the PowerCenter directory structure.

By default, the upgrade operation preserves the contents of the following reference data directories:

- \Informatica_installation_directory\services\DQContent\INFA_Content\dictionaries/
  Parent directory for the dictionary files.
- \Informatica_installation_directory\services\DQContent\INFA_Content\av/
  Parent directory for the address reference data files.
- \Informatica_installation_directory\services\DQContent\INFA_Content\identity/
  Parent directory for the identity population data files.

If you install or copy reference data files to a non-default directory in the PowerCenter directory structure, back up the directory before you upgrade. Take a note of the directory location, so that you can copy the directory to the PowerCenter directory structure after you upgrade. If you install or copy reference data files to a directory outside the PowerCenter directory structure, you do not need to back up the directory.

You can use configuration files and environment variables to identify the reference data directories. Use the INFA_CONTENT environment variable to specify the parent directory for the dictionary files. Use the ADs0.cfg file to specify the parent directory for the address reference data files. Use the SSAPR environment variable or the IDQTx.cfg file to specify the parent directory for the identity population data files. Follow the post-upgrade steps to verify the contents of any configuration file or any environment variable that you set.

Note: The PowerCenter Integration Service reads the identity population data files from a directory with the name /default/. The parent directory for the identity population data files must contain a directory with the name /default/.

Prepare the Staging Database

Before you upgrade the domain, back up the staging database.

Use the native database back up option to back up the staging database.

Prepare Metadata Manager

Before you upgrade the domain, prepare Metadata Manager.

Note: If you need to upgrade business glossaries, you must upgrade to version 9.5.1 HotFix 4 before you upgrade to the current version.

1. Back up the Metadata Manager warehouse.
2. Disable the Metadata Manager Service.
3. Back up the Metadata Manager properties file.
Back Up the Metadata Manager Warehouse

Before you upgrade the domain, back up the Metadata Manager warehouse.

Use the native database backup option or the Metadata Manager backupCmdLine command line program to back up the Metadata Manager warehouse.

Metadata Manager backupCmdLine includes command line programs to back up and restore the Metadata Manager warehouse. The backupCmdLine command line program is in the following directory:

```<Informatica installation directory>\services\MetadataManagerService\utilities\mmBackupUtil```

To back up the Metadata Manager warehouse with the backupCmdLine command line program, use the following syntax:

```backupCmdLine.(bat | sh) backup <DBType> "<JDBCConnectionString>" <DBUserName> <DBPassword> <FileName.bkp>```

Back Up the Metadata Manager Properties File

Before you upgrade the domain, back up the Metadata Manager properties file.

The imm.properties file is in the following directory:

```<Informatica installation directory>\tomcat\shared\classes```

Prepare Data Analyzer

Before you upgrade the domain, prepare the Data Analyzer repository.

1. Assign roles to users and groups.
2. Back up the Data Analyzer repository.

Assign Roles to Users and Groups

Create roles for Reporting Service privileges and assign the roles to users and groups. If you do not use roles to assign Reporting Service privileges, users and groups lose privilege assignments after you upgrade.

Back Up the Repository

Back up each Data Analyzer repository.

To back up each Data Analyzer repository, select the service in the Administrator tool. Then, on the Domain Actions menu, click Repository Contents > Backup.
Prepare the Domain

Before you upgrade the domain, complete the steps to prepare the domain.

Rename the Administrator Group

The Informatica domain version 9.6.0 and later includes an Administrator group with default administrator privileges.

In version 9.6.0 or later, the Administrator group has administrator permissions and privileges on the domain and all application services. All users in the Administrator group have the same permissions and privileges as the default administrator created during installation.

When you upgrade a domain that contains a group named Administrator, the upgrade process assigns the group default administrator privileges. The privileges assigned to the group in the previous release are removed.

If you do not want the Administrator group to have the default Administrator group privileges after you upgrade, perform the following tasks:

1. Log in to the Administrator tool.
2. Create another group and assign the privileges of the Administrator group to the new group.
3. Move users in the Administrator group who must not have the default administrator privileges to the new group.

Verify Database User Account Requirements

Perform the following tasks for the domain configuration repository database:

- Set the OPEN_CURSORS parameter to 4000 or higher.
- Set permissions on the view $parameter in the Oracle database.
- Set the privileges to run show parameter open_cursors in the Oracle database.
  When you run the pre-installation (i9Pi) system check tool, i9Pi runs the command against the database to identify the OPEN_CURSORS parameter with the domain database user credentials.
  You can run the following query to determine the open cursors setting for the domain database user account:

  SELECT VALUE OPEN_CURSORS FROM V$PARAMETER WHERE UPPER(NAME)=UPPER('OPEN_CURSORS')

- Set the DynamicSections parameter to 3000 or higher in the IBM DB2 database.
  For more information about updating the DynamicSections parameter, see Appendix A, "Updating the DynamicSections Parameter of a DB2 Database" on page 106.

Shut Down the Domain

You must shut down the domain before you back up domain and then upgrade the domain.

To shut down the domain, stop the Informatica service process on each node in the domain.

You can stop the Informatica service process on each node using one of the following methods:

- To stop Informatica from the Windows Start menu, click Programs > Informatica[Version] > Server > Stop Informatica Services.
• To stop Informatica on UNIX, you use the infaservice command. By default, the infaservice executable file is installed in the following directory:
  <Informatica installation directory>/tomcat/bin
Enter the following command to stop the daemon:
  infaservice shutdown
You can also stop the Informatica service from the Windows control panel or from the Administrator tool.

**Back Up the Domain**

Before you upgrade the domain, you must back up the configuration metadata for the domain.

Complete the following steps to back up the domain:

• Run the infaservice BackupDomain command to back up the domain configuration database tables to a file.
• Back up the metadata configuration files to any directory accessible by the machines where you install Informatica.

Informatica infaservice includes command line programs to back up and restore the domain. infaservice is located in the following directory:

  <Informatica installation directory>/server

To back up the domain with infaservice, use the following syntax:

