Informatica PowerCenter (Version 9.5.1 HotFix 3)

Installation and Configuration Guide
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Preface

The Informatica PowerCenter Installation and Configuration Guide is written for the system administrator who is responsible for installing the Informatica product. This guide assumes 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 you are familiar with the interface requirements for your supporting applications.

Informatica Resources

Informatica My Support Portal

As an Informatica customer, you can access the Informatica My Support Portal at http://mysupport.informatica.com. 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.

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Informatica Velocity

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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.

Chapter 1

Installation Overview

This chapter includes the following topics:

- Informatica Installation, 1
- Informatica Services, 2
- Informatica Clients, 3

Informatica Installation

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

The Informatica platform includes the following products:

- Informatica Data Explorer
- Informatica Data Quality
- Informatica Data Services
- Informatica Data Transformation
- PowerCenter

The Informatica platform also includes components for PowerExchange, Data Services and Data Quality adapters.

Installation of Multiple Products

If you purchase more than one Informatica product, you need to install the Informatica platform only once.

Before you install Informatica, review the requirements and pre-installation tasks for the products that you purchase. Verify that the machine where you install Informatica meets the requirements for all products. Most of the steps in the installation process are common to all Informatica products. You need to perform these steps only once.

Install the Informatica platform once on each machine that you want to use as a node in the Informatica domain. Verify that you have all licenses required for the products that you want to use.

After you install the Informatica platform, review the post-installation tasks for your product. Complete the configuration tasks for all the products you want to use. Most of the configuration tasks are common to all Informatica products. You need to perform the common tasks only once.
**Installation Tasks**

To install PowerCenter, complete the following tasks:

1. Complete the pre-installation tasks. Complete the pre-installation tasks to ensure that you can successfully run the installers and create and run the services on the domain.

2. Install the Informatica services. Use the server installer to install the Informatica services on one or more Windows or UNIX machines. Create a node and configure the domain. Specify the database to store the domain configuration repository.

3. Install the Informatica client. Use the client installer to install PowerCenter Client. You can install PowerCenter Client on one or more Windows machines.

4. Perform the post-installation configuration tasks. Prepare the databases and user accounts for the repositories used in PowerCenter. Configure the machine to ensure that you can run the domain services and components.

After you complete the installation and configuration process, log in to Informatica Administrator and create and configure the following services:

- PowerCenter Repository Service
- PowerCenter Integration Service

Optionally, you can create the following services:

- Metadata Manager Service
- Reporting Service
- Reporting and Dashboards Service
- SAP BW Service
- Web Services Hub

**Note:** If you install the Informatica product on more than one machine, complete the first installation using the detailed instructions in this guide. You can use the installation checklist in the appendix to perform subsequent installations.

**Informatica Services**

The Informatica domain is the administrative unit for the Informatica environment. The domain is a collection of nodes that represent the machines on which the application services run. Each node runs a Service Manager that manages operations and services in the domain. Use Informatica Administrator to manage the Informatica domain.

You can run the server installer multiple times to install the Informatica services on more than one machine.

If you install on a single machine, you create a domain and a node on the machine. If you install on multiple machines, you can create multiple domains with one or more nodes in each domain or you can create one domain for all nodes.

If you install on multiple machines, you must create an Informatica domain and a node when you install the Informatica services for the first time. When you install on another machine, you can create another domain or you can create a node and join the current domain.

You can install the Informatica services in graphical or silent mode on Windows and in graphical, silent, or console mode on UNIX. The installation process creates a service named Informatica that runs as a service on Windows and as a daemon on UNIX. When you start the Informatica service, it starts the Service Manager, which manages all domain operations.
PowerCenter Application Services

The Informatica domain has the following application services for PowerCenter:

- PowerCenter Integration Service. Runs sessions and workflows created in PowerCenter Client and stored in the PowerCenter repository.
- PowerCenter Repository Service. Manages connections to the PowerCenter repository.
- Metadata Manager Service. Runs the Metadata Manager application and manages access to metadata in the Metadata Manager warehouse.
- Reporting Service. Runs the Data Analyzer application. Use Data Analyzer to create and run Informatica reports.
- Web Services Hub. Allows client applications to access PowerCenter workflows as web services.
- SAP BW Service. Listens for RFC requests from SAP BW, initiates workflows to extract from or load to SAP BW, and sends log events to the Log Manager.
- Reporting and Dashboards Service. Runs the JasperReports application.

Informatica Clients

The Informatica clients consist of client applications and web applications that you use to access the services in the domain. You can install the Informatica clients on Windows in graphical or silent mode.

PowerCenter Client Tools

Use the client installer to install the following client applications for PowerCenter:

- PowerCenter Client. Use PowerCenter Client to define sources and targets, create transformations and build mappings, and create workflows to run mappings. The objects are stored in a PowerCenter repository and run by a PowerCenter Integration Service.
- Metadata Manager Custom Metadata Configurator. Use the Custom Metadata Configurator to create custom models to generate PowerCenter objects from new metadata source files. This application is installed with PowerCenter Client by default.

After you install the Informatica Services, you can log in to Informatica Administrator to create application services to run the following web applications:

- Metadata Manager and Business Glossary. Use Metadata Manager to browse and analyze metadata from disparate metadata repositories. It includes a business glossary for consistency in the definition of the business terms in the metadata. The Metadata Manager Service runs the Metadata Manager and Business Glossary application.
- Data Analyzer. Use Data Analyzer to run reports to analyze PowerCenter metadata. The Reporting Service runs the Data Analyzer application.
- Jaspersoft. Use Jaspersoft to run PowerCenter Repository Reports and Metadata Manager Reports. The Reporting and Dashboards Service runs the Jaspersoft application.
- Web Services Hub Console. Use the Web Services Hub Console to manage the web services you create in PowerCenter. The Web Services Hub runs the Web Services Hub Console.
CHAPTER 2

Before You Begin

This chapter includes the following topics:

- Before You Begin Overview, 4
- License Key, 4
- Incremental License Key, 4
- Uninstall Data Transformation, 5

Before You Begin Overview

Before you begin the Informatica installation, ensure that you have the license key and uninstall previous versions of Data Transformation.