```
BackupDomain
<<DatabaseAddress|-da> database_hostname:database_port>
<<DatabaseConnectionString|-cs> database_connection_string>
<<DatabaseUserName|-du> database_user_name
<<DatabasePassword|-dp> database_password
<<DatabaseType|-dt> database_type
[<<DatabaseServiceName|-ds> database_service_name]
<<BackupFile|-bf> backup_file_name
[<<Force|-f>]
<<DomainName|-dn> domain_name
[<<Tablespace|-ts> tablespace_name (used for IBM DB2 only)]
[<<SchemaName|-sc> schema_name (used for Microsoft SQL Server only)]
[<<DatabaseTlsEnabled|-dbtls> database_tls_enabled]
[<<DatabaseTruststorePassword|-dbtp> database_truststore_password]
[<<TrustedConnection|-tc> trusted_connection (used for Microsoft SQL Server only)]
[<<EncryptionKeyLocation|-kl> encryption_key_location]
```
Back up the metadata configuration files to any directory accessible by the machines where you install Informatica. The following table describes the metadata files and the locations where you can find them:

<table>
<thead>
<tr>
<th>Metadata File</th>
<th>Description</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>nodemeta.xml</td>
<td>Contains metadata for a node.</td>
<td>Stored in the isp/config directory on each node in the domain. If you use the same backup directory name on all the nodes, rename nodemeta.xml before copying it to the backup location. For example, you back up nodemeta.xml to the /nodebak directory on nodeA and nodeB. Rename the configuration files so that on nodeA the file is backed up to /nodebak/nodemeta_A.xml, and on nodeB the file is backed up to /nodebak/nodemeta_B.xml.</td>
</tr>
</tbody>
</table>
| domains.infa  | Contains connectivity information for the gateway nodes. | Stored in one of the following locations:  
- The Informatica installation directory on the client and server machines.  
- The location configured through the INFA_DOMAINS_FILE environment variable. |

Prepare to Change the Node Configuration

Before you upgrade the domain with changes to the node configuration, you must perform steps to prepare for the upgrade.

The steps that you perform depend on the kind of change that you plan to make to the node configuration. You can migrate the domain configuration repository to a different database. Or, you can migrate the Informatica services installation to a different machine.

Migrating to a Different Database

If the domain configuration repository database type or version is no longer supported, you must migrate the repository to a different database. Migrate the repository in the previous Informatica instance before you upgrade the domain.

For example, if the domain configuration repository is in a Sybase ASE 15.0.3 database, migrate the repository to a Sybase ASE 15.5 database.

**Note:** You cannot migrate a 9.1.0 domain configuration repository to a Sybase ASE 15.7 database.


1. Verify that you have shut down the domain.
2. Verify that you have backed up the domain configuration database tables to a file with the infasetup BackupDomain command.
3. Create a database schema and a user account in a supported database.
4. Restore the domain configuration in the backup file to the specified database schema with the infasetup RestoreDomain command.
5. When you upgrade a gateway node, select the **Allow changes to the node host name and port number** option. When you select this option, you can configure the gateway node to connect to the new domain configuration repository database. All gateway nodes must have a connection to the domain configuration repository to retrieve and update domain configuration. When you upgrade a worker node, clear the **Allow changes to the node host name and port number** option.
Migrating the Installation to a Different Machine

If the Informatica services are installed on a machine with an operating system that is no longer supported, you must migrate the installation to a different machine before you upgrade the domain.

For example, effective in 9.6.0, Informatica dropped support for 32-bit Linux. If any node in the domain is on 32-bit Linux, you must migrate the node to a machine with a supported operating system before upgrading the node to 9.6.0.

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

Before you upgrade the domain, complete the following steps on the machine where you want the new version of Informatica to run:

1. Copy the installation directory.
2. Verify port requirements.
3. Create a system user account.
4. If you plan to run the Data Integration Service, PowerCenter Repository Service, or PowerCenter Integration Service on the new machine, configure native connectivity on the new machine so that these services can connect to databases.

When you upgrade the migrated node, select the Allow changes to the node host name and port number option. When you select this option, you can update the configuration of the node on the new machine. When you upgrade other nodes in the domain that you did not migrate to different machines, clear the Allow changes to the node host name and port number option.

Copy the Installation Directory

Copy the directory of the previous version of Informatica to the machine where you want the new version of Informatica to run.

For example, if the previous version of Informatica is installed in C:\Informatica\9.1.0, copy the C:\Informatica\9.1.0 directory and subdirectories to the new machine.

When you run the upgrade installer, specify the Informatica installation directory on the new machine as the one that you want to upgrade.

Verify Port Requirements

The installer sets up the ports for components in the Informatica domain, and it designates a range of dynamic ports to use for some application services.

You can specify the port numbers to use for the components and a range of dynamic port numbers to use for the application services. Or you can use the default port numbers provided by the installer. Verify that the port numbers are available on the machines where you install the Informatica services.
The following table describes the ports used by Informatica:

<table>
<thead>
<tr>
<th>Port Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Node port</td>
<td>Port number for the node created during installation. Default is 6005.</td>
</tr>
<tr>
<td>Service Manager port</td>
<td>Port number used by the Service Manager on the node. The Service Manager listens for incoming connection requests on this port. Client applications use this port to communicate with the services in the domain. This is the port that the Informatica command line programs use to communicate to the domain. This is also the port for the SQL data service JDBC/ODBC driver. Default is 6006.</td>
</tr>
<tr>
<td>Service Manager shutdown port</td>
<td>Port number that controls server shutdown for the domain Service Manager. The Service Manager listens for shutdown commands on this port. Default is 6007.</td>
</tr>
<tr>
<td>Informatica Administrator port</td>
<td>Port number used by Informatica Administrator. Default is 6008.</td>
</tr>
<tr>
<td>Informatica Administrator shutdown port</td>
<td>Port number that controls server shutdown for Informatica Administrator. Informatica Administrator listens for shutdown commands on this port. Default is 6009.</td>
</tr>
</tbody>
</table>
| Range of dynamic ports for application services | Range of port numbers that can be dynamically assigned to application service processes as they start up. When you start an application service that uses a dynamic port, the Service Manager dynamically assigns the first available port in this range to the service process. At a minimum, the number of ports in the range must be at least twice the number of application service processes that will run on the node. Default is 6013 to 6113. The Service Manager dynamically assigns port numbers from this range to the following application services:  
  - Model Repository Service 
  - PowerCenter Integration Service 
  - PowerCenter Repository Service |
| Static ports for application services | Static ports are ports that are assigned dedicated port numbers that do not change. When you create the application service, you can accept the default port number, or you can manually assign the port number.  
  The following services use static port numbers:  
  - Analyst Service. Default is 8085 for HTTP.  
  - Content Management Service. Default is 8105 for HTTP.  
  - Data Integration Service. Default is 8095 for HTTP.  
  - Metadata Manager Service. Default is 10250 for HTTP.  
  - Reporting and Dashboards Service. Default is 10370 for HTTP.  
  - Reporting Service. Default is 16080 for HTTP.  
  - Search Service. Default is 8084 for HTTP.  
  - Secure@Source Service. Default is 6200 for HTTP.  
  - Web Services Hub. Default is 7333 for HTTP. |

**Note:** Services and nodes can fail to start if there is a port conflict. You can update the range of ports for application services after you upgrade.

**Create a System User Account on Windows**

Create a system user account to perform the installation and to run the Informatica service. Verify that the user account that you use to install the Informatica services has write permission on the installation directory.

You can install Informatica with the user account logged in to the machine and run it under another user account. You can create a local account or a domain account to install Informatica or run the Informatica Windows service.
Note: To access a repository on Microsoft SQL Server that uses a Windows trusted connection, create a domain account.

The user accounts require the following permissions to run the installer or to run the Informatica Windows service:

- **Logged in user account.** The user account must be a member of the Administrators group and have the Log on as a service permission. Log in with this user account before you install Informatica.

- **Another user account.** The user account must be a member of the Administrators group and have Log on as a service and Act as operating system permissions. You do not have to log in with this user account before you install Informatica. During installation, you can specify the user account to run the Informatica Windows service.

**Create a System User Account on UNIX**

Create a user account specifically to run the Informatica daemon.

Verify that the user account you use to install Informatica has write permission on the installation directory.

**Configure Native Connectivity on Service Machines**

To establish native connectivity between an application service and a database, install the database client software for the database that you want to access.

Native drivers are packaged with the database server and client software. Configure connectivity on the machines where the application services and the service processes run. To ensure compatibility between the application service and the database, install a client software that is compatible with the database version and use the appropriate database client libraries.

The following services use native connectivity to connect to different databases:

**Data Integration Service**

The Data Integration Service uses native database drivers to connect to the following databases:

- Source and target databases. Reads data from source databases and writes data to target databases.
- Data object cache database. Stores the data object cache.
- Profiling source databases. Reads from relational source databases to run profiles against the sources.
- Profiling warehouse. Writes the profiling results to the profiling warehouse.
- Reference tables. Runs mappings to transfer data between the reference tables and the external data sources.

Install and configure the native database client software associated with the relational data sources and the repository databases on the machines where the Data Integration Service runs.

**PowerCenter Repository Service**

The PowerCenter Repository Service uses native database drivers to connect to the PowerCenter repository database.

Install database client software and configure connectivity on the machines where the PowerCenter Repository Service and the PowerCenter Repository Service processes run.
PowerCenter Integration Service

The PowerCenter Integration Service uses native database drivers to connect to the following databases:

- Source and target databases. Reads from the source databases and writes to the target databases.
- Metadata Manager source databases. Loads the relational data sources in Metadata Manager.

Install database client software associated with the relational data sources and the repository databases on the machines where the PowerCenter Integration Service runs.

Install Database Client Software

You must install the database clients on the machine where the service runs based on the types of databases that the application services access.

To ensure compatibility between the application service and the database, use the appropriate database client libraries and install a client software that is compatible with the database version.

Install the following database client software based on the type of database that the application service accesses:

**IBM DB2 Client Application Enabler (CAE)**

Configure connectivity on the machine where the Data Integration Service, PowerCenter Integration Service, or Repository Service process runs by logging in to the machine as a user who can start a service process.

**Microsoft SQL Server 2012 Native Client**

Download the client from the following Microsoft website:

**Oracle client**

Install compatible versions of the Oracle client and Oracle database server. You must also install the same version of the Oracle client on all machines that require it. To verify compatibility, contact Oracle.

**Sybase Open Client (OCS)**

Install an Open Client version that is compatible with the Sybase ASE database server. You must also install the same version of Open Client on the machines hosting the Sybase ASE database and Informatica. To verify compatibility, contact Sybase.

Configure Database Client Environment Variables on UNIX

Configure database client environment variables on the machines that run the Data Integration Service, PowerCenter Integration Service, and PowerCenter Repository Service processes.

The database client path variable name and requirements depend on the UNIX platform and the database.

After you configure the database environment variables, you can test the connection to the database from the database client.
The following table lists the database environment variables you need to set in UNIX:

<table>
<thead>
<tr>
<th>Database</th>
<th>Environment Variable Name</th>
<th>Database Utility</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle</td>
<td>ORACLE_HOME PATH</td>
<td>sqlplus</td>
<td>Set to: <code>&lt;DatabasePath&gt;</code>&lt;br&gt;Add: <code>&lt;DatabasePath&gt;/bin</code></td>
</tr>
<tr>
<td>IBM DB2</td>
<td>DB2DIR DB2INSTANCE PATH</td>
<td>db2connect</td>
<td>Set to: <code>&lt;DatabasePath&gt;</code>&lt;br&gt;Set to: <code>&lt;DB2InstanceName&gt;</code>&lt;br&gt;Add: <code>&lt;DatabasePath&gt;/bin</code></td>
</tr>
<tr>
<td>Sybase ASE</td>
<td>SYBASE15 SYBASE_ASE SYBASE_OCS PATH</td>
<td>isql</td>
<td>Set to: <code>&lt;DatabasePath&gt;/sybase&lt;version&gt;</code>&lt;br&gt;Set to: <code>${SYBASE15}/ASE-&lt;version&gt;</code>&lt;br&gt;Set to: <code>${SYBASE15}/OCS-&lt;version&gt;</code>&lt;br&gt;Add: <code>${SYBASE_ASE}/bin:${SYBASE_OCS}/bin:$PATH</code></td>
</tr>
</tbody>
</table>
Domain Upgrade Overview

Use the server installer to upgrade the domain of a previous version of Informatica services. The server installer provides a domain upgrade wizard to guide you through the upgrade process.

The upgrade wizard installs Informatica 9.6.1 in the installation directory you specify. It does not modify the files in the directory of the previous version.

The upgrade wizard reads the domain information from files in the previous version and uses the same settings to configure the domain and server files for Informatica 9.6.1. It upgrades the tables of the domain configuration repository in the same database as the previous version.

Complete the pre-upgrade tasks before you start the upgrade. Run the installer on all machines that host previous versions of Informatica that you want to upgrade. On Windows, you can upgrade in graphical or silent mode. On UNIX, you can upgrade in console or silent mode.

**Note:** In a multinode domain, upgrade the master gateway node before you upgrade other nodes.

You can perform the upgrade from a DVD or from the root of the directory where you download the installation files.

After you upgrade the domain, upgrade Informatica Developer to the same Informatica version, including the hotfix version.

Secure Directory for the Encryption Key and Configuration Files

When you install or upgrade Informatica, the installer creates directories to store Informatica files that require restricted access, such as the domain encryption key file and the nodemeta.xml. On UNIX, the installer assigns different permissions for the directories and the files in the directories.

By default, the installer creates the following directories within the Informatica installation directory:
<Informatica installation directory>/isp/config

Contains the nodemeta.xml file. Also contains the /keys directory where the encryption key file is stored. If you configure the domain to use Kerberos authentication, the /keys directory also contains the Kerberos keytab files. You can specify a different directory in which to store the files. The installer assigns the same permissions to the specified directory as the default directory.

<Informatica installation directory>/services/shared/security

If you enable secure communication for the domain, the /security directory contains the keystore and truststore files for the default SSL certificates.

The installer assigns the following permissions to the directories and the files in the directories:

**Directory Permissions**

- The owner of the directory has -wx permissions to the directory but no r permission. The owner of the directory is the user account used to run the installer. The group to which the owner belongs also has -wx permissions to the directory but no r permission.
- For example, the user account ediqa owns the directory and belongs to the infaadmin group. The ediqa user account and the infaadmin group have the following permissions: -wx-wx---
- The ediqa user account and the infaadmin group can write to and run files in the directory. They cannot display the list of files in directory but they can list a specific file by name.
- If you know the name of a file in the directory, you can copy the file from the directory to another location. If you do not know the name of the file, you must change the permission for the directory to include the read permission before you can copy the file. You can use the command chmod 730 to give read permission to the owner of the directory and subdirectories.
- For example, you need to copy the encryption key file named siteKey to a temporary directory to make it accessible to another node in the domain. Run the command chmod 730 on the <Informatica installation directory>/isp/config directory to assign the following permissions: rwx-wx---. You can then copy the encryption key file from the /keys subdirectory to another directory.
- After you complete copying the files, change the permissions for the directory back to write and execute permissions. You can use the command chmod 330 to remove the read permission.

**Note:** Do not use the -R option to recursively change the permissions for the directory and files. The directory and the files in the directory have different permissions.

**File Permissions**

- The owner of the files in the directory has rwx permissions to the files. The owner of the files in the directory is the user account used to run the installer. The group to which the owner belongs also has rwx permissions to the files in the directory.
- The owner and group have full access to the file and can display or edit the file in the directory.

**Note:** You must know the name of the file to be able to list or edit the file.

---

**Upgrading in Graphical Mode**

You can upgrade in graphical mode to upgrade the domain on the same machine and on the same domain configuration repository database. You can upgrade the domain in graphical mode on Windows.

To upgrade the domain to a different machine or to a different domain configuration repository database and change the node configuration, see "Upgrading with Changes to the Node Configuration" on page 57.
On Windows, if you encounter problems when you run the install.bat file from the root directory, run the following file:

<Informatica installation directory>/server/install.exe

1. Log in to the machine with the same user account that you used to install the previous version.
2. Stop all processes that access the directory and subdirectories of the Informatica product to upgrade, including command prompts and tail logs.
3. Go to the root of the directory that contains the installation files and run install.bat as administrator.
   To run the file as administrator, right-click the install.bat file and select **Run as administrator**.
   **Note**: If you do not run the installer as administrator, the Windows system administrator might encounter issues when accessing files in the Informatica installation directory.
   The **Informatica 9.6.1 HotFix 3** page appears.
4. Select **Install or upgrade to Informatica 9.6.1 HotFix 3**.
   Informatica provides utilities to facilitate the Informatica services installation process.
   • Run the Pre-Installation (i9Pi) System Check tool to verify whether the machine on which you are upgrading Informatica services meets the system requirements.
     For more information about the Pre-Installation (i9Pi) System Check tool, see “Run the Pre-Installation (i9Pi) System Check Tool” on page 21.
   • You do not have to run the Informatica Kerberos SPN Format Generator before you upgrade to Informatica 9.6.1. If you plan to configure the Informatica domain with Kerberos authentication after you upgrade to Informatica 9.6.1, you can generate the list of Kerberos principal names and keytab file names required for the Informatica domain before you set up Kerberos authentication. Verify that the upgrade was successful before you configure the domain to use Kerberos authentication.
5. Read the terms and conditions of Informatica product usage toolkit and select **I agree to the terms and conditions**.
   Informatica DiscoveryIQ is a product usage tool that sends routine reports on data usage and system statistics to Informatica. Informatica DiscoveryIQ uploads data to Informatica 15 minutes after you install and configure Informatica domain. Thereafter, the domain sends the data every 30 days. You can choose to not send any usage statistics to Informatica. For more information on how to disable sending usage statistics, see Informatica Administrator Guide.
6. Click **Start**.
7. Select **Upgrade to Informatica <Version>**.
   The **Upgrade Pre-Requisites** page displays the upgrade system requirements.
8. Verify the requirements before you continue the upgrade.
9. Click **Next**.
10. On the **Upgrade Directory** page, enter the directory of the Informatica version you want to upgrade and the directory in which you want to install Informatica 9.6.1.
The following table describes the directories that you must specify:

<table>
<thead>
<tr>
<th>Directory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directory of the Informatica product to upgrade</td>
<td>Directory that contains the version of Informatica services that you want to upgrade.</td>
</tr>
<tr>
<td>Directory for Informatica 9.6.1</td>
<td>Directory in which to install Informatica 9.6.1. Enter the absolute path for the installation directory. The directory cannot be the same as the directory that contains the previous version of Informatica services. The directory names in the path must not contain spaces or the following special characters: @</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> Informatica recommends using alphanumeric characters in the installation directory path. If you use a special character such as á or €, unexpected results might occur at run time. On Windows, the installation directory must be on the current machine.</td>
</tr>
</tbody>
</table>

11. Verify that the **Allow changes to the node host name and port numbers** option is not selected.
12. Click **Next**.
   The upgrade wizard displays a warning to shut down the Informatica domain before you continue the upgrade.
13. Click **OK**.
14. Enter the keyword and directory for the encryption key for the Informatica domain.
   Informatica uses an encryption key to secure sensitive data, such as passwords, that are stored in the Informatica domain. When you upgrade a domain with a single node, you must specify a keyword to use to create an encryption key for the domain.
   When you upgrade a domain with multiple nodes, the installer determines the type of node that you are upgrading and displays a different screen based on the type of node. When you upgrade the master gateway node, you must specify a keyword to create an encryption key for the domain. When you subsequently upgrade other nodes, you must specify the encryption key created for the domain when you upgraded the master gateway node.
   Enter the following parameters based on the type of node that you are upgrading:
   - The following table describes the encryption key parameters that you specify when you upgrade a domain with a single node or when you upgrade the master gateway node of a multinode domain:
• The following table describes the encryption key parameters that you specify when you upgrade a node other than the master gateway node:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select the encryption key</td>
<td>Path and file name of the encryption key for the Informatica domain of the node that you are upgrading. If you copied the encryption key file to a temporary directory to make it accessible to the nodes in the domain, specify the path and file name of the encryption key file in the temporary directory.</td>
</tr>
<tr>
<td>Encryption key directory</td>
<td>Directory in which to store the encryption key on the node that you are upgrading.</td>
</tr>
</tbody>
</table>

**Note:** All nodes in an Informatica domain use the same keyword and encryption key. You must keep the name of the domain, the keyword for the encryption key, and the encryption key file in a secure location. The encryption key is required when you change the encryption key of the domain or move a repository to another domain. If you do not have the encryption key, you must have the domain name and the keyword used to generate the encryption key.

15. Click **Next**.

16. On the **Pre-Installation Summary** page, review the upgrade information, and click **Install** to continue.

The upgrade wizard installs the Informatica server files to the Informatica 9.6.1 installation directory.

17. If you are upgrading a gateway node, the upgrade wizard displays the database and user account information for the domain configuration repository to be upgraded.

If you are upgrading a worker node, the upgrade wizard does not display the domain configuration repository information. You cannot modify the database connection information.

The following table describes the properties that the installer displays for the domain configuration repository:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database type</td>
<td>Database for the domain configuration repository.</td>
</tr>
<tr>
<td>Database user ID</td>
<td>Database user account for the domain configuration repository.</td>
</tr>
<tr>
<td>User password</td>
<td>Password for the database user account.</td>
</tr>
</tbody>
</table>

The upgrade wizard displays the database connection string for the domain configuration repository based on how the connection string of the previous version was created at installation:

• If the previous version used a JDBC URL at installation, the upgrade wizard displays the JDBC connection properties, including the database address and service name.

  Optionally, you can specify additional JDBC parameters to include in the JDBC URL. To provide additional JDBC parameters, select JDBC parameters and enter a valid JDBC parameter string.

• If the previous version used a custom JDBC connection string at installation, the upgrade wizard displays the custom connection string.

  You cannot specify additional JDBC parameters.

18. Click **Test Connection** to verify that you can connect to the database, and then click **OK** to continue.

19. Click **Next**.
On Windows, the upgrade wizard creates a service to start Informatica. By default, the service runs under the same user account as the account used for installation. You can run the Windows service under a different user account.

20. Select whether to run the Windows service under a different user account.

The following table describes the properties that you set:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run Informatica under a different user account</td>
<td>Indicates whether to run the Windows service under a different user account.</td>
</tr>
<tr>
<td>User name</td>
<td>User account with which to run the Informatica Windows service.</td>
</tr>
<tr>
<td>User name</td>
<td>Use the following format:</td>
</tr>
<tr>
<td></td>
<td>DomainName\UserAccount</td>
</tr>
<tr>
<td></td>
<td>This user account must have the Act as operating system permission.</td>
</tr>
<tr>
<td>Password</td>
<td>Password for the user account with which to run the Informatica Windows</td>
</tr>
<tr>
<td></td>
<td>service.</td>
</tr>
</tbody>
</table>

21. Click **Next**.

The **Post-Upgrade Summary** page indicates whether the upgrade completed successfully.

22. Click **Done**.

You can view the upgrade log files to get more information about the tasks performed by the upgrade wizard and to view the configuration of installed components.

---

## Upgrading in Console Mode

You can upgrade in console mode to upgrade the domain on the same machine and on the same domain configuration repository database. You can upgrade the domain in console mode on UNIX.

To upgrade the domain to a different machine or to a different domain configuration repository database and change the node configuration, see "Upgrading with Changes to the Node Configuration" on page 57.

When you run the installer in console mode, the words Quit and Back are reserved words. Do not use them as input text.

1. Log in to the machine with the same user account that you used to install the previous version.
2. Stop all processes that access the directory and subdirectories of the Informatica product to upgrade, including command prompts and tail logs.
3. On a shell command line, run the install.sh file from the root directory.
   The installer displays the message to verify that the locale environment variables are set.
4. If the environment variables are not set, press **n** to exit the installer and set them as required.
   If the environment variables are set, press **y** to continue.
5. Press **1** to install or upgrade Informatica.
Informatica provides utilities for facilitate the Informatica upgrade process.

- Run the Pre-Installation (i9Pi) System Check tool to verify whether the machine on which you are upgrading Informatica services meets the system requirements.
  
  For more information about the Pre-Installation (i9Pi) System Check tool, see “Run the Pre-Installation (i9Pi) System Check Tool” on page 29.

- You do not have to run the Informatica Kerberos SPN Format Generator before you upgrade to Informatica 9.6.1. If you plan to configure the Informatica domain with Kerberos authentication after you upgrade to Informatica 9.6.1, you can generate the list of Kerberos principal names and keytab file names required for the Informatica domain before you set up Kerberos authentication. Verify that the upgrade was successful before you configure the domain to use Kerberos authentication.

6. Press 3 to run the Informatica services installation.
7. Press y to continue the installation.
9. Read the terms and conditions of Informatica product usage toolkit and press 2 to continue the upgrade.

  Informatica DiscoveryIQ is a product usage tool that sends routine reports on data usage and system statistics to Informatica. Informatica DiscoveryIQ uploads data to Informatica 15 minutes after you install and configure Informatica domain. Thereafter, the domain sends the data every 30 days. You can choose to not send any usage statistics to Informatica. For more information on how to disable sending usage statistics, see Informatica Administrator Guide.

10. Press Enter.
11. At the prompt, enter the directory of the Informatica version you want to upgrade and the directory in which you want to install Informatica 9.6.1.

  The following table describes the directories you must specify:

<table>
<thead>
<tr>
<th>Directory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directory of the Informatica product to upgrade</td>
<td>Directory that contains the previous version of Informatica services that you want to upgrade.</td>
</tr>
</tbody>
</table>
| Directory for Informatica 9.6.1                | Directory in which to install Informatica 9.6.1. The directory cannot be the same as the directory that contains the previous version of Informatica services. The directory names in the path must not contain spaces or the following special characters: @"$!%(){}\[,]":’

  Note: Informatica recommends using alphanumeric characters in the installation directory path. If you use a special character such as à or €, unexpected results might occur at run time.

12. Enter 1 to use the same node configuration as the previous version.

  The installer displays a warning to shut down the Informatica domain that you want to upgrade before you continue the upgrade.

13. Press Enter.
14. Enter the keyword and directory for the encryption key for the Informatica domain.

  Informatica uses an encryption key to secure sensitive data, such as passwords, that are stored in the Informatica domain. When you upgrade a domain with a single node, you must specify a keyword to use to create an encryption key for the domain.
When you upgrade a domain with multiple nodes, the installer determines the type of node that you are upgrading and displays a different screen based on the type of node. When you upgrade the master gateway node, you must specify a keyword to create an encryption key for the domain. When you subsequently upgrade other nodes, you must specify the encryption key created for the domain when you upgraded the master gateway node.

If the location of the encryption key in the gateway node is not accessible to the current node, copy the encryption key file to an accessible directory. You might need to assign read permission to the directory that contains the encryption key file on gateway node before you can copy the file. For more information about the permissions for the encryption key file and directory, see "Secure Directory for the Encryption Key and Configuration Files" on page 46.

- The following table describes the encryption key parameters that you specify when you upgrade a domain with a single node or when you upgrade the master gateway node of a multinode domain:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
</table>
| Keyword             | Keyword to use to create a custom encryption key to secure sensitive data in the domain. The keyword must meet the following criteria:  
- From 8 to 20 characters long  
- Includes at least one uppercase letter  
- Includes at least one lowercase letter  
- Includes at least one number  
- Does not contain spaces  
The encryption key is created based on the keyword that you provide when you create the Informatica domain. |
| Encryption key directory | Directory in which to store the encryption key on the master gateway node. |

- The following table describes the encryption key parameters that you specify when you upgrade a node other than the master gateway node:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select the encryption key</td>
<td>Path and file name of the encryption key for the Informatica domain of the node that you are upgrading. If you copied the encryption key file to a temporary directory to make it accessible to the nodes in the domain, specify the path and file name of the encryption key file in the temporary directory.</td>
</tr>
<tr>
<td>Encryption key directory</td>
<td>Directory in which to store the encryption key on the node that you are upgrading.</td>
</tr>
</tbody>
</table>

**Note**: All nodes in an Informatica domain use the same keyword and encryption key. You must keep the name of the domain, the keyword for the encryption key, and the encryption key file in a secure location. The encryption key is required when you change the encryption key of the domain or move a repository to another domain. If you do not have the encryption key, you must have the domain name and the keyword used to generate the encryption key.

15. Review the upgrade information and press **Enter** to continue.

The installer copies the server files to the Informatica 9.6.1 installation directory.
The installer displays the database and user account information for the domain configuration repository to upgrade. It displays the database connection string for the domain configuration repository based on how the connection string of the previous version was created at installation:

- If the previous version used a JDBC URL at installation, the installer displays the JDBC connection properties, including the database address and service name.
- If the previous version used a custom JDBC connection string at installation, the installer displays the custom connection string.

16. Press Enter.
17. If you use a JDBC URL, you can specify additional parameters to include in the connection string.
   If you use a custom connection string, you cannot specify additional parameters.

The Post-Installation Summary window indicates whether the upgrade completed successfully. It also shows the status of the installed components and their configuration.

You can view the upgrade log files to get more information about the upgrade tasks performed by the installer and to view the configuration properties for the installed components.

### Upgrading in Silent Mode

You can upgrade in silent mode to upgrade the domain on the same machine and on the same domain configuration repository database.

To upgrade the domain to a different machine or to a different domain configuration repository database and change the node configuration, see "Upgrading with Changes to the Node Configuration" on page 57.

To upgrade the Informatica services without user interaction, upgrade in silent mode. Use a properties file to specify the upgrade options. The installer reads the file to determine the upgrade options. You can use silent mode upgrade to upgrade the Informatica services on multiple machines on the network or to standardize the upgrade process across machines.

Copy the Informatica installation files to the hard disk on the machine that hosts the Informatica instance you plan to upgrade.

To upgrade in silent mode, complete the following tasks:

1. Create the upgrade properties file and specify the upgrade options.
2. Run the installer with the upgrade properties file.

### Creating the Properties File

Informatica provides a sample properties file that includes the upgrade parameters that are required by the installer. You can customize the sample properties file to specify the options for your upgrade.

The sample upgrade properties file is named SilentInput_upgrade.properties and is located in the root directory of the installation DVD or the installer download location. After you customize the file, save it with the file name SilentInput.properties.

1. Go to the root of the directory that contains the installation files.
2. Find the file named SilentInput_upgrade.properties.
   Back up the file before you modify it.
3. Use a text editor to open the file and modify the values of the upgrade parameters.

The following table describes the upgrade parameters that you can modify:

<table>
<thead>
<tr>
<th>Property Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>INSTALL_TYPE</td>
<td>Indicates whether to install or upgrade Informatica. If the value is 0, the installer performs a fresh installation of Informatica. If the value is 1, the installer upgrades a previous version of Informatica.</td>
</tr>
<tr>
<td>USER_INSTALL_DIR</td>
<td>Directory in which to install the new version of Informatica services. The directory cannot be the same as the directory that contains the previous version of Informatica services.</td>
</tr>
<tr>
<td>UPG_BACKUP_DIR</td>
<td>Directory that contains the previous version of Informatica services that you want to upgrade.</td>
</tr>
<tr>
<td>KEY_DEST_LOCATION</td>
<td>Directory in which to store the encryption key for the node created during the installation.</td>
</tr>
<tr>
<td>PASS_PHRASE_PASSWD</td>
<td>Keyword to use to create an encryption key to secure sensitive data in the domain. The keyword must meet the following criteria:</td>
</tr>
<tr>
<td></td>
<td>- From 8 to 20 characters long</td>
</tr>
<tr>
<td></td>
<td>- Includes at least one uppercase letter</td>
</tr>
<tr>
<td></td>
<td>- Includes at least one lowercase letter</td>
</tr>
<tr>
<td></td>
<td>- Includes at least one number</td>
</tr>
<tr>
<td></td>
<td>- Does not contain spaces</td>
</tr>
<tr>
<td></td>
<td>Set this property when you upgrade the master gateway node.</td>
</tr>
<tr>
<td>KEY_SRC_LOCATION</td>
<td>Directory that contains the encryption key for the master gateway node of the Informatica domain. Set this property when you upgrade a node other than the master gateway node.</td>
</tr>
<tr>
<td>DB2_TABLESPACE</td>
<td>This parameter is obsolete. Do not set it.</td>
</tr>
<tr>
<td>ADVANCE_JDBC_PARAM</td>
<td>This parameter is obsolete. Do not set it.</td>
</tr>
<tr>
<td>ADVANCE_PORT_CONFIG</td>
<td>This parameter is obsolete. Do not set it.</td>
</tr>
<tr>
<td>TOMCAT_PORT</td>
<td>This parameter is obsolete. Do not set it.</td>
</tr>
<tr>
<td>SERVER_PORT</td>
<td>Port number that controls server shutdown for the domain Service Manager. The Service Manager listens for shutdown commands on this port. You can set this parameter if ADVANCE_PORT_CONFIG=1.</td>
</tr>
<tr>
<td>AC_PORT</td>
<td>Port number used by the Administrator tool. You can set this parameter if ADVANCE_PORT_CONFIG=1.</td>
</tr>
</tbody>
</table>
4. On Windows, specify whether to run the Informatica service under the same user account as the account used for upgrade.

The following table describes the properties that you set:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>USE_LOGIN_DETAILS</td>
<td>Indicates whether to run the Windows service under a different user account. If the value is 0, the installer configures the service to run under the current user account. If the value is 1, the installer configures the service to run under a different user account.</td>
</tr>
<tr>
<td>WIN_USER_ID</td>
<td>User account with which to run the Informatica Windows service. Use the following format: DomainName\UserAccount. This user account must have the Act as operating system permission.</td>
</tr>
<tr>
<td>WIN_USER_PSSWD</td>
<td>Password for the user account with which to run the Informatica Windows service.</td>
</tr>
</tbody>
</table>

5. Save the properties file with the name SilentInput.properties.

**Running the Silent Installer**

After you create the properties file, open a command prompt to start the silent upgrade.

1. Open a command prompt.

   On Windows, open the command prompt as administrator. If you do not open the command prompt as administrator, the Windows system administrator might encounter issues when accessing files in the Informatica installation directory.

2. Go to the root of the server installer directory.

3. Verify that the directory contains the file SilentInput.properties with the upgrade options.


   The silent upgrade runs in the background. The process can take a while. The silent upgrade process is complete when the Informatica_<Version>_Services_InstallLog.log is created in the installation directory.

   The silent upgrade fails if you incorrectly configure the properties file or if the installation directory is not accessible. If the upgrade fails, view the silent upgrade log file and correct the errors. Then run the silent
installer again. The silent upgrade log file name is silentErrorLog.log. The installer creates it in the root directory on Windows and in the user home directory on UNIX.

Secure the Passwords in the Properties File

After you run the silent upgrade, ensure that passwords in the properties file are kept secure.

When you configure the properties file for a silent upgrade, you enter passwords in plain text. After you run the silent upgrade, use one of the following methods to secure the passwords:

• Remove the passwords from the properties file.
• Delete the properties file.
• Store the properties file in a secure location.

Upgrading with Changes to the Node Configuration

When you upgrade the domain, you can choose to change the node configuration to allow changes to the node host name, port numbers, or domain configuration repository database.

If you migrated an Informatica services installation to a different machine, choose to change the node configuration to upgrade the domain and configure the node on the new machine. If you migrated the domain configuration repository to a different database, choose to change the node configuration to upgrade the domain and configure the new database.

Complete the pre-upgrade tasks before you run the installer. On Windows, you can run the installer in graphical or silent mode. On UNIX, you can run the installer in console or silent mode.

Upgrading in Graphical Mode

When you upgrade in graphical mode, you can change the node configuration to upgrade the domain to a different machine or to a different domain configuration repository database. You can upgrade the domain in graphical mode on Windows.

To upgrade the domain on the same machine and on the same domain configuration repository database, see “Upgrading in Graphical Mode” on page 47.

On Windows, if you encounter problems when you run the install.bat file from the root directory, run the following file:

<Informatica installation directory>/server/install.exe

1. Log in to the machine with the same user account that you used to install the previous version.
2. Stop all processes that access the directory and subdirectories of the Informatica product to upgrade, including command prompts and tail logs.
3. Go to the root of the directory that contains the installation files and run install.bat as administrator.

To run the file as administrator, right-click the install.bat file and select Run as administrator.

Note: If you do not run the installer as administrator, the Windows system administrator might encounter issues when accessing files in the Informatica installation directory.

The Informatica 9.6.1 HotFix 3 page appears.

4. Select Install or upgrade to Informatica 9.6.1 HotFix 3.
Informatica provides utilities to facilitate the Informatica services installation process.

- Run the Pre-Installation (i9Pi) System Check tool to verify whether the machine on which you are upgrading Informatica services meets the system requirements.

  For more information about the Pre-Installation (i9Pi) System Check tool, see “Run the Pre-Installation (i9Pi) System Check Tool” on page 21.

- You do not have to run the Informatica Kerberos SPN Format Generator before you upgrade to Informatica 9.6.1. If you plan to configure the Informatica domain with Kerberos authentication after you upgrade to Informatica 9.6.1, you can generate the list of Kerberos principal names and keytab file names required for the Informatica domain before you set up Kerberos authentication. Verify that the upgrade was successful before you configure the domain to use Kerberos authentication.

5. Read the terms and conditions of Informatica product usage toolkit and select I agree to the terms and conditions.

Informatica DiscoveryIQ is a product usage tool that sends routine reports on data usage and system statistics to Informatica. Informatica DiscoveryIQ uploads data to Informatica 15 minutes after you install and configure Informatica domain. Thereafter, the domain sends the data every 30 days. You can choose to not send any usage statistics to Informatica. For more information on how to disable sending usage statistics, see Informatica Administrator Guide.

6. Click Start.

7. Select Upgrade to Informatica <Version>.

   The Upgrade Pre-Requisites page displays the upgrade system requirements.

8. Verify the requirements before you continue the upgrade.

9. Click Next.

10. On the Upgrade Directory page, enter the directory of the Informatica version you want to upgrade and the directory in which you want to install Informatica 9.6.1.

    The following table describes the directories you must specify:

<table>
<thead>
<tr>
<th>Directory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directory of the Informatica product to upgrade</td>
<td>Directory that contains the previous version of Informatica services that you want to upgrade.</td>
</tr>
<tr>
<td>Directory for Informatica 9.6.1</td>
<td>Directory in which to install Informatica 9.6.1. Enter the absolute path for the installation directory. The directory cannot be the same as the directory that contains the previous version of Informatica services. The directory names in the path must not contain spaces or the following special characters: @* $ # ! % ( ) [ ] , ; '</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> Informatica recommends using alphanumeric characters in the installation directory path. If you use a special character such as â or €, unexpected results might occur at run time. On Windows, the installation directory must be on the current machine.</td>
</tr>
</tbody>
</table>

11. Select Allow changes to the node host name and port numbers.

    Use this option to change the configuration of the Informatica installation that you upgrade. If you are upgrading to a different machine, change the node configuration to match the configuration of the new machine. If you are upgrading to a different domain configuration repository database, change the node configuration to match the configuration of the new database.

12. Click Next.
The upgrade wizard displays a warning to shut down the Informatica domain before you continue the upgrade.

13. Click OK.

14. Enter the keyword and directory for the encryption key for the Informatica domain.

Informatica uses an encryption key to secure sensitive data, such as passwords, that are stored in the Informatica domain. When you upgrade a domain with a single node, you must specify a keyword to use to create an encryption key for the domain.

When you upgrade a domain with multiple nodes, the installer determines the type of node that you are upgrading and displays a different screen based on the type of node. When you upgrade the master gateway node, you must specify a keyword to create an encryption key for the domain. When you subsequently upgrade other nodes, you must specify the encryption key created for the domain when you upgraded the master gateway node.

Enter the following parameters based on the type of node that you are upgrading:

- The following table describes the encryption key parameters that you specify when you upgrade a domain with a single node or when you upgrade the master gateway node of a multinode domain:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
</table>
| Keyword                   | Keyword to use to create a custom encryption key to secure sensitive data in the domain. The keyword must meet the following criteria:  
- From 8 to 20 characters long  
- Includes at least one uppercase letter  
- Includes at least one lowercase letter  
- Includes at least one number  
- Does not contain spaces  
The encryption key is created based on the keyword that you provide when you create the Informatica domain. |
| Encryption key directory  | Directory in which to store the encryption key on the master gateway node. |

- The following table describes the encryption key parameters that you specify when you upgrade a node other than the master gateway node:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select the encryption key</td>
<td>Path and file name of the encryption key for the Informatica domain of the node that you are upgrading. If you copied the encryption key file to a temporary directory to make it accessible to the nodes in the domain, specify the path and file name of the encryption key file in the temporary directory.</td>
</tr>
<tr>
<td>Encryption key directory</td>
<td>Directory in which to store the encryption key on the node that you are upgrading.</td>
</tr>
</tbody>
</table>

**Note:** All nodes in an Informatica domain use the same keyword and encryption key. You must keep the name of the domain, the keyword for the encryption key, and the encryption key file in a secure location. The encryption key is required when you change the encryption key of the domain or move a repository to another domain. If you do not have the encryption key, you must have the domain name and the keyword used to generate the encryption key.

15. Click Next.
16. On the **Pre-Installation Summary** page, review the upgrade information, and click **Install** to continue. The upgrade wizard installs the Informatica server files to the Informatica 9.6.1 installation directory.

17. If you are upgrading a gateway node, enter the database and user account information for the domain configuration repository on the **Domain Configuration Repository Upgrade** page.

   If you are upgrading a worker node, the upgrade wizard does not display the domain configuration repository information. You cannot modify the database connection information. Skip to step 22.

   The following table describes the properties that you specify for the database and user account:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database type</td>
<td>Database for the domain configuration repository. Select Oracle, IBM DB2, Microsoft SQL Server, or Sybase ASE.</td>
</tr>
<tr>
<td>Database user ID</td>
<td>Database user account for the domain configuration repository.</td>
</tr>
<tr>
<td>User password</td>
<td>Password for the database user account.</td>
</tr>
<tr>
<td>Tablespace</td>
<td>Available for IBM DB2. Name of the tablespace in which to create the tables. Specify a tablespace that meets the pageSize requirement of 32768 bytes.</td>
</tr>
<tr>
<td></td>
<td>In a single partition database, if this option is not selected, the installer creates the tables in the default tablespace.</td>
</tr>
<tr>
<td></td>
<td>In a multipartition database, select this option and specify the name of the tablespace that resides in the catalog partition of the database.</td>
</tr>
<tr>
<td>Schema name</td>
<td>Available for Microsoft SQL Server. Name of the schema that will contain domain configuration tables. If not selected, the installer creates the tables in the default schema.</td>
</tr>
<tr>
<td>Trusted connection</td>
<td>Available for Microsoft SQL Server. Indicates whether to connect to Microsoft SQL Server through a trusted connection. Trusted authentication uses the security credentials of the current user to make the connection to Microsoft SQL Server. If not selected, the installer uses Microsoft SQL Server authentication.</td>
</tr>
</tbody>
</table>

18. Verify that the **Secure database** option is not selected.

   During the upgrade, you cannot create the domain configuration repository in a database secured with the SSL protocol because the secure database option is not supported in the previous version. After you upgrade, you can configure a secure domain configuration repository database.

19. Enter the JDBC connection information.
   - To enter the connection information using the JDBC URL information, select **JDBC URL** and specify the JDBC URL properties.
The following table describes the JDBC URL properties that you must specify:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database address</td>
<td>Host name and port number for the database in the format host_name:port.</td>
</tr>
<tr>
<td>Database service name</td>
<td>Service name for Oracle and IBM DB2 databases or database name for Microsoft SQL Server and Sybase ASE.</td>
</tr>
<tr>
<td>JDBC parameters</td>
<td>Optional parameters to include in the database connection string. Use the parameters to optimize database operations for the configuration database. The upgrade wizard displays the parameters you provided when you installed the previous version. You can modify the JDBC parameter string. Verify that the parameter string is valid. The upgrade wizard does not validate the parameter string before it adds the string to the JDBC URL. If not selected, the upgrade wizard creates the JDBC URL string without additional parameters.</td>
</tr>
</tbody>
</table>

- To enter the connection information using a custom JDBC connection string, select **Custom JDBC connection string** and type the connection string.

Use the following syntax for the JDBC connection string for the databases:

**IBM DB2**

```
jdbc:Informatica:db2://host_name:port_no;DatabaseName=
```

**Oracle**

```
jdbc:Informatica:oracle://host_name:port_no;ServiceName=
```

**Microsoft SQL Server**

```
jdbc:Informatica:sqlserver://host_name:port_no;SelectMethod=cursor;DatabaseName=
```

**Sybase**

```
jdbc:Informatica:sybase://host_name:port_no;DatabaseName=
```

Verify that the connection string contains all the connection parameters required by your database system.

20. Click **Test Connection** to verify that you can connect to the database, and then click **OK** to continue.
21. Click **Next**.

   The installer displays the domain and node properties.
22. Modify the node host name and port number to match the configuration of the new version of Informatica.
The following table describes the domain and node properties that you can specify:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain name</td>
<td>Name of the domain. The default domain name is Domain_&lt;MachineName&gt;.</td>
</tr>
<tr>
<td></td>
<td>The name must not exceed 128 characters and must be 7-bit ASCII only.</td>
</tr>
<tr>
<td></td>
<td>It cannot contain a space or any of the following characters: ` % * + ; &quot; ? , &lt; &gt; /</td>
</tr>
<tr>
<td>Node name</td>
<td>Name of the node that you are upgrading.</td>
</tr>
<tr>
<td>Node host name</td>
<td>Host name of the machine that hosts the node for the new version of</td>
</tr>
<tr>
<td></td>
<td>Informatica. If the machine has a single network name, use the default host</td>
</tr>
<tr>
<td></td>
<td>name. If the machine has multiple network names, you can modify the default</td>
</tr>
<tr>
<td></td>
<td>host name to use an alternate network name. Optionally, you can use the IP</td>
</tr>
<tr>
<td></td>
<td>address. Note: Do not use localhost. The host name must explicitly identify</td>
</tr>
<tr>
<td></td>
<td>the machine.</td>
</tr>
<tr>
<td>Node port number</td>
<td>Port number for the node you are upgrading. The default port number for the</td>
</tr>
<tr>
<td></td>
<td>node is 6005.</td>
</tr>
<tr>
<td>Gateway node host name</td>
<td>Host name of the machine that hosts the gateway node for the domain.</td>
</tr>
<tr>
<td></td>
<td>Available if you upgrade a worker node.</td>
</tr>
<tr>
<td>Gateway node port</td>
<td>Port number of the gateway node.</td>
</tr>
<tr>
<td>number</td>
<td>Available if you upgrade a worker node.</td>
</tr>
</tbody>
</table>

23. If you are securing the Informatica Administrator with a custom keystore file and you are upgrading to a different gateway node configuration, specify the custom keystore file password and location. The following table describes the properties for the Informatica Administrator custom keystore:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custom Keystore</td>
<td>Plain text password for the custom keystore file.</td>
</tr>
<tr>
<td>Password</td>
<td></td>
</tr>
<tr>
<td>Custom Keystore File</td>
<td>Path and file name of the custom keystore file. If you leave this field blank,</td>
</tr>
<tr>
<td></td>
<td>the installer looks for the keystore file in the following directory:</td>
</tr>
<tr>
<td></td>
<td>&lt;Informatica installation directory&gt;\tomcat\conf\</td>
</tr>
</tbody>
</table>

24. Click Next.

On the Port Configuration Upgrade page, the upgrade wizard displays the port numbers assigned to the domain and node components.

25. You can specify new port numbers or use the default port numbers.
The following table describes the ports that you can specify:

<table>
<thead>
<tr>
<th>Port</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Manager port</td>
<td>Port number used by the Service Manager in the node. Client applications and the Informatica command line programs use this port to communicate to the services in the domain.</td>
</tr>
<tr>
<td>Service Manager shutdown port</td>
<td>Port number that controls server shutdown for the domain Service Manager. The Service Manager listens for shutdown commands on this port.</td>
</tr>
<tr>
<td>Informatica Administrator port</td>
<td>Port number used by the Administrator tool. Available if you upgrade a gateway node.</td>
</tr>
<tr>
<td>Informatica Administrator shutdown port</td>
<td>Port number used by the Administrator tool to listen for shut down commands. Available if you upgrade a gateway node.</td>
</tr>
</tbody>
</table>

26. Click **Next**.

On Windows, the upgrade wizard creates a service to start Informatica. By default, the service runs under the same user account as the account used for installation. You can run the Windows service under a different user account.

27. Select whether to run the Windows service under a different user account.

The following table describes the properties that you set:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run Informatica under a different user account</td>
<td>Indicates whether to run the Windows service under a different user account.</td>
</tr>
<tr>
<td>User name</td>
<td>User account with which to run the Informatica Windows service. Use the following format: DomainName\UserAccount. This user account must have the Act as operating system permission.</td>
</tr>
<tr>
<td>Password</td>
<td>Password for the user account with which to run the Informatica Windows service.</td>
</tr>
</tbody>
</table>

28. Click **Next**.

The **Post-Upgrade Summary** page indicates whether the upgrade completed successfully.

29. Click **Done**.

You can view the upgrade log files to get more information about the tasks performed by the upgrade wizard and to view the configuration of installed components.

**Upgrading in Console Mode**

When you upgrade in console mode, you can change the node configuration to upgrade the domain to a different machine or to a different domain configuration repository database. You can upgrade the domain in console mode on UNIX.

To upgrade the domain on the same machine and on the same domain configuration repository database, see "Upgrading in Console Mode" on page 51.
When you run the installer in console mode, the words Quit and Back are reserved words. Do not use them as input text.

1. Log in to the machine with the same user account that you used to install the previous version.
2. Stop all processes that access the directory and subdirectories of the Informatica product to upgrade, including command prompts and tail logs.
3. On a shell command line, run the install.sh file from the root directory.
   The installer displays the message to verify that the locale environment variables are set.
4. If the environment variables are not set, press n to exit the installer and set them as required.
   If the environment variables are set, press y to continue.
5. Press 1 to install or upgrade Informatica.
   Informatica provides utilities for facilitate the Informatica upgrade process.
   • Run the Pre-Installation (i9Pi) System Check tool to verify whether the machine on which you are upgrading Informatica services meets the system requirements.
     For more information about the Pre-Installation (i9Pi) System Check tool, see “Run the Pre-Installation (i9Pi) System Check Tool” on page 29.
   • You do not have to run the Informatica Kerberos SPN Format Generator before you upgrade to Informatica 9.6.1. If you plan to configure the Informatica domain with Kerberos authentication after you upgrade to Informatica 9.6.1, you can generate the list of Kerberos principal names and keytab file names required for the Informatica domain before you set up Kerberos authentication. Verify that the upgrade was successful before you configure the domain to use Kerberos authentication.
6. Press 3 to run the Informatica service installation.
7. Press y to continue the installation.
9. Read the terms and conditions of Informatica product usage toolkit and press 2 to continue the upgrade.
   Informatica DiscoveryIQ is a product usage tool that sends routine reports on data usage and system statistics to Informatica. Informatica DiscoveryIQ uploads data to Informatica 15 minutes after you install and configure Informatica domain. Thereafter, the domain sends the data every 30 days. You can choose to not send any usage statistics to Informatica. For more information on how to disable sending usage statistics, see Informatica Administrator Guide.
10. Press Enter.
11. At the prompt, enter the directory of the Informatica version you want to upgrade and the directory in which you want to install Informatica 9.6.1.
   The following table describes the directories you must specify:

<table>
<thead>
<tr>
<th>Directory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directory of the Informatica product to upgrade</td>
<td>Directory that contains the version of Informatica services that you want to upgrade.</td>
</tr>
<tr>
<td>Directory for Informatica 9.6.1</td>
<td>Directory in which to install Informatica 9.6.1. The directory cannot be the same as the directory that contains the previous version of Informatica services. The directory names in the path must not contain spaces or the following special characters: @&quot;' $# ! % ( ) { } [ ] , ; '</td>
</tr>
<tr>
<td>Note:</td>
<td>Informatica recommends using alphanumeric characters in the installation directory path. If you use a special character such as à or €, unexpected results might occur at run time.</td>
</tr>
</tbody>
</table>
12. Enter 2 to allow changes to the node host name and port number.

Use this option to change the configuration of the Informatica installation that you upgrade. If you are upgrading to a different machine, change the node configuration to match the configuration of the new machine. If you are upgrading to a different domain configuration repository database, change the node configuration to match the configuration of the new database.

The installer displays a warning to shut down the Informatica domain that you want to upgrade before you continue the upgrade.

13. Press Enter.

14. Enter the keyword and directory for the encryption key for the Informatica domain.

Informatica uses an encryption key to secure sensitive data, such as passwords, that are stored in the Informatica domain. When you upgrade a domain with a single node, you must specify a keyword to use to create an encryption key for the domain.

When you upgrade a domain with multiple nodes, the installer determines the type of node that you are upgrading and displays a different screen based on the type of node. When you upgrade the master gateway node, you must specify a keyword to create an encryption key for the domain. When you subsequently upgrade other nodes, you must specify the encryption key created for the domain when you upgraded the master gateway node.

If the location of the encryption key in the gateway node is not accessible to the current node, copy the encryption key file to an accessible directory. You might need to assign read permission to the directory that contains the encryption key file on gateway node before you can copy the file. For more information about the permissions for the encryption key file and directory, see “Secure Directory for the Encryption Key and Configuration Files” on page 46.

- The following table describes the encryption key parameters that you specify when you upgrade a domain with a single node or when you upgrade the master gateway node of a multinode domain:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keyword</td>
<td>Keyword to use to create a custom encryption key to secure sensitive data in the domain. The keyword must meet the following criteria:</td>
</tr>
<tr>
<td></td>
<td>- From 8 to 20 characters long</td>
</tr>
<tr>
<td></td>
<td>- Includes at least one uppercase letter</td>
</tr>
<tr>
<td></td>
<td>- Includes at least one lowercase letter</td>
</tr>
<tr>
<td></td>
<td>- Includes at least one number</td>
</tr>
<tr>
<td></td>
<td>- Does not contain spaces</td>
</tr>
<tr>
<td></td>
<td>The encryption key is created based on the keyword that you provide when you create the Informatica domain.</td>
</tr>
<tr>
<td>Encryption key directory</td>
<td>Directory in which to store the encryption key on the master gateway node.</td>
</tr>
</tbody>
</table>
The following table describes the encryption key parameters that you specify when you upgrade a node other than the master gateway node:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select the encryption key</td>
<td>Path and file name of the encryption key for the Informatica domain of the node that you are upgrading. If you copied the encryption key file to a temporary directory to make it accessible to the nodes in the domain, specify the path and file name of the encryption key file in the temporary directory.</td>
</tr>
<tr>
<td>Encryption key directory</td>
<td>Directory in which to store the encryption key on the node that you are upgrading.</td>
</tr>
</tbody>
</table>

**Note**: All nodes in an Informatica domain use the same keyword and encryption key. You must keep the name of the domain, the keyword for the encryption key, and the encryption key file in a secure location. The encryption key is required when you change the encryption key of the domain or move a repository to another domain. If you do not have the encryption key, you must have the domain name and the keyword used to generate the encryption key.

15. Review the upgrade information and press **Enter** to continue.

   The installer copies the server files to the Informatica 9.6.1 installation directory.

16. If you are upgrading a gateway node, select the database to use for the domain configuration repository.

   If you are upgrading a worker node, the domain configuration repository information does not display. You cannot modify the database connection information. Skip to step 20.

   The following table lists the databases you can use for the domain configuration repository:

<table>
<thead>
<tr>
<th>Prompt</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database type</td>
<td>Type of database for the domain configuration repository. Select from the following options:</td>
</tr>
<tr>
<td></td>
<td>1 - Oracle</td>
</tr>
<tr>
<td></td>
<td>2 - Microsoft SQL Server</td>
</tr>
<tr>
<td></td>
<td>3 - IBM DB2</td>
</tr>
<tr>
<td></td>
<td>4 - Sybase ASE</td>
</tr>
</tbody>
</table>

17. Enter the properties for the database user account.

   The following table lists the properties for the database user account:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database user ID</td>
<td>Name for the domain configuration database user account.</td>
</tr>
<tr>
<td>User password</td>
<td>Password for the domain configuration database user account.</td>
</tr>
</tbody>
</table>

18. Press 2 to create a domain configuration repository in an unsecure database.

   During the upgrade, you cannot create the domain configuration repository in a database secured with the SSL protocol because the secure database option is not supported in the previous version. After you upgrade, you can configure a secure domain configuration repository database.
19. Enter the parameters for the database.
   
a. If you select IBM DB2, select whether to configure a tablespace and enter the tablespace name.
   
The following table describes the properties that you must configure for the IBM DB2 database:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configure tablespace</td>
<td>Select whether to specify a tablespace:</td>
</tr>
<tr>
<td></td>
<td>1 - No</td>
</tr>
<tr>
<td></td>
<td>2 - Yes</td>
</tr>
<tr>
<td></td>
<td>In a single-partition database, if you select No, the installer creates the</td>
</tr>
<tr>
<td></td>
<td>tables in the default tablespace. In a multi-partition database, you must</td>
</tr>
<tr>
<td></td>
<td>select Yes.</td>
</tr>
<tr>
<td>Tablespace</td>
<td>Name of the tablespace in which to create the tables. Specify a</td>
</tr>
<tr>
<td></td>
<td>tablespace that meets the pageSize requirement of 32768 bytes.</td>
</tr>
<tr>
<td></td>
<td>In a single-partition database, if you select Yes to configure the</td>
</tr>
<tr>
<td></td>
<td>tablespace, enter the name of the tablespace in which to create the</td>
</tr>
<tr>
<td></td>
<td>tables.</td>
</tr>
<tr>
<td></td>
<td>In a multi-partition database, specify the name of the tablespace that</td>
</tr>
<tr>
<td></td>
<td>resides in the catalog partition of the database.</td>
</tr>
</tbody>
</table>

b. If you select Microsoft SQL Server, enter the schema name for the database.
   
The following table describes the properties that you must configure for the Microsoft SQL Server database:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schema name</td>
<td>Name of the schema that will contain domain configuration tables. If this</td>
</tr>
<tr>
<td></td>
<td>parameter is blank, the installer creates the tables in the default schema.</td>
</tr>
</tbody>
</table>

c. To enter the JDBC connection information using the JDBC URL information, press 1. To enter the JDBC connection information using a custom JDBC connection string, press 2.

d. Enter the JDBC connection information.
   
   • To enter the connection information using the JDBC URL information, specify the JDBC URL properties.
   
The following table describes the database connection information:

<table>
<thead>
<tr>
<th>Prompt</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database host name</td>
<td>Host name for the database.</td>
</tr>
<tr>
<td>Database port number</td>
<td>Port number for the database.</td>
</tr>
<tr>
<td>Prompt</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Database service name</td>
<td>Password for the domain configuration database user account. Service name for Oracle and IBM DB2 databases or database name for Microsoft SQL Server and Sybase ASE.</td>
</tr>
<tr>
<td>Configure JDBC Parameters</td>
<td>Select whether to add additional JDBC parameters to the connection string: 1 - Yes 2 - No If you select Yes, enter the parameters or press Enter to accept the default. If you select No, the installer creates the JDBC connection string without parameters.</td>
</tr>
</tbody>
</table>

- To enter the connection information using a custom JDBC connection string, type the connection string. Use the following syntax for the JDBC connection string for the databases:
  
  **IBM DB2**
  
  `jdbc:Informatica:db2://host_name:port_no;DatabaseName=`

  **Oracle**
  
  `jdbc:Informatica:oracle://host_name:port_no;ServiceName=`

  **Microsoft SQL Server**
  
  `jdbc:Informatica:sqlserver://host_name:port_no;SelectMethod=cursor;DatabaseName=`

  **Sybase**
  
  `jdbc:Informatica:sybase://host_name:port_no;DatabaseName=`

  Verify that the connection string contains all the connection parameters required by your database system.

20. Modify the node host name and port number to match the configuration of the new version of Informatica.

The following table describes the domain and node properties that you can specify:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain name</td>
<td>Name of the domain. The default domain name is Domain_&lt;MachineName&gt;. The name must not exceed 128 characters and must be 7-bit ASCII only. It cannot contain a space or any of the following characters: <code> % + ; &quot; ? , &lt; &gt; \ /</code></td>
</tr>
<tr>
<td>Node name</td>
<td>Name of the node that you are upgrading.</td>
</tr>
</tbody>
</table>
### Property Description

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Node host name</td>
<td>Host name of the machine that hosts the node you are upgrading. If the machine has a single network name, use the default host name. If the machine has multiple network names, you can modify the default host name to use an alternate network name. Optionally, you can use the IP address. Note: Do not use localhost. The host name must explicitly identify the machine.</td>
</tr>
<tr>
<td>Custom keystore password</td>
<td>Plain text password for the custom keystore file. Enter the custom keystore password if you are securing the Informatica Administrator with a custom keystore file and you are upgrading to a different gateway node configuration.</td>
</tr>
<tr>
<td>Custom keystore file</td>
<td>Path and file name of the custom keystore file. Enter the custom keystore file if you are securing the Informatica Administrator with a custom keystore file and you are upgrading to a different gateway node configuration. If you leave this field blank, the installer looks for the keystore file in the following directory: <code>&lt;Informatica installation directory&gt;\tomcat\conf</code></td>
</tr>
<tr>
<td>Node port number</td>
<td>Port number for the node you are upgrading. The default port number for the node is 6005.</td>
</tr>
<tr>
<td>Gateway node host name</td>
<td>Host name of the machine that hosts the gateway node for the domain. Available if you upgrade a worker node.</td>
</tr>
<tr>
<td>Gateway node port number</td>
<td>Port number of the gateway node. Available if you upgrade a worker node.</td>
</tr>
</tbody>
</table>

21. The installer displays the port numbers assigned the domain components. You can specify new port numbers or use the default port numbers. The following table describes the ports that you can specify:

<table>
<thead>
<tr>
<th>Port</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Manager port</td>
<td>Port number used by the Service Manager in the node. Client applications and the Informatica command line programs use this port to communicate to the services in the domain.</td>
</tr>
<tr>
<td>Service Manager shutdown port</td>
<td>Port number that controls server shutdown for the domain Service Manager. The Service Manager listens for shutdown commands on this port.</td>
</tr>
<tr>
<td>Informatica Administrator port</td>
<td>Port number used by the Administrator tool. Available if you upgrade a gateway node.</td>
</tr>
<tr>
<td>Informatica Administrator shutdown port</td>
<td>Port number used by the Administrator tool to listen for shut down commands. Available if you upgrade a gateway node.</td>
</tr>
</tbody>
</table>

The Post-Installation Summary window indicates whether the upgrade completed successfully. It also shows the status of the installed components and their configuration. You can view the upgrade log files to get more information about the upgrade tasks performed by the installer and to view the configuration properties for the installed components.
Upgrading in Silent Mode

When you upgrade in silent mode, you can change the node configuration to upgrade the domain to a different machine or to a different domain configuration repository database.

To upgrade the domain on the same machine and on the same domain configuration repository database, see "Upgrading in Silent Mode" on page 54.

To upgrade the Informatica services without user interaction, upgrade in silent mode. Use a properties file to specify the upgrade options. The installer reads the file to determine the upgrade options. You can use silent mode upgrade to upgrade the Informatica services on multiple machines on the network or to standardize the upgrade process across machines.

Copy the Informatica installation files to the hard disk on the machine that hosts the Informatica instance you plan to upgrade.

To upgrade in silent mode, complete the following tasks:

1. Create the upgrade properties file and specify the upgrade options.
2. Run the installer with the upgrade properties file.

Creating the Properties File

Informatica provides a sample properties file that includes the upgrade parameters that are required by the installer. You can customize the sample properties file to specify the options for your upgrade.

The sample upgrade properties file is named SilentInput_Upgrade_NewConfig.properties and is located in the root directory of the installation DVD or the installer download location. After you customize the file, save it with the file name SilentInput.properties.

1. Go to the root of the directory that contains the installation files.
2. Find the file named SilentInput_Upgrade_NewConfig.properties.
   - Back up the file before you modify it.
3. Use a text editor to open the file and modify the values of the upgrade parameters.
   - The following table describes the upgrade parameters that you can modify:

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>INSTALL_TYPE</td>
<td>Indicates whether to install or upgrade Informatica.</td>
</tr>
<tr>
<td></td>
<td>To upgrade from a previous version of Informatica, set the value to 1.</td>
</tr>
<tr>
<td>UPG_DIFF_CONFIG</td>
<td>Indicates whether to change the node configuration for the new version of Informatica.</td>
</tr>
<tr>
<td></td>
<td>To upgrade a previous version of Informatica to a different machine or to a different domain configuration repository database, set this parameter to 1.</td>
</tr>
<tr>
<td>USER_INSTALL_DIR</td>
<td>Directory in which to install Informatica the new version of Informatica. The directory cannot be the same as the directory that contains the previous version.</td>
</tr>
<tr>
<td>Parameter Name</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>UPG_BACKUP_DIR</td>
<td>Directory that contains the previous version of Informatica product that you want to upgrade.</td>
</tr>
<tr>
<td>KEY_DEST_LOCATION</td>
<td>Directory in which to store the encryption key for the node created during the installation.</td>
</tr>
<tr>
<td>PASS_PHRASE_PASSWD</td>
<td>Keyword to use to create an encryption key to secure sensitive data in the domain. The keyword must meet the following criteria:</td>
</tr>
<tr>
<td></td>
<td>- From 8 to 20 characters long</td>
</tr>
<tr>
<td></td>
<td>- Includes at least one uppercase letter</td>
</tr>
<tr>
<td></td>
<td>- Includes at least one lowercase letter</td>
</tr>
<tr>
<td></td>
<td>- Includes at least one number</td>
</tr>
<tr>
<td></td>
<td>- Does not contain spaces</td>
</tr>
<tr>
<td></td>
<td>Set this property when you upgrade the master gateway node.</td>
</tr>
<tr>
<td>KEY_SRC_LOCATION</td>
<td>Directory that contains the encryption key for the master gateway node of the Informatica domain. Set this property when you upgrade a node other than the master gateway node.</td>
</tr>
<tr>
<td>DB_TYPE</td>
<td>Database for the domain configuration repository. The value can be one of the following databases:</td>
</tr>
<tr>
<td></td>
<td>- Oracle</td>
</tr>
<tr>
<td></td>
<td>- MSSQLServer</td>
</tr>
<tr>
<td></td>
<td>- DB2</td>
</tr>
<tr>
<td></td>
<td>- Sybase</td>
</tr>
<tr>
<td>DB_UNAME</td>
<td>Database user account name for the domain configuration repository.</td>
</tr>
<tr>
<td>DB_PASSWD</td>
<td>Password for the database user account.</td>
</tr>
<tr>
<td>DB2_TABLESPACE</td>
<td>For IBM DB2. Name of the tablespace in which to create the tables. Specify a tablespace that meets the pageSize requirement of 32768 bytes.</td>
</tr>
<tr>
<td></td>
<td>In a single-partition database, if DB2_TABLESPACE is empty, the installer creates the tables in the default tablespace. In a multi-partition database, define the tablespace in the catalog partition of the database.</td>
</tr>
<tr>
<td>SQLSERVER_SCHEMA_NAME</td>
<td>For Microsoft SQL Server. Name of the schema that will contain domain configuration tables. If this parameter is empty, the installer creates the tables in the default schema.</td>
</tr>
<tr>
<td>TRUSTED_CONNECTION</td>
<td>For Microsoft SQL Server. Indicates whether to connect to Microsoft SQL Server through a trusted connection. If this parameter is empty, the installer uses Microsoft SQL Server authentication. Set this parameter only if you are installing on Windows.</td>
</tr>
<tr>
<td>Parameter Name</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>DB_CUSTOM_STRING_SELECTION</td>
<td>Determines whether to use a JDBC URL or a custom connection string to connect to the domain configuration repository database. If the value is 0, the installer creates a JDBC URL from the database properties you provide. If the value is 1, the installer uses the custom connection string you provide.</td>
</tr>
<tr>
<td>DB_SERVICENAME</td>
<td>Required if DB_CUSTOM_STRING_SELECTION=0. Service name for Oracle and IBM DB2 databases or database name for Microsoft SQL Server.</td>
</tr>
<tr>
<td>DB_ADDRESS</td>
<td>Required if DB_CUSTOM_STRING_SELECTION=0. Host name and port number for the database instance in the format HostName:Port.</td>
</tr>
<tr>
<td>ADVANCE_JDBC_PARAM</td>
<td>This parameter is obsolete. Do not set it.</td>
</tr>
<tr>
<td>DB_CUSTOMSTRING</td>
<td>Required if DB_CUSTOM_STRING_SELECTION=1. Valid custom JDBC connection string.</td>
</tr>
<tr>
<td>DOMAIN_HOST_NAME</td>
<td>Host name of the machine that hosts the node that you are upgrading. The node host name cannot contain the underscore (_) character. If the machine has a single network name, use the default host name. If the machine has multiple network names, you can modify the default host name to use an alternate network name. Optionally, you can use the IP address. Note: Do not use localhost. The host name must explicitly identify the machine.</td>
</tr>
<tr>
<td>DOMAIN_PORT</td>
<td>Port number for the node that you are upgrading.</td>
</tr>
<tr>
<td>GATEWAYNODE_HOST</td>
<td>Required if you upgrade a worker node. Host name of the machine that hosts the gateway node.</td>
</tr>
<tr>
<td>GATEWAYNODE_PORT</td>
<td>Required if you upgrade a worker node. Port number for the gateway node.</td>
</tr>
<tr>
<td>CUSTOM_KEYSTORE_FILE_UPGRADE</td>
<td>Path and file name of the custom keystore file. Enter the custom keystore file if you are securing the Informatica Administrator with a custom keystore file and you are upgrading to a different gateway node configuration. If you leave this field blank, the installer looks for the keystore file in the following directory: &lt;Informatica installation directory&gt;\tomcat\conf\</td>
</tr>
<tr>
<td>CUSTOM_KEYSTORE_PSSWD_UPGRADE</td>
<td>Plain text password for the custom keystore file. Enter the custom keystore password if you are securing the Informatica Administrator with a custom keystore file and you are upgrading to a different gateway node configuration.</td>
</tr>
<tr>
<td>ADVANCE_PORT_CONFIG</td>
<td>This parameter is obsolete. Do not set it.</td>
</tr>
</tbody>
</table>
### Parameter Name | Description
--- | ---
TOMCAT_PORT | This parameter is obsolete. Do not set it.
SERVER_PORT | You can set this parameter if ADVANCE_PORT_CONFIG=1. Port number that controls server shutdown for the domain Service Manager. The Service Manager listens for shutdown commands on this port.
AC_PORT | Port number used by the Administrator tool.
AC_SHUTDWN_PORT | Port number that controls server shutdown for the Administrator tool. The Administrator tool listens for shutdown commands on this port.
ENABLE_USAGE_COLLECTION | Enables Informatica DiscoveryIQ, a product usage tool that sends routine reports on data usage and system statistics to Informatica. Informatica DiscoveryIQ uploads data to Informatica 15 minutes after you install and configure Informatica domain. Thereafter, the domain sends the data every 30 days. You can choose to not send any usage statistics to Informatica. For more information on how to disable sending usage statistics, see Informatica Administrator Guide. You must set the value to 1 to upgrade.

4. On Windows, specify whether to run the Informatica service under the same user account as the account used for upgrade.

The following table describes the properties that you set:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>USE_LOGIN_DETAILS</td>
<td>Indicates whether to run the Windows service under a different user account. If the value is 0, the installer configures the service to run under the current user account. If the value is 1, the installer configures the service to run under a different user account.</td>
</tr>
<tr>
<td>WIN_USER_ID</td>
<td>User account with which to run the Informatica Windows service. Use the following format: DomainName\UserAccount This user account must have the Act as operating system permission.</td>
</tr>
<tr>
<td>WIN_USER_PSSWD</td>
<td>Password for the user account with which to run the Informatica Windows service.</td>
</tr>
</tbody>
</table>

5. Save the properties file with the name SilentInput.properties.
Running the Silent Installer

After you create the properties file, open a command prompt to start the silent upgrade.

1. Open a command prompt.
   On Windows, open the command prompt as administrator. If you do not open the command prompt as administrator, the Windows system administrator might encounter issues when accessing files in the Informatica installation directory.

2. Go to the root of the server installer directory.

3. Verify that the directory contains the file SilentInput.properties with the upgrade options.


The silent upgrade runs in the background. The process can take a while. The silent upgrade process is complete when the Informatica_<Version>_Services_InstallLog.log is created in the installation directory.

The silent upgrade fails if you incorrectly configure the properties file or if the installation directory is not accessible. If the upgrade fails, view the silent upgrade log file and correct the errors. Then run the silent installer again. The silent upgrade log file name is silentErrorLog.log. The installer creates it in the root directory on Windows and in the user home directory on UNIX.

Secure the Passwords in the Properties File

After you run the silent upgrade, ensure that passwords in the properties file are kept secure.

When you configure the properties file for a silent upgrade, you enter passwords in plain text. After you run the silent upgrade, use one of the following methods to secure the passwords:

- Remove the passwords from the properties file.
- Delete the properties file.
- Store the properties file in a secure location.

Troubleshooting the Domain Upgrade

If the upgrade does not complete successfully, review log files to determine the cause of the failure. The upgrade log files are in the root of the directory where the new version of Informatica is installed. Review the following log file: Informatica_<Version>_Services_Upgrade.log.

If the upgrade fails, restore the domain configuration repository database from the backup and run the installer again.

If the Administrator tool is configured for secure communication, you might receive a 404 Not Found message when you access the Administrator tool. This issue occurs when the machine that runs the gateway node cannot access the keystore file used for the HTTPS connection to the Administrator tool. Copy the file to an accessible location, and then shut down the domain. Run the infasetup UpdateGatewayNode command to update the gateway node with the location of the keystore file. You must run the command on each gateway node in the domain.
Before You Upgrade the Application Services

This chapter includes the following topics:

- Configure POSIX Asynchronous I/O, 75
- Configure Informatica Environment Variables, 75
- Configure Locale Environment Variables, 76
- Verify the Keystore File Location for the Administrator Tool, 76
- Clear Browser Cache, 77
- Complete Changing the Node Configuration, 77

Configure POSIX Asynchronous I/O

If you install Informatica on IBM AIX, make POSIX Asynchronous I/O available on any node where you want to run a PowerCenter Integration Service. A PowerCenter Integration Service running on an IBM AIX machine can fail to start if POSIX Asynchronous I/O is not available.

Configure Informatica Environment Variables

You can configure the INFA_DOMAINS_FILE and INFA_HOME environment variables to store the domain and installation location settings.

**INFA_DOMAINS_FILE**

The installer creates a domains.infa file in the Informatica installation directory. The domains.infa file contains the connectivity information for the gateway nodes in a domain, including the domain names, domain host names, and domain host port numbers.

Set the value of the INFA_DOMAINS_FILE variable to the path and file name of the domains.infa file.

Configure the INFA_DOMAINS_FILE variable on the machine where you install the Informatica services. On Windows, configure INFA_DOMAINS_FILE as a system variable.
INFA_HOME

Use INFA_HOME to designate the Informatica installation directory. If you modify the Informatica
directory structure, you need to set the environment variable to the location of the Informatica installation
directory or the directory where the installed Informatica files are located.

For example, you use a softlink in UNIX for any of the Informatica directories. To configure INFA_HOME
so that any Informatica application or service can locate the other Informatica components it needs to
run, set INFA_HOME to the location of the Informatica installation directory.

Configure Locale Environment Variables

Use LANG, LC_CTYPE, or LC_ALL to set the UNIX code page.

Different UNIX operating systems require different values for the same locale. The value for the locale
variable is case sensitive.

Use the following command to verify that the value for the locale environment variable is compatible with the
language settings for the machine and the type of code page you want to use for the repository:

```
locale -a
```

The command returns the languages installed on the UNIX operating system and the existing locale settings.

Locale on Linux

All UNIX operating systems except Linux have a unique value for each locale. Linux allows different
values to represent the same locale. For example, “utf8,” “UTF-8,” “UTF8,” and “utf-8” represent the
same locale on a Linux machine. Informatica requires that you use a specific value for each locale on a
Linux machine. Make sure that you set the LANG environment variable appropriately for all Linux
machines.

Locale for Oracle database clients

For Oracle database clients, set NLS_LANG to the locale you want the database client and server to use
with the login. A locale setting consists of the language, territory, and character set. The value of
NLS_LANG depends on the configuration. For example, if the value is american_america.UTF8, set the
variable in a C shell with the following command:

```
setenv NLS_LANG american_america.UTF8
```

Verify the Keystore File Location for the Administrator Tool

If you used a keystore file that you created to secure the connection to the Administrator tool, you must verify
the keystore file location before you access the Administrator tool. The upgrade process does not update this
location.

If you used the default keystore file generated by the installer in the previous domain, you do not need to
verify the keystore file location.

The tasks that you must perform depend on the following locations where you previously stored the keystore
file:
A location inside the previous Informatica installation directory structure

If you stored the keystore file in a location inside the previous Informatica installation directory structure, perform the following steps:

1. Copy the file to another location.
2. Update the gateway node with the copied keystore file location.
   Run the infasetup UpdateGatewayNode command to update the gateway node with the location of the keystore file. You must run the command on each gateway node in the domain.

A location outside the previous Informatica installation directory structure

If you stored the keystore file in a location outside the previous Informatica installation directory structure, verify that the machine that runs the gateway node can access the file.

Clear Browser Cache

Before you access the Administrator tool, clear the browser cache.

On Windows Internet Explorer, delete the browsing history, including temporary files, cookies, and history.

If you do not clear the browser cache, the previous Administrator tool URL is not redirected to the latest URL and some menu options may not appear.

Complete Changing the Node Configuration

If you chose to change the node configuration during the domain upgrade because you migrated the Informatica services installation to a different machine, you must perform additional tasks before you upgrade the application services.

Note: If you chose to change the node configuration during the domain upgrade because you migrated the domain configuration repository to a different database, you do not need to perform additional tasks.

You must perform the following additional tasks:

1. Configure the environment variables.
2. Verify the range of dynamic port numbers.
3. Verify the location of the node backup directory.

Configure Environment Variables

Informatica uses environment variables to store configuration information when it runs the application services and connects to the clients. Configure the environment variables to meet the Informatica requirements. Incorrectly configured environment variables can cause the Informatica domain or nodes to fail to start or can cause connection problems between the Informatica clients and the domain.

To configure environment variables on UNIX, log in with the system user account you used to install Informatica.
Configure Library Path Environment Variables on UNIX

Configure library path environment variables on the machines that run the Data Integration Service, PowerCenter Integration Service, and PowerCenter Repository Service processes. The variable name and requirements depend on the platform and database.

Solaris and Linux

Configure the LD_LIBRARY_PATH environment variable.

The following table describes the values that you set for the LD_LIBRARY_PATH for the different databases:

<table>
<thead>
<tr>
<th>Database</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle</td>
<td><code>&lt;DatabasePath&gt;/lib</code></td>
</tr>
<tr>
<td>IBM DB2</td>
<td><code>&lt;DatabasePath&gt;/lib</code></td>
</tr>
<tr>
<td>Sybase ASE</td>
<td>&quot;${SYBASE_OCS}/lib:${SYBASE_ASE}/lib:${LD_LIBRARY_PATH}&quot;</td>
</tr>
<tr>
<td>Informix</td>
<td><code>&lt;DatabasePath&gt;/lib</code></td>
</tr>
<tr>
<td>Teradata</td>
<td><code>&lt;DatabasePath&gt;/lib</code></td>
</tr>
<tr>
<td>ODBC</td>
<td><code>&lt;CLOSEDODBCHOME&gt;/lib</code></td>
</tr>
</tbody>
</table>

AIX

Configure the LIBPATH environment variable for the following Java-based components and databases:

Java component variables

The PowerCenter Integration Service requires the Java Runtime Environment libraries to process the following Java-based components:

- Custom transformations that use Java
- Java transformations

Configure the library path environment variable to point to the installed Java directory on machines where the PowerCenter Integration Service process runs. Configure the LIBPATH environment variable with the following values:

- `JAVA_HOME/java/jre/bin`
- `JAVA_HOME/java/jre/bin/classic`
- `JAVA_HOME/usr/lib:/lib`
The following table describes the values that you set for the LIBPATH environment variable for the different databases:

<table>
<thead>
<tr>
<th>Database</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle</td>
<td><code>&lt;DatabasePath&gt;/lib</code></td>
</tr>
<tr>
<td>IBM DB2</td>
<td><code>&lt;DatabasePath&gt;/lib</code></td>
</tr>
<tr>
<td>Sybase ASE</td>
<td>“${SYBASE_OCS}/lib:${SYBASE_ASE}/lib:${LIBPATH}”</td>
</tr>
<tr>
<td>Informix</td>
<td><code>&lt;DatabasePath&gt;/lib</code></td>
</tr>
<tr>
<td>Teradata</td>
<td><code>&lt;DatabasePath&gt;/lib</code></td>
</tr>
<tr>
<td>ODBC</td>
<td><code>&lt;CLOSEDODBCHOME&gt;/lib</code></td>
</tr>
</tbody>
</table>

**HP-UX**

Configure the SHLIB_PATH environment variable for the following Java-based components and databases:

**Java component variables**

The PowerCenter Integration Service requires the Java Runtime Environment libraries to process the following Java-based components:

- Custom transformations that use Java
- Java transformations

Configure the library path environment variable to point to the installed Java directory on machines where the PowerCenter Integration Service process runs. Configure the SHLIB_PATH environment variable with the following values:

- `JAVA_HOME/java/jre/lib/IA64W/jli`
- `JAVA_HOME/java/jre/lib/IA64W`

**Databases**

The following table describes the values that you set for the SHLIB_PATH environment variable for the different databases:

<table>
<thead>
<tr>
<th>Database</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle</td>
<td><code>&lt;DatabasePath&gt;/lib</code></td>
</tr>
<tr>
<td>IBM DB2</td>
<td><code>&lt;DatabasePath&gt;/lib</code></td>
</tr>
<tr>
<td>Sybase ASE</td>
<td>“${SYBASE_OCS}/lib:${SYBASE_ASE}/lib:${SHLIB_PATH}”</td>
</tr>
<tr>
<td>Informix</td>
<td><code>&lt;DatabasePath&gt;/lib</code></td>
</tr>
<tr>
<td>Teradata</td>
<td><code>&lt;DatabasePath&gt;/lib</code></td>
</tr>
<tr>
<td>ODBC</td>
<td><code>&lt;CLOSEDODBCHOME&gt;/lib</code></td>
</tr>
</tbody>
</table>
Verify the Range of Dynamic Port Numbers

When you upgrade a migrated node, the upgrade wizard assigns a default range of port numbers that can be dynamically assigned to application service processes that run on the node.

The default range of dynamic port numbers is 6013 to 6113. Verify that the default range of port numbers are available on the machine that runs the new version of Informatica. If the range of port numbers are not available, use the Administrator tool to update the range. Configure the minimum and maximum dynamic port numbers for service processes in the Advanced Properties section of the node Properties view.

Verify the Node Backup Directory

Verify that the backup directory for the node is accessible by the machine that runs the new version of Informatica. In the Administrator tool, view the Backup Directory property in the Advanced Properties section of the node Properties view.

Configure PowerExchange Adapters

If your previous installation included PowerExchange adapters, configure the PowerExchange adapters on the machine that runs the new version of Informatica. If the PowerExchange adapter has an installer, re-install the PowerExchange adapter.

<table>
<thead>
<tr>
<th>Database</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teradata</td>
<td><code>&lt;DatabasePath&gt;/lib</code></td>
</tr>
<tr>
<td>ODBC</td>
<td><code>&lt;CLOSEDODBCHOME&gt;/lib</code></td>
</tr>
</tbody>
</table>
This chapter includes the following topics:

- Application Service Upgrade Overview, 81
- Service Upgrade Wizard, 83
- Verify the Model Repository Service Upgrade, 84

Application Service Upgrade Overview

The Informatica services version that you upgrade from determines the application service upgrade process. Some Informatica services versions require that you upgrade the application services. When you upgrade an application service, you must also upgrade the dependent services. When you upgrade an application service, the upgrade process upgrades the database contents of the databases associated with the service.

Use the service upgrade wizard, the actions menu of each service, or the command line to upgrade application services. The service upgrade wizard upgrades multiple services in the appropriate order and checks for dependencies. If you use the actions menu of each service or the command line to upgrade application services, you must upgrade the application services in the correct order and verify that you upgrade dependent services.

The privileges required to upgrade application services depend on the service. After you upgrade an application service, you must restart the service. After you upgrade the Model Repository Service, check the log to verify that the upgrade completed successfully.

Privileges to Upgrade Services

The privileges required to upgrade application services depend on the application service. A user with the Administrator role on the domain can access the service upgrade wizard. A user must have these roles, privileges, and permissions to upgrade the following application services:

**Model Repository Service**

To upgrade the Model Repository Service using the service upgrade wizard, a user must have the following credentials:

- Administrator role on the domain.
• Create, Edit, and Delete Projects privilege for the Model Repository Service and write permission on projects.

To upgrade the Model Repository Service from the Actions menu or from the command line, a user must have the following credentials:

• Manage Services privilege for the domain and permission on the Model Repository Service.
• Create, Edit, and Delete Projects privilege for the Model Repository Service and write permission on projects.

**Data Integration Service**

To upgrade the Data Integration Service, a user must have the Administrator role on the Data Integration Service.

**Content Management Service**

To upgrade the Content Management Service, a user must have the Administrator role on the Content Management Service.

**PowerCenter Repository Service**

To upgrade the PowerCenter Repository Service, a user must have the Manage Services privilege for the domain and permission on the PowerCenter Repository Service.

**Metadata Manager Service**

To upgrade the Metadata Manager Service, a user must have the Manage Services privilege for the domain and permission on the Metadata Manager Service.

---

**Service Upgrade from Version 9.1.0**

When you upgrade from version 9.1.0, some application services require an upgrade. Upgrade the application services that you used in version 9.1.0.

Before you upgrade, verify that the Metadata Manager Service is disabled. Verify that all other application services are enabled.

To upgrade application services, upgrade the following services and associated databases in this order:

1. Model Repository Service
2. Data Integration Service
3. Profiling warehouse for the Data Integration Service
4. Content Management Service
5. PowerCenter Repository Service
6. Metadata Manager Service

**Note:** When you upgrade the Data Integration Service, the upgrade process upgrades the core service. When you upgrade all other application services, the upgrade process upgrades the database contents of the databases associated with the service.
Service Upgrade Wizard

Use the service upgrade wizard to upgrade application services and the database contents of the databases associated with the services.

The service upgrade wizard provides the following options:

- Upgrade multiple application services and associated databases.
- Enable application services before the upgrade.
  
  **Note:** The Metadata Manager Service must be disabled before the upgrade. All other services must be enabled before the upgrade.
- Display upgraded services in a list along with services and associated databases that require an upgrade.
- Save the current or previous upgrade report.
- Automatically restart the application services after they have been upgraded.

You can access the service upgrade wizard from the Manage menu in the header area.

Upgrade Report

The upgrade report contains the upgrade start time, upgrade end time, upgrade status, and upgrade processing details. The service upgrade wizard generates the upgrade report.

To save the upgrade report, choose one of the following options:

- **Save Report**

  The **Save Report** option appears on step 4 of the service upgrade wizard.

- **Save Previous Report**

  The second time you run the service upgrade wizard, the **Save Previous Report** option appears on step 1 of the service upgrade wizard. If you did not save the upgrade report after upgrading services, you can select this option to view or save the previous upgrade report.

Running the Service Upgrade Wizard

Use the service upgrade wizard to upgrade application services and the database contents of the databases associated with the services.

1. In the Informatica Administrator header area click **Manage > Upgrade**.
2. Select the application services and associated databases to upgrade.
3. Optionally, specify if you want to **Automatically recycle services after upgrade**.

   If you choose to automatically recycle application services after the upgrade, the upgrade wizard restarts the services after they have been upgraded.
4. Click **Next**.
5. If dependency errors exist, the **Dependency Errors** dialog box appears. Review the dependency errors and click **OK**. Then, resolve dependency errors and click **Next**.
6. Enter the repository login information.
7. Click **Next**.

   The service upgrade wizard upgrades each application service and associated database and displays the status and processing details.
8. When the upgrade completes, the **Summary** section displays the list of application services and their upgrade status. Click each service to view the upgrade details in the **Service Details** section.

9. Optionally, click **Save Report** to save the upgrade details to a file.

   If you choose not to save the report, you can click **Save Previous Report** the next time you launch the service upgrade wizard.

10. Click **Close**.

11. If you did not choose to automatically recycle application services after the upgrade, restart the upgraded services.

---

### Verify the Model Repository Service Upgrade

After you upgrade the Model Repository Service, check the log to verify that the upgrade completed successfully.

When you upgrade a Model Repository Service, the upgrade process performs the following steps:

1. Upgrades the contents of the Model repository.
2. Rebuilds the object dependency graph so that you can view object dependencies after the upgrade.

   If the upgrade process encounters a fatal error while upgrading the Model repository contents, then the upgrade of the service fails. The Administrator tool or the command line program informs you that you must perform the upgrade again.

   If the upgrade process encounters a fatal error while rebuilding the object dependency graph, then the upgrade of the service succeeds. However, the rebuilding of the object dependency graph might have failed. You cannot view object dependencies in the Developer tool until you rebuild the object dependency graph.

After you upgrade the Model Repository Service, verify that the Model Repository Service log includes the following message:

```
MRS_50431 "Finished rebuilding the object dependency graph for project group '<project group>'.'
```

If the message does not exist in the log, run the infacmd mrs rebuildDependencyGraph command to rebuild the object dependency graph. Users must not access Model repository objects until the rebuild process completes, or the object dependency graph might not be accurate. You might want to run the command when users are not logged in.
Informatica Client Upgrade

This chapter includes the following topics:

- Informatica Client Upgrade Overview, 85
- Informatica Client Upgrade Options, 86
- Upgrading in Graphical Mode, 86
- Upgrading in Silent Mode, 87

Informatica Client Upgrade Overview

Use the client installer to upgrade a previous version of the Informatica client tools. The Informatica client tools are installed on the installation directory you specify. The client installer configures the newly installed client tools with the same settings as the previous version. The client installer does not modify the files of the previous version of the client tools.

Complete the pre-upgrade tasks before you start the upgrade. Run the installer on all machines that host previous versions of the Informatica client tools that you want to upgrade. You can upgrade the Informatica clients in graphical or silent mode.

When you run the client installer, you can select the following Informatica client tools to upgrade:

**Informatica Developer**

Informatica Developer is a client application that you use to create and run mappings, data objects, and virtual databases. Objects created in Informatica Developer are stored in a Model repository and are run by a Data Integration Service. If you upgrade Informatica Developer, verify that the Informatica version, including the hotfix version, matches the version of the domain upgrade.

**PowerCenter Client tools**

The PowerCenter Client is a set of tools you can use to manage the PowerCenter repository, mappings, and sessions. The client upgrade also upgrades the following client tools:

- Custom Metadata Configurator
- Mapping Architect for Visio
- Mapping Analyst for Excel

By default, the when you upgrade the Informatica client tools, the following components are also upgraded:

- DataDirect ODBC drivers
- Java Runtime Environment libraries
You can perform the upgrade from a DVD or from the root of the directory where you download the installation files.

On Windows, the length of the entire installation directory path, including the zip file name, must be 60 characters or less. Verify that the zip utility version is compatible with the Windows operating system version. When you unzip the file, verify that the zip utility also extracts empty folders.

Informatica Client Upgrade Options

You can upgrade the Informatica client tools in one of the following ways:

- Upgrade in Graphical Mode. Upgrades the Informatica client tools in graphical mode. The installer guides you through the upgrade process.
- Upgrade in Silent Mode. Upgrades the Informatica client tools using a properties file that contains the upgrade options.

Upgrading in Graphical Mode

If you encounter problems when you run the install.bat file from the root directory, run the following file:

`<Informatica installation directory>\client\install.exe`

1. Close all applications.
2. Run install.bat from the root directory.
3. On the Installation Type page, select Upgrade to Informatica 9.6.1 Clients and click Next.
4. On the Upgrade Pre-Requisites page, verify the system requirements before you continue the installation and click Next.
5. On the Select Client Tool Selection page, select the Informatica client you want to upgrade.
   You can upgrade the following Informatica client applications:
   - Informatica Developer
   - PowerCenter Client
   - Data Transformation
   If you have Data Transformation 9.1.0 installed, upgrading Informatica Developer also upgrades Data Transformation Studio. If you do not have Data Transformation installed, upgrading Informatica Developer installs Data Transformation Studio.
6. Click Next.
7. On the Select Directory page, enter the directory of the Informatica version you want to upgrade and the directory in which you want to install Informatica 9.6.1.
The following table describes the directories you must specify:

<table>
<thead>
<tr>
<th>Directory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directory of the Informatica client to upgrade</td>
<td>Directory that contains the previous version of the Informatica client tool that you want to upgrade.</td>
</tr>
<tr>
<td>Directory for the Informatica 9.6.1 client tools</td>
<td>Directory in which to install the Informatica 9.6.1 client tools. Enter the absolute path for the installation directory. The installation directory must be on the current machine. The directory names in the path must not contain spaces or the following special characters: @! $ # % ( ) { } [ ] , ; '</td>
</tr>
</tbody>
</table>

**Note:** Informatica recommends using alphanumeric characters in the installation directory path. If you use a special character such as á or €, unexpected results might occur at run time.

8. Click **Next**.
9. On the **Pre-Installation Summary** page, review the installation information and click **Install**.
   The installer copies the Informatica client files to the installation directory.
10. On the **Post-installation Summary** page, verify whether the upgrade completed successfully and click **Done** to close the installer.
11. After you complete an upgrade of Informatica Developer, log off the Windows machine and then log back on to complete the system configurations.
   You can view the installation log files to get more information about the upgrade tasks performed by the installer.

### Upgrading in Silent Mode

To upgrade the Informatica client tools without user interaction, upgrade in silent mode. Use a properties file to specify the upgrade options. The installer reads the file to determine the upgrade options. You can use silent mode upgrade to upgrade the Informatica client tools on multiple machines on the network or to standardize the upgrade process across machines.

Copy the Informatica installation files to the hard disk on the machine that hosts the Informatica client you plan to upgrade.

To upgrade in silent mode, complete the following tasks:

1. Create the upgrade properties file and specify the upgrade options.
2. Run the installer with the upgrade properties file.

### Creating the Properties File

Informatica provides a sample properties file that includes the upgrade parameters that are required by the installer. You can customize the sample properties file to specify the options for your upgrade.

The sample properties file is named SilentInput.properties and is located in the root of the client installer directory.

1. Go to the root of the directory that contains the client installation files.
2. Locate the file named SilentInput.properties. 
   Back up the file before you modify it.
3. Use a text editor to open the file and modify the values of the upgrade parameters. 
   The following table describes the upgrade parameters you can modify:

<table>
<thead>
<tr>
<th>Property Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>INSTALL_TYPE</td>
<td>Indicates whether to install or upgrade the Informatica client tools. To upgrade from a previous version of Informatica, set the value to 1.</td>
</tr>
<tr>
<td>USER_INSTALL_DIR</td>
<td>Directory in which to install the new version of the Informatica client tools.</td>
</tr>
<tr>
<td>UPG_BACKUP_DIR</td>
<td>Directory of the previous version of the Informatica tools that you want to upgrade.</td>
</tr>
<tr>
<td>DXT_COMP</td>
<td>Indicates whether to install Informatica Developer. If the value is 1, the Developer tool will be installed. If the value is 0, the Developer tool will not be installed. Default is 1.</td>
</tr>
<tr>
<td>CLIENT_COMP</td>
<td>Indicates whether to install the PowerCenter Client. If the value is 1, the PowerCenter Client will be installed. If the value is 0, the PowerCenter Client will not be installed. Default is 1.</td>
</tr>
<tr>
<td>DT_COMP</td>
<td>Indicates whether to install Data Transformation Studio. If the value is 1, Data Transformation Studio will be installed. If the value is 0, Data Transformation Studio will not be installed. If DXT_COMP=1, set this parameter to 1.</td>
</tr>
<tr>
<td>NEW_ECLIPSE_SELECTION</td>
<td>You can set this parameter if DT_COMP=1. Indicates whether to install the copy of Eclipse that is bundled with the installer or use an Eclipse development environment that is already installed on your machine. If the value is 0, the installer uses the Eclipse development environment that is already installed on your machine. Set the ECLIPSE_LOCATION property. If the value is 1, the setup installs the copy of Eclipse that is bundled with the installer. Default is 1.</td>
</tr>
<tr>
<td>ECLIPSE_LOCATION</td>
<td>Required if NEW_ECLIPSE_SELECTION=0. Absolute path of the existing eclipse.exe file.</td>
</tr>
</tbody>
</table>

4. Save the properties file.

**Running the Silent Installer**

After you create the properties file, open a command prompt to start the silent upgrade.
1. Open a command prompt.
2. Go to root of the client installer directory.
3. Verify that the directory contains the file SilentInput.properties with the upgrade options.
4. To start the silent upgrade process, run silentInstall.bat.  
The silent upgrade runs in the background. The process can take a while. The silent upgrade process is complete when the Informatica_<Version>_Client_InstallLog.log is created in the installation directory.  
The silent upgrade fails if you incorrectly configure the properties file or if the installation directory is not accessible. If the upgrade fails, view the installation log files and correct the errors. Then run the silent installer again.

5. After you complete an upgrade of Informatica Developer, log off the Windows machine and then log back on to complete the system configurations.
This chapter includes the following topics:

- Informatica Domain, 90
- Secure Client Connections to the Domain, 91
- PowerCenter Integration Service, 92
- PowerCenter Data Masking, 92
- Content Management Service, 93
- Data Integration Service, 95
- Analyst Service, 96
- Search Service, 97
- Metadata Manager Agent, 97
- Metadata Manager Service, 98
- Reporting and Dashboards Service, 102
- Informatica Developer, 102
- Reference Data, 103
- Exception Record Management, 103
- Profiles, 104
- Upgrade the Informatica Drivers for SQL Data Services, 104
- User Authentication, 104
- Read the Release Guide, 105
- Update ODBC Data Sources, 105
- Copy the Data Transformation Files, 105

Informatica Domain

After you upgrade, complete the post-upgrade tasks for the domain.

Update the Log Events Directory

After you upgrade, you might want to update the log events directory for the domain.

The default value of the log events directory after an upgrade depends on the following upgrade types:
Upgrade the domain without changes to the node configuration.

The log events directory points to the location that you specified in the previous version.

Upgrade the domain with changes to the node configuration.

The log events directory points to the `isp/logs` directory in the new installation directory.

To use a different directory for the logs, update the Log Directory Path property for the domain in the Administrator tool. You can also use the `infasetup updateGatewaynode` command to update the directory. For example, you can configure the log events directory as the `server/infa_shared/logs` directory in the new installation directory.

Update ODBC Data Sources

The Informatica installation includes DataDirect 7.1 ODBC drivers. Re-create each ODBC data source to use the new drivers if you upgrade from Informatica 9.5.1 or earlier versions.

Configure a Secure Database

After you upgrade, you can optionally configure the domain configuration repository on a database that is secured with the SSL protocol. You configure a secure domain configuration repository database from the command line.

The SSL protocol uses SSL certificates stored in a truststore file. Access to the secure database requires a truststore that contains the certificates for the database. You can use a secure domain configuration repository database only if you enable secure communication for the domain.

For more information about configuring a secure domain configuration repository database, see the Informatica Security Guide.

Secure Client Connections to the Domain

If you enabled secure communication between client applications and the Informatica domain, you must verify the keystore file locations after you upgrade. The upgrade process does not update these locations.

**Note:** If you used RSA encryption with fewer than 512 bits to create the private key and SSL certificate, you must create new SSL certificate files. Due to the FREAK vulnerability, Informatica does not support RSA encryption with fewer than 512 bits.

You can enable secure communication between the domain and the following types of clients:

**Informatica web client applications**

You use Informatica web client applications to access services in the domain. To enable secure communication from the browser to the application service, you configure a secure HTTPS connection.

You can configure security for the browser for the following Informatica web applications:

- Analyst tool
- Data Analyzer
- Metadata Manager
- Web Services Hub Console
Web service clients

You can use a web service client such as an external application or a Web Service Consumer transformation to access the Data Integration Service. To enable secure communication between a web service client and the Data Integration Service, you configure a secure HTTPS connection.

When you configure a secure connection between a client application and a service, you specify the keystore file that contains the keys and certificates for the secure HTTPS connection. After you upgrade, you must verify the keystore file locations.

The tasks that you must perform depend on the following locations where you previously stored the keystore files:

A location inside the previous Informatica installation directory structure

If you stored the keystore file in a location inside the previous Informatica installation directory structure, perform the following steps:

1. Copy the file to another location.
2. Update the application service with the copied keystore file location.

   Use the Administrator tool to update the location of the keystore file for the appropriate application service. For example, if the keystore file is used for Analyst tool security, update the keystore file location in the Analyst Service properties.

A location outside the previous Informatica installation directory structure

If you stored the keystore file in a location outside the previous Informatica installation directory structure, verify that the machine that runs the application service can access the file.

PowerCenter Integration Service

After you upgrade, complete the post-upgrade task for the PowerCenter Integration Service.

Configure Umask for Operating System Profiles

If you upgraded from a version that used operating system profiles, set the umask setting to change the security on files that the DTM writes.

For example, you can change umask to 077 for maximum security. You must restart Informatica services if you change the umask setting.

PowerCenter Data Masking

After you upgrade, complete the post-upgrade tasks for PowerCenter Data Masking.
Upgrade Storage Table for Repeatable Data Masking

If you use an IDM_SUBSTITUTION_STORAGE table for repeatable data masking, you need to run a script to upgrade the storage table.

Run the `Substitution_Upgrade_<database>.sql` script for Oracle, IBM DB2, Sybase, or Microsoft SQL Server. You can find the upgrade scripts in the following directory:

\<Informatica installation directory>\clients\PowerCenterClient\client\bin\Extensions\DataMasking

Modify the Storage Table for the Bigint Datatype in Serial Number Columns

If you use a serial number column (SNO) with a bigint datatype for substitution data masking, you need to run a script to alter the storage table.

**Note:** If the database is Oracle, you do not need to run the script.

Run the `Substitution_Alter_<database>.sql` script for IBM DB2, Sybase, or Microsoft SQL Server. You can find the alter scripts in the following directory:

\<Informatica installation directory>\clients\PowerCenterClient\client\bin\Extensions\DataMasking

Content Management Service

After you upgrade, verify the reference data configuration options on each Content Management Service in the domain.

Verify the Location of the Identity Population Files

If you install identity population data files, verify that the Informatica services that run mappings and sessions can find the files.

**Identity Population Files in Data Quality**

The Data Integration Service reads the path to the population files from the the **Identity Properties** options on the Content Management Service. Earlier versions of Data Quality store the file location in the SSAPR environment variable.

When you upgrade, the upgrade process reads the environment variable and updates the Content Management Service with the path from the variable.

If the upgrade process does not find the SSAPR environment variable, the Content Management Service uses the following default location for the files:

\<Informatica installation directory>/services/DQContent/INFA_Content/identity

**Identity Population Files in PowerCenter**

The PowerCenter Integration Service can reads the file location from the IDQTx.cfg configuration file or from the SSAPR environment variable.

When you upgrade, the PowerCenter installer writes an empty IDQTx.cfg file to the following directory:
The installed IDQTx.cfg does not specify a location for the identity population data files. If you do not set a file location, the PowerCenter Integration Service looks for the SSAPR environment variable.

**Note:** If the installer finds an IDQTx.cfg file in the server/bin directory, it renames the file with the following name:

IDQTx.cfg.bak.

To maintain the identity population data configuration that you defined before you upgraded, merge the contents of the backup file and the upgrade file.

**Verify the Reference Data Warehouse**

The reference data warehouse stores the data values for reference table objects that you define in a Model repository. You configure a Content Management Service to identify the reference data warehouse.

Earlier versions of Data Quality stored reference table data values in the staging database that you defined on the Analyst Service. The upgrade process uses the staging database as the default reference data warehouse. The upgrade process transfers the staging database connection from the Analyst Service to the Content Management Service.

After you upgrade, verify the database connection in the Associated services and reference data location properties on the Content Management Service. To change the reference data warehouse, update the connection name. If you change the connection name, restart the Content Management Service and the Analyst Service.

**Note:** You associate a reference data warehouse with a single Model repository. You can select the same reference data warehouse on multiple Content Management Services if the Content Management Services identify a common Model repository.

**Set Privileges and Roles for Reference Table Data**

To enable users and groups to create and edit reference tables in the reference data warehouse, set roles and privileges on the Content Management Service.

Use the Security tab options on the Administrator tool to set the roles and privileges.

Assign the following Content Management Service privileges to users and groups who create or update reference tables:

- Create reference table data. The user or group can create a reference table.
- Edit reference table data. The user or group can edit or delete reference table data.
- Edit reference table metadata. The user or group can edit or delete reference table metadata.

**Note:** When you create a Content Management Service, you specify the user credentials that the Content Management Service uses to communicate with the Model Repository Service. To perform reference table management tasks in the Model repository, the user that you specify must have the Model Repository Service Administrator role. The reference table management tasks include purge operations on orphaned reference tables.
**Restart Services**

The Content Management Service interacts with other services to manage reference data.

Restart the Content Management Service after you upgrade. You can manually restart the service, or you can restart services automatically when you run the service upgrade wizard. If you update a property on the Content Management Service, restart any service that uses the property that you updated.

Restart the Analyst Service if you update the following property:

- Reference data warehouse name

Restart the Data Integration Service if you update a property for the following types of reference data:

- Address reference data
- Identity population data
- Classifier model data
- Probabilistic model data

**Data Integration Service**

After you upgrade, complete the post-upgrade tasks for each Data Integration Service.

**Reset the HTTP Proxy Server Password**

If the Data Integration Service runs Web Service Consumer transformations and is configured to use an HTTP proxy server with authentication, reset the HTTP proxy server password.

If you do not reset the password, then the Data Integration Service cannot successfully process Web Service Consumer transformations.

Reset the HTTP Proxy Server Password for the Data Integration Service in the Administrator tool.

**Enable Jobs to Run in Separate Processes**

The Launch Jobs as Separate Processes property for an upgraded Data Integration Service is disabled by default. Enable the property to increase stability of the Data Integration Service and to isolate batch jobs.

When the property is disabled, the Data Integration Service runs all jobs in one operating system process, the Data Integration Service process. Disable the property when the Data Integration Service runs SQL data service and web service jobs. SQL data service and web service jobs typically achieve better performance when the Data Integration Service runs jobs in one operating system process.

When the property is enabled, the Data Integration Service runs jobs in separate operating system processes. Stability increases because an unexpected interruption to one job does not affect all other jobs. Enable the property when the Data Integration Service runs mapping, preview, profile, or workflow jobs.

Enable the Launch Jobs as Separate Processes property for the Data Integration Service in the Administrator tool.

**Note:** If the Data Integration Service runs on UNIX and you enable this option, verify that the host file on the node that runs the Data Integration Service contains a localhost entry. Otherwise, jobs that run in separate operating system processes fail.
Analyst Service

After you upgrade, complete the post-upgrade tasks for each Analyst Service.

Verify the Flat File Cache Location

You must verify the location of the flat file cache directory after you upgrade. The upgrade process does not update this location.

If you created the flat file cache directory within the previous Informatica installation directory, copy the directory to the upgraded Informatica installation directory and update the Analyst Service property with the new location. If you created the directory outside of the previous Informatica installation directory, verify that the machine that runs the Analyst Service can access the directory.

To verify the location of the flat file cache directory, view the Flat File Cache Location property in the runtime properties for the Analyst Service.

Verify the Human Task Properties

If you expect to run workflows that contain Human tasks, associate an Analyst Service with the Data Integration Service that runs the Human tasks. Use the Human task properties on the Analyst Service to identify the Data Integration Service. You can log in to the Analyst Service URL to work on the records that the Human tasks specify.

Consider the following rules and guidelines when you verify the Human task properties:

- Select a Data Integration Service that you configure to run Human tasks. If the Data Integration Service that you select is not configured to run Human tasks, select a different Data Integration Service. If the Analyst tool users for the current Analyst Service do not work on Human task records, do not configure the option.
- An Analyst Service uses run-time properties to identify the Data Integration Service that runs profiles and performs other run-time operations. If you do not configure the run-time properties, do not associate the Analyst Service with a Model Repository Service. Verify that the Model Repository Service in the domain associates with a single Analyst Service.

Assign Privileges

If there is an Analyst Service in the Informatica domain, you must grant a Model Repository Service privilege to users. You might need to grant Analyst Service privileges based on the tasks that users need to perform in the Analyst tool.

Grant the following Model Repository Service privilege to users:
- Access Analyst

Grant the following Analyst Service privileges to users:
- Access Mapping Specifications
- Load Mapping Specification Results
- Workspace Access
- Manage Glossaries
- Design Workspace
Recycle the Analyst Service

To access the Analyst tool after you upgrade, recycle the Analyst Service. Before you recycle the Analyst Service, complete the upgrade and post-upgrade steps for the Model Repository Service and Data Integration Service. After you recycle the Analyst Service, wait for at least 10 minutes before you access the Glossary workspace.

Before you recycle the Analyst Service, verify that you have performed the following tasks:

- Upgrade the Model Repository Service.
- Upgrade the Data Integration Service.

**Note:** The Model Repository Service and the Data Integration Service must be running before you recycle the Analyst Service.

Search Service

To perform searches in the Analyst tool and Business Glossary Desktop after you upgrade, create the Search Service in the Informatica domain. Before you create the Search Service, complete the upgrade and post-upgrade steps for the Model Repository Service, Data Integration Service, and Analyst Service.

Before you create and enable the Search Service, verify that you have performed the following tasks:

- Upgrade the Model Repository Service.
- Upgrade the Data Integration Service.
- Recycle the Analyst Service.

**Note:** The Model Repository Service, Data Integration Service, and Analyst Service must be running before you enable the Search Service.

Metadata Manager Agent

After you upgrade, you must uninstall and reinstall each Metadata Manager Agent so that Metadata Manager can extract metadata from the metadata sources. Install the latest version of the Metadata Manager Agent before you migrate resources.

1. Stop the Metadata Manager Agent.
2. Reinstall the Metadata Manager Agent.

For information about installing the Metadata Manager Agent, see the *Metadata Manager Administrator Guide*. 
Metadata Manager Service

After you reinstall the Metadata Manager Agent, perform the following post-upgrade tasks for each Metadata Manager Service:

1. If Metadata Manager uses a Netezza resource to extract metadata from Netezza, copy the Netezza JDBC drivers to the Informatica installation directory.
2. Update the Metadata Manager properties file to include any customization.
3. Update the Metadata Manager File Location property in the Administrator tool.
5. Enable the Metadata Manager Service.
6. Migrate and reload Metadata Manager resources.
7. Verify Load privileges and permissions for Metadata Manager users.

To view, load, or manage a resource on the Load tab, users must have both the appropriate Metadata Manager Service privilege and read or write permission on the resource.

Copy JDBC Drivers for Netezza Resources

If Metadata Manager uses a Netezza resource to extract metadata from Netezza, copy the Netezza JDBC drivers to the Informatica installation directory.

Copy nzjdbc.jar from the Netezza JDBC driver installation folder to the following directory:

<Informatica installation directory>\services\shared\jars\thirdparty

Update the Metadata Manager Properties File

Compare the imm.properties file in the previous installation directory with the 9.6.1 version. Update the 9.6.1 version of the imm.properties file as required.

The 9.6.1 version of the imm.properties file is in the following directory:

<Informatica installation directory>\services\shared\jars\pc\classes

The 9.1.0 version of the imm.properties file is in the following directory:

<9.1.0 installation directory>\tomcat\shared\classes

The changes take effect when you enable the Metadata Manager Service.

Update the Metadata Manager File Location

When you upgrade, the Metadata Manager file location points to the location you specified in the previous version. To use a different directory for the files, update the Metadata Manager File Location property for the Metadata Manager Service in the Administrator tool.
Configure Domain SMTP Configuration Settings

You use the Administrator tool to configure the host name and port number of the outgoing mail server in the domain SMTP configuration settings. Metadata Manager uses the mail server that you configure to send email from Metadata Manager.

In previous versions, you configured the host name and port number of the outgoing mail server in the imm.properties file. After you upgrade, use the Administrator tool to configure the email properties in the domain SMTP configuration settings.

Migrate and Reload Metadata Manager Resources

In version 9.6.1 HotFix 3, some models are changed. If a model has significant changes, such as renamed classes, you must migrate and reload the resources that are based on the model. If a model has minor changes, such as new class attributes, you must reload the resources that are based on the model.

If a model has significant changes, the upgrade process marks the resources that are based on the model as deprecated. You cannot create, configure, edit, load, or add schedules for a deprecated resource. If there are deprecated resources in the repository, you must migrate them to the current version of Metadata Manager. You must also migrate resource configuration files for deprecated resource types if you want to upload them into the current version of Metadata Manager. After you migrate resources, you must reload them.

The following table lists the types of resources that you must migrate and reload because the migration process marks them as deprecated:

<table>
<thead>
<tr>
<th>Metadata Source Type</th>
<th>Resource Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Intelligence</td>
<td>Business Objects</td>
</tr>
<tr>
<td></td>
<td>Cognos</td>
</tr>
<tr>
<td></td>
<td>Microsoft Analysis and Reporting Services</td>
</tr>
<tr>
<td></td>
<td>Microstrategy</td>
</tr>
<tr>
<td></td>
<td>Oracle Business Intelligence Enterprise Edition (OBIEE)</td>
</tr>
<tr>
<td>Data Modeling</td>
<td>Embarcadero ERStudio</td>
</tr>
<tr>
<td></td>
<td>ERwin</td>
</tr>
<tr>
<td></td>
<td>Sybase PowerDesigner</td>
</tr>
<tr>
<td>Database Management</td>
<td>JDBC</td>
</tr>
</tbody>
</table>

Additionally, you must purge and reload all other types of resources except business glossary resources and custom resources. You must reload custom resources only if the model or the metadata has changed between releases.

Migrate resources and resource configuration files with the migration utilities, rmu and rcfmu.

Migration Utilities

The rmu and rcfmu migration utilities are command line programs that migrate deprecated resources and deprecated resource configuration files to the current version.

Use the following utilities:
**rmu**

Migrates deprecated resources by creating new, equivalent resources. You can also use rmu to migrate resources from the previous version of Metadata Manager to the current version. You can migrate one or all resources in the repository.

**rcfmu**

Migrates a resource configuration file from the previous version of Metadata Manager to the current version. After you migrate a resource configuration file, you must upload it to the repository.

After you migrate and reload a resource, edit the new resource to re-create the shortcuts, comments, links, and relationships that exist in the original resource. You must also update any schedule to which the original resource is assigned.

For information about rmu and rcfmu syntax and options, see the *Metadata Manager Administrator Guide*.

### Migrating Deprecated Resources

To prevent the loss of connection information for business intelligence and data modeling resources, migrate, purge, and reload resources in the following order. After you reload resources, you can edit the new resources and delete the deprecated resources.

Before you migrate resources, install the latest version of the Metadata Manager Agent.

1. Run the rmu migration utility on each deprecated JDBC resource.
2. Load the new JDBC resources.
3. Purge and reload all other database management resources.
4. Run the rmu migration utility on each deprecated business intelligence and data modeling resource.
5. Load the new business intelligence and data modeling resources.
7. Edit the new resources to re-create the shortcuts, comments, links, and relationships that exist in the original resources.
8. Optionally, delete the deprecated resources.

**Note:** rmu cannot convert Business Objects universe names to universe IDs. Therefore, after you migrate a Business Objects resource, you might need to update the universe ID.

### Migrating Resource Configuration Files

You can migrate one resource configuration file at-a-time. After you migrate a resource configuration file, you can create and load the resource.

Before you migrate resource configuration files, install the latest version of the Metadata Manager Agent.

1. Run the rcfmu migration utility on a resource configuration file.
2. Create a resource from the new resource configuration file.
3. Update connection information, if required.
4. Load the new resource.
5. Edit the new resource to create the shortcuts, comments, links, and relationships.

**Note:** rcfmu cannot convert Business Objects universe names to universe IDs. Therefore, after you migrate a Business Objects resource, you might need to update the universe ID.
Verify Load Privileges and Permissions for Metadata Manager Users

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></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></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 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.
Reporting and Dashboards Service

After you upgrade, complete the post-upgrade tasks for each Reporting and Dashboards Service.

Upgrade to Jaspersoft 4.7

After you upgrade, install or upgrade the Jaspersoft application and assign the iReport Designer license.

Upgrading from Informatica 9.1.0 HotFix 1 or 9.1.0 HotFix 2 to Jaspersoft 4.7

Install the Jaspersoft application. You can run the following command to import the Jaspersoft repository resource that you exported before you upgraded the domain.

```
js-ant import -DimportFile=<File_Name>.zip -DdatabaseUser=<username> -DdatabasePass=<password>
```

For more information about installing Jaspersoft, see the Informatica Administrator Guide.

Upgrading from Informatica 9.1.0 HotFix 3 or later to Jaspersoft 4.7

Upgrade the Jaspersoft repository with the existing contents on the Actions tab of the Administrator tool. You can also run the following command to import the Jaspersoft repository resource that you exported before you upgraded the domain.

```
js-ant import -DimportFile=<File_Name>.zip -DdatabaseUser=<username> -DdatabasePass=<password>
```

**Note:** `js-ant` requires the bash shell interpreter. Verify that the bash shell is available.

Assign the iReport License

2. Select Help > License Manager.
3. Select Install License.
4. Navigate to the `<Informatica installation directory>\clients\iReport-Professional` directory and select the `jasperserver.license`.

Informatica Developer

After you upgrade, complete the post-upgrade task for the Developer tool.

Update the Data Transformation Studio Eclipse Plug-In File

When you upgrade Informatica Developer and you have Data Transformation Studio installed on an existing version of Eclipse, the installer does not update the path in the Eclipse plug-in file to the new Data Transformation Studio installation directory.

After you upgrade Informatica Developer, go to the directory `<EclipseDir>/links`, open the plug-in file `com.itemfield.cm.studio.link` in a text editor, and set the following path:

Path=`<Informatica installation directory>\\Clients\\DT\\eclipseAdapter3_3`
Reference Data

After you upgrade, complete the post-upgrade tasks for reference data objects and files.

Copy the Reference Data Directories

If you backed up a reference data directory from the PowerCenter directory structure before you upgraded PowerCenter, copy the directory to the same location in the current directory structure.

If you cannot copy the directory to the same location, copy the directory to a location that the PowerCenter Integration Service can read. Use a configuration file or an environment variable to identify the location.

Use the INFA_CONTENT environment variable to specify the parent directory for dictionary files. Use the AD50.cfg file to specify the parent directory for address reference data files. Use the IDQTx.cfg file to specify the parent directory for identity population data files.

Note: The PowerCenter Integration Service reads the identity population data files from a directory with the name /default/. The parent directory for the identity population data files must contain a directory with the name /default/.

Merge Address Reference Data Configuration Files in PowerCenter

The PowerCenter Integration Service reads configuration settings for address reference data from the AD50.cfg file.

During the upgrade process, the PowerCenter installer writes an empty AD50.cfg file to the following location:

<Informatica installation directory>/server/bin

If the installer finds an AD50.cfg file at the location, it renames the file with the following name:

AD50.cfg.bak.

To maintain the address reference data configuration that you defined before you upgraded, merge the contents of the backup file and the upgrade file.

Exception Record Management

After you upgrade, complete the post-upgrade tasks that apply to the Exception transformation.

Update Exception Mapping Objects

You must update any mapping that includes an Exception transformation when you upgrade from Data Quality 9.1.0. Perform the update for mappings that contain reusable or nonreusable Exception transformations.

After you upgrade, create a data object for any table that an Exception transformation uses as a data target. Add the data objects to the mappings that contain the transformations, and connect the transformation output ports to the data objects.
Profiles

After you upgrade, complete the post-upgrade tasks for profiles and scorecards.

Migrate Profile and Scorecard Results

After you upgrade, you need to migrate the profile results and scorecard results to the profile warehouse.

To migrate the profile results and scorecard results, run the following commands:

• `infacmd ps migrateProfileResults`. Migrates column profile results and data domain discovery results to the profiling warehouse.

• `infacmd ps synchronizeProfile`. If you have enterprise discovery profiles in specific projects, run the command to migrate documented, user-defined, and committed primary keys and foreign keys for all the profiles to the profiling warehouse.

• `infacmd ps migrateScorecards`. If you created scorecards in Informatica Analyst, run the command to migrate the scorecard results to the profiling warehouse.

Import Data Domains

To add predefined data domain groups and related data domains to the data domain glossary, import the `Informatica_IDE_DataDomain.xml` file into the Developer tool using the Windows > Preferences > Informatica > Data Domain Glossary > Import menu option.

To view and make changes to rules associated with data domains, import the `Informatica_IDE_DataDomainRule.xml` file using the File > Import menu option in the Developer tool.

Upgrade the Informatica Drivers for SQL Data Services

Upgrade the Informatica JDBC or ODBC drivers for SQL data services.

Upgrade the Informatica ODBC or JDBC driver on the machine from which you connect to the SQL data service. To upgrade the driver, run the Informatica JDBC/ODBC driver installation program and select the upgrade option.

User Authentication

To ensure a high level of security for the Informatica domain, you can configure the domain to use Kerberos authentication.

Before you configure the Informatica domain to use Kerberos authentication, verify that the upgraded domain and services are working as expected. Verify that you can enable all upgraded services and run all operations in the domain and all domain functionality works as expected.

For more information about setting up Kerberos authentication, see the Informatica Security Guide.
**Read the Release Guide**

The *Informatica Release Guide* lists new features and enhancements, behavior changes between versions, and tasks that you might need to perform after you upgrade. Read the *Informatica Release Guide* to view the list of new functionality that you might want to implement or new options that you might want to enable.

**Update ODBC Data Sources**

The Informatica installation includes DataDirect 7.1 ODBC drivers. Re-create each ODBC data source to use the new drivers if you upgrade from Informatica 9.5.1 or earlier versions.

**Copy the Data Transformation Files**

After you upgrade Data Transformation, copy the files from the previous installation directories to the new installation directories, to get the same workspace, repository, and custom global components as in the previous version.

<table>
<thead>
<tr>
<th>File or Directory</th>
<th>Default Location</th>
</tr>
</thead>
</table>
| Workspace (Data Transformation client only) | `<Informatica installation directory>`
|                                        | `\DataTransformation\<version_number>\workspace`                              |
| Repository                             | `<Informatica installation directory>`
|                                        | `\DataTransformation\ServiceDB`                                                 |
| Custom Global Components directory (TGP files) | `<Informatica installation directory>`
|                                        | `\DataTransformation\autoInclude\user`                                         |

Copy the library files you previously backed up to the new installation directories.

<table>
<thead>
<tr>
<th>File or Directory</th>
<th>Default Location</th>
</tr>
</thead>
</table>
| Library files     | `<Informatica installation directory>`
|                   | `\DataTransformation\Libraries`       |
| Library plugin files | `<Informatica installation directory>`
|                    | `\DataTransformation\eclipse3_3\plugins` |
Updating the DynamicSections Parameter of a DB2 Database

This appendix includes the following topics:

- DynamicSections Parameter Overview, 106
- Updating the DynamicSections Parameter, 106

DynamicSections Parameter Overview

IBM DB2 packages contain the SQL statements to be executed on the database server. The DynamicSections parameter of a DB2 database determines the maximum number of executable statements that the database driver can have in a package. You can raise the value of the DynamicSections parameter to allow a larger number of executable statements in a DB2 package. To modify the DynamicSections parameter, connect to the database using a system administrator user account with BINDADD authority.

Updating the DynamicSections Parameter

Use the DataDirect Connect for JDBC utility to raise the value of the DynamicSections parameter in the DB2 database.

To use the DataDirect Connect for JDBC utility to update the DynamicSections parameter, complete the following tasks:

- Download and install the DataDirect Connect for JDBC utility.
- Run the Test for JDBC tool.

Downloading and Installing the DataDirect Connect for JDBC Utility

Download the DataDirect Connect for JDBC utility from the DataDirect download web site to a machine that has access to the DB2 database server. Extract the contents of the utility file and run the installer.

1. Go to the DataDirect download site:
2. Choose the Connect for JDBC driver for an IBM DB2 data source.
3. Register to download the DataDirect Connect for JDBC Utility.
4. Download the utility to a machine that has access to the DB2 database server.
5. Extract the contents of the utility file to a temporary directory.
6. In the directory where you extracted the file, run the installer.
The installation program creates a folder named testforjdbc in the installation directory.

Running the Test for JDBC Tool

After you install the DataDirect Connect for JDBC Utility, run the Test for JDBC tool to connect to the DB2 database. You must use a system administrator user account with the BINDADD authority to connect to the database.

1. In the DB2 database, set up a system administrator user account with the BINDADD authority.
2. In the directory where you installed the DataDirect Connect for JDBC Utility, run the Test for JDBC tool.
3. On the Test for JDBC Tool window, click Press Here to Continue.
4. Click Connection > Connect to DB.
5. In the Database field, enter the following text:
   ```
   jdbc:datadirect:db2://
   HostName:PortNumber;databaseName=DatabaseName;CreateDefaultPackage=TRUE;ReplacePackage=TRUE;DynamicSections=3000
   
   HostName is the name of the machine hosting the DB2 database server.
   PortNumber is the port number of the database.
   DatabaseName is the name of the DB2 database.
   ```
6. In the User Name and Password fields, enter the system administrator user name and password you use to connect to the DB2 database.
7. Click Connect, and then close the window.
Upgrade Checklist

This appendix includes the following topics:

- Upgrade Checklist Overview, 108
- Before You Upgrade the Domain, 108
- Domain Upgrade, 110
- Before You Upgrade the Application Services, 110
- Application Service Upgrade, 111
- Informatica Client Upgrade, 111
- After You Upgrade, 112

Upgrade Checklist Overview

The upgrade checklist summarizes the tasks that you must perform to complete an upgrade. If you upgrade the Informatica product on more than one machine, complete the first upgrade using the detailed instructions in this guide. You can use this checklist to perform subsequent upgrades.

Before You Upgrade the Domain

Before you upgrade the domain, perform the following pre-upgrade tasks:

- Read the Informatica Release Notes.
- Perform the following tasks to set up the machine to meet the requirements on Windows:
  - Verify that the machine has the required operating system patches and libraries.
  - Verify that the machine meets the minimum system requirements to upgrade the domain.
  - Verify that the machine meets the hardware requirements to upgrade the application services.
  - Review the environment variables.
  - Review the maximum heap size setting.
  - Extract the installer files.
  - Run the pre-installation (i9Pi) system check tool.
Perform the following tasks to set up the machine to meet the requirements on UNIX:

- Verify that the machine has the required operating system patches and libraries.
- Install the Java Developer Kit when you upgrade Informatica on AIX, HP-UX, or zLinux.
- Verify that the machine meets the minimum system requirements to upgrade the domain.
- Verify that the machine meets the hardware requirements to upgrade the application services.
- Review the environment variables.
- Verify that the operating system meets the file descriptor requirement.
- Review the maximum heap size setting.
- Extract the installer files.
- Run the pre-installation (i9Pi) system check tool.

If you have a previous version of Data Transformation installed, back up the essential Data Transformation files.

Back up the PowerCenter repository.

Perform the following tasks to prepare the Model repository:

- Back up the Model repository.
- Verify the user account requirements for the Model repository database.
- Verify the maximum heap size setting.

Perform the following tasks to prepare the Reporting and Dashboards Service:

- Export the Jaspersoft repository resources.
- Configure the database user for the Jaspersoft repository.

Perform the following tasks to prepare the profiling warehouse:

- Use the native database back up option to back up the profiling warehouse.
- Verify the user account permissions for the database.

Back up any reference data directory at a non-default location in the PowerCenter directory structure.

Prepare the staging database.
Use the native database back up option to back up the staging database.

Perform the following tasks to prepare Metadata Manager:

- Back up the Metadata Manager warehouse.
- Disable the Metadata Manager Service.
- Back up the Metadata Manager properties file.

Perform the following tasks to prepare the Data Analyzer repository:

- Assign roles to users and groups.
- Back up the Data Analyzer repository.

Record the ODBC data source names of the ODBC connections in the domain.

Perform the following tasks to prepare the domain:

- Rename the Administrator group.
- Verify user account requirements for the domain configuration repository database.
• Shut down the domain. To shut down the domain, stop the Informatica service process on each node in the domain.
• Back up the domain.

Prepare to change the node configuration.
Perform the additional pre-upgrade tasks if you choose to change the node configuration for the following reasons:
• If the domain configuration repository database type or version is no longer supported, migrate the repository to a different database.
• If the Informatica installation is on a machine with an operating system that is no longer supported, migrate the installation to a different machine.

Related Topics:
• "Before You Upgrade the Domain" on page 16

Domain Upgrade

Use the server installer to upgrade the domain. The server installer provides a domain upgrade wizard to guide you through the upgrade process.

The upgrade wizard installs the Informatica files in the installation directory you specify. It does not modify the files in the directory of the previous version.

When you run the upgrade wizard, select the option to change the node configuration if you upgrade the domain to a different machine or to a different domain configuration repository database.

Related Topics:
• "Domain Upgrade" on page 46

Before You Upgrade the Application Services

Before you upgrade application services, perform the following pre-upgrade tasks:

Configure POSIX Asynchronous I/O.
If you install Informatica on IBM AIX, make POSIX Asynchronous I/O available on any node where you want to run a PowerCenter Integration Service.

Configure Informatica environment variables.

Configure locale environment variables.
Verify that the locale setting is compatible with the code page for the repository.

If you used a keystore file that you created to secure the connection to the Administrator tool, verify the keystore file location.

Clear the browser cache.
If you chose the option to change the node configuration to migrate the Informatica installation to a different machine, perform the following tasks:

- Configure the environment variables.
- Verify the range of port numbers that can be dynamically assigned to application service processes that run on the node.
- Verify that the backup directory for the node is accessible by the node.
- Configure PowerExchange Adapters. If the PowerExchange adapter has an installer, re-install the PowerExchange adapter.

** RELATED TOPICS:**
- “Before You Upgrade the Application Services” on page 75

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**Application Service Upgrade**

Some service versions require a service upgrade. You can use the service upgrade wizard to upgrade services.

To upgrade application services for Informatica services version 9.1.0, perform the following upgrade tasks:

- Upgrade the Model Repository Service.
- Upgrade the Data Integration Service.
- Upgrade the profiling warehouse for the Data Integration Service.
- Upgrade the Content Management Service.
- Upgrade the PowerCenter Repository Service.
- Upgrade the Metadata Manager Service.

** RELATED TOPICS:**
- “Application Service Upgrade” on page 81

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**Informatica Client Upgrade**

Use the client installer to upgrade the client tools. The client tools are installed in the installation directory you specify. The client installer configures the newly installed client tools with the same settings as the previous version.
After You Upgrade

After you upgrade the domain, application services, and client files, perform the following post-upgrade tasks:

- Perform the following tasks for the domain:
  - Verify that the log events directory is correct.
    To use a different directory for the logs, update the Log Directory Path property for the domain.
  - The Informatica installation includes new DataDirect ODBC drivers. Re-create each ODBC data source to use the new drivers.
  - You can optionally configure the domain configuration repository on a database that is secured with the SSL protocol.
- If you enabled secure communication between client applications and the previous domain, verify the keystore file locations. The upgrade process does not update these locations.
- If you upgraded from a version that used operating system profiles, set the umask setting to change the security on files that the DTM writes.
- Perform the following tasks for PowerCenter data masking:
  - Upgrade the storage table for repeatable data masking.
  - Modify the storage table for the bigint datatype in serial number columns.
- Perform the following tasks for each Content Management Service:
  - Verify the location of the identity population data files.
  - Verify the reference data warehouse.
  - Assign privileges and roles for reference data use.
  - Restart the Content Management Service.
    If you update Content Management Service properties for address reference data, identity population data, classifier model data, or probabilistic model data, you must also restart the Data Integration Service.
- Perform the following tasks for each Data Integration Service:
  - Reset the HTTP proxy server password.
    If the Data Integration Service runs Web Service Consumer transformations and is configured to use an HTTP proxy server with authentication, reset the HTTP proxy server password.
  - To increase stability, enable the Data Integration Service to run jobs in separate operating system processes.
- Perform the following tasks for each Analyst Service:
  - Verify the location of the flat file cache directory. The upgrade process does not update this location.
  - If you plan to run workflows that contain Human tasks, select an Analyst Service to associate with the Data Integration Service that runs the Human tasks.
  - Assign privileges.
If you have an Analyst Service in your Informatica domain, you must grant the Access Analyst privilege from the Model Repository Service privileges to users. Based on the tasks that users need to perform in the Analyst tool, you might need to grant the Access Mapping Specifications, Load Mapping Specification Results, Workspace Access, Manage Glossaries, Design Workspace, Discovery Workspace, Glossary Workspace, and Scorecards workspace privileges from the Analyst Service privileges to users.

- Recycle the Analyst Service.
  
  Before you recycle the Analyst Service, complete the upgrade and post-upgrade steps for the Model Repository Service, Data Integration Service, and Content Management Service.

- To perform searches in the Analyst tool and Business Glossary Desktop, create the Search Service.

- Uninstall and reinstall the Metadata Manager Agent.

- Perform the following tasks for each Metadata Manager Service:
  
  - If Metadata Manager uses a Netezza resource to extract metadata from Netezza, copy the Netezza JDBC drivers to the Informatica installation directory.
  
  - Update the Metadata Manager properties file to include any customization.

  - Update the **Metadata Manager File Location** property in the Administrator tool.

  - Configure the host name and port number of the outgoing mail server in the domain SMTP configuration settings.

  - Enable the Metadata Manager Service.

  - Migrate and reload Metadata Manager resources.

  - Verify Load privileges and permissions for Metadata Manager users.

- If you use the Reporting and Dashboards Service, upgrade to Jaspersoft 4.7.

- If you have Data Transformation Studio installed on an existing version of Eclipse, update the Data Transformation Studio Eclipse plug-in file with the path of the new Data Transformation Studio installation directory.

- Perform the following tasks for reference data objects and files:
  
  - If you created a backup copy of a reference data directory from the PowerCenter directory structure, restore the directory to the PowerCenter directory structure.

  - If you use Address Doctor reference data in PowerCenter, merge the contents of the AD50.cfg and AD50.cfg.bak files to maintain the Address Doctor properties.

- Update mappings that contain reusable or non-reusable Exception transformations.

- Perform the following tasks for profiles and scorecards:
  
  - Migrate the column profile, data domain discovery, and scorecard results to the profiling warehouse.

  - Import data domain groups and related data domains to the data domain glossary. If you want to add predefined data domain groups and their related data domains to the data domain glossary, import the **Informatica_IDE_DataDomain.xml** file.

- Upgrade the Informatica ODBC or JDBC driver on each machine from which you connect to the SQL data service.

- To ensure a high level of security for the Informatica domain, you can optionally configure the domain to use Kerberos authentication.

- Read the **Informatica Release Guide** to view the list of new functionality that you might want to implement or new options that you might want to enable.
RELATED TOPICS:

- “After You Upgrade” on page 90
<table>
<thead>
<tr>
<th>A</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>address reference data in PowerCenter</td>
<td>103</td>
</tr>
<tr>
<td>application service upgrade</td>
<td></td>
</tr>
<tr>
<td>privileges</td>
<td>81</td>
</tr>
<tr>
<td>application services</td>
<td></td>
</tr>
<tr>
<td>ports</td>
<td>41</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>back up files</td>
<td></td>
</tr>
<tr>
<td>before installing</td>
<td>32</td>
</tr>
<tr>
<td>before upgrading</td>
<td>32</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>configuration</td>
<td></td>
</tr>
<tr>
<td>environment variables on UNIX</td>
<td>78</td>
</tr>
<tr>
<td>copy files</td>
<td></td>
</tr>
<tr>
<td>after upgrade</td>
<td>105</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>database clients</td>
<td></td>
</tr>
<tr>
<td>configuring</td>
<td>44</td>
</tr>
<tr>
<td>environment variables</td>
<td></td>
</tr>
<tr>
<td>IBM DB2 client application enabler</td>
<td>44</td>
</tr>
<tr>
<td>Microsoft SQL Server native clients</td>
<td>44</td>
</tr>
<tr>
<td>Oracle clients</td>
<td></td>
</tr>
<tr>
<td>Sybase open clients</td>
<td>44</td>
</tr>
<tr>
<td>databases</td>
<td></td>
</tr>
<tr>
<td>testing connections</td>
<td>44</td>
</tr>
<tr>
<td>db2 connect</td>
<td></td>
</tr>
<tr>
<td>testing database connections</td>
<td>44</td>
</tr>
<tr>
<td>dependency graph</td>
<td></td>
</tr>
<tr>
<td>rebuilding</td>
<td>84</td>
</tr>
<tr>
<td>disk space requirements</td>
<td></td>
</tr>
<tr>
<td>installation requirements</td>
<td>26</td>
</tr>
<tr>
<td>DISPLAY</td>
<td></td>
</tr>
<tr>
<td>environment variables</td>
<td>19</td>
</tr>
<tr>
<td>domain configuration repository</td>
<td></td>
</tr>
<tr>
<td>migrating during upgrade</td>
<td>14, 40, 57</td>
</tr>
<tr>
<td>domains</td>
<td>41</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>environment variables</td>
<td></td>
</tr>
<tr>
<td>configuring on UNIX</td>
<td>78</td>
</tr>
<tr>
<td>database clients</td>
<td>44</td>
</tr>
<tr>
<td>installation</td>
<td>19, 27</td>
</tr>
<tr>
<td>library paths on UNIX</td>
<td>78</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>IATEMPPDIR</td>
<td></td>
</tr>
<tr>
<td>environment variables</td>
<td>19, 27</td>
</tr>
<tr>
<td>identity population data</td>
<td></td>
</tr>
<tr>
<td>Data Integration Service</td>
<td>93</td>
</tr>
<tr>
<td>PowerCenter Integration Service</td>
<td>93</td>
</tr>
<tr>
<td>installation</td>
<td></td>
</tr>
<tr>
<td>backing up files before</td>
<td>32</td>
</tr>
<tr>
<td>installation requirements</td>
<td></td>
</tr>
<tr>
<td>disk space</td>
<td>25</td>
</tr>
<tr>
<td>environment variables</td>
<td>19, 27</td>
</tr>
<tr>
<td>minimum system requirements</td>
<td>25</td>
</tr>
<tr>
<td>port requirements</td>
<td>41</td>
</tr>
<tr>
<td>isql</td>
<td></td>
</tr>
<tr>
<td>testing database connections</td>
<td>44</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>J</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>JRE_HOME</td>
<td></td>
</tr>
<tr>
<td>environment variables</td>
<td>19, 27</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>L</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LANG</td>
<td></td>
</tr>
<tr>
<td>locale environment variables</td>
<td>19, 27</td>
</tr>
<tr>
<td>LC_ALL</td>
<td></td>
</tr>
<tr>
<td>locale environment variables</td>
<td>19, 27</td>
</tr>
<tr>
<td>library paths</td>
<td></td>
</tr>
<tr>
<td>environment variables</td>
<td>27</td>
</tr>
<tr>
<td>library requirements</td>
<td></td>
</tr>
<tr>
<td>UNIX</td>
<td></td>
</tr>
<tr>
<td>Windows</td>
<td>17</td>
</tr>
<tr>
<td>Linux</td>
<td></td>
</tr>
<tr>
<td>database client environment variables</td>
<td>44</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>M</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Repository Service</td>
<td></td>
</tr>
<tr>
<td>upgrade error</td>
<td>84</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>node</td>
<td></td>
</tr>
<tr>
<td>migrating during upgrade</td>
<td>14, 40, 57</td>
</tr>
<tr>
<td>node configuration</td>
<td></td>
</tr>
<tr>
<td>changing during upgrade</td>
<td>57</td>
</tr>
<tr>
<td>completing the change process</td>
<td>77</td>
</tr>
</tbody>
</table>
node configuration (continued)
  preparing to change 40
  reasons to change 14

O
object dependency graph
  rebuilding 84
operating system
  dropped support 14, 41

P
patch requirements
  UNIX 23
  Windows 17
PATH
  environment variables 27
port requirements
  installation requirements 41
ports
  application services 41
  domains 41
  requirements 41

R
repositories
  configuring native connectivity 43
  installing database clients 44

S
service upgrade wizard
  upgrading services 83
services
  service upgrade wizard 83
sqlplus
  testing database connections 44
system requirements
  minimum installation requirements 25

U
UNIX
  database client environment variables 44
  database client variables 44
  library paths 78
  library requirements 23
  patch requirements 23
  user accounts 43
upgrade
  copying files after 105
  upgrade error
    Model Repository Service 84
upgrades
  backing up files before 32
  upgrading
    service upgrade wizard 83
  user accounts
    UNIX 43
    Windows 42

W
Windows
  library requirements 17
  patch requirements 17
  user accounts 42