License Key

Before you install the software, verify that you have the license key available. You can get the license key in the following ways:

- Installation DVD. If you receive the Informatica installation files in a DVD, the license key file is included in the Informatica License Key CD.
- FTP download. If you download the Informatica installation files from the Informatica Electronic Software Download (ESD) site, the license key is in an email message from Informatica. Copy the license key file to a directory accessible to the user account that installs the product.

Contact Informatica Global Customer Support if you do not have a license key.

Incremental License Key

Contact Informatica Global Customer Support if you have an incremental license key and you want to create a domain.
Uninstall Data Transformation

If your machine has Data Transformation 9.0.1 or earlier versions, you must uninstall it before you upgrade the Informatica services or clients. The Informatica installation overwrites the Data Transformation configuration file. Before you upgrade the Informatica services or clients, back up the essential Data Transformation files and uninstall the previous version of Data Transformation.

Backing Up the Data Transformation Files

Before you install a new version of Data Transformation, you must back up the Data Transformation files that were created under previous versions.

The following table lists the files that you must back up.

<table>
<thead>
<tr>
<th>Directory</th>
<th>Default Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workspace (Data Transformation client only)</td>
<td>C:\Documents and Settings&lt;user&gt;\My Documents\Informatica\DataTransformation&lt;version_number&gt;\workspace</td>
</tr>
<tr>
<td>Repository</td>
<td>&lt;INSTALL_DIR&gt;/DataTransformation/ServiceDB</td>
</tr>
<tr>
<td>Custom Global Components directory (TGP files)</td>
<td>&lt;INSTALL_DIR&gt;/DataTransformation/autoInclude/user</td>
</tr>
<tr>
<td>Custom Global Components directory (DLL and JAR files)</td>
<td>&lt;INSTALL_DIR&gt;/DataTransformation/externLibs/user</td>
</tr>
<tr>
<td>Configuration file</td>
<td>&lt;INSTALL_DIR&gt;/DataTransformation/CMConfig.xml</td>
</tr>
<tr>
<td>License file</td>
<td>&lt;INSTALL_DIR&gt;/DataTransformation/CDELicense.cfg</td>
</tr>
<tr>
<td>Library files</td>
<td>&lt;INSTALL_DIR&gt;/DataTransformation/Libraries</td>
</tr>
<tr>
<td>Library files</td>
<td>The following files under &lt;INSTALL_DIR&gt;/DataTransformation/eclipse3_3/plugins:</td>
</tr>
<tr>
<td></td>
<td>- com.informatica.libeditor.compare_&lt;version&gt;.jar</td>
</tr>
<tr>
<td></td>
<td>- com.informatica.libeditor.DigesterWrap_&lt;version&gt;.jar</td>
</tr>
<tr>
<td></td>
<td>- com.informatica.libeditor.gen_wiz_&lt;version&gt;.jar</td>
</tr>
<tr>
<td></td>
<td>- com.informatica.libeditor.launcher_&lt;version&gt;.jar</td>
</tr>
<tr>
<td></td>
<td>- com.informatica.libeditor.run_validations_&lt;version&gt;.jar</td>
</tr>
<tr>
<td></td>
<td>- com.informatica.libeditor_&lt;version&gt;.jar</td>
</tr>
<tr>
<td></td>
<td>- All other plugins with names that start with com.informatica.libeditor_</td>
</tr>
<tr>
<td>SWIFT library files</td>
<td>com.informatica.libeditor.BicLookup_&lt;version&gt;.jar</td>
</tr>
<tr>
<td>FpML or SEPA library files</td>
<td>- com.informatica.libeditor.propertypages_&lt;version&gt;.jar</td>
</tr>
<tr>
<td></td>
<td>- com.informatica.libeditor_xsd_&lt;version&gt;.jar</td>
</tr>
</tbody>
</table>

Uninstalling Previous Versions of Data Transformation

The installer cannot upgrade Data Transformation directly from 9.0.1 or previous versions.
If you have Data Transformation 9.0.1 or previous versions installed, you must uninstall it before you install the current version.

1. Close all applications that use Data Transformation services.
2. If you are uninstalling version 9.x, uninstall all libraries.
3. To run the uninstaller, in the Windows Control Panel, select Add or Remove Programs or Programs and Features, depending on the Windows operating system version, and then select the option to remove Data Transformation.
   The Uninstallation window appears.
4. Click Uninstall.
   The system prompts you to shut down all services.
5. Click Continue.
   Data Transformation files are removed from the computer, essential customer customized files are backed up in the <INSTALL_DIR>/DataTransformation_<VERSION>_Backup directory, and the system displays the following message:
   Uninstallation completed.
   Note: There is no log file containing the details of the uninstall operation.
6. Click Done.
7. When the uninstallation is complete, move the <INSTALL_DIR>/DataTransformation_<VERSION>_Backup directory, and then delete the installation directory and all files remaining in it.
CHAPTER 3

Informatica Services Pre-Installation Tasks

This chapter includes the following topics:
- Informatica Services Pre-Installation Tasks Overview, 7
- Informatica Services Pre-Installation Tasks on UNIX, 7
- Informatica Services Pre-Installation Tasks on Windows, 13
- Before you Create the Informatica Domain, 18

Informatica Services Pre-Installation Tasks Overview

Before you install the Informatica services, set up the machine to meet the requirements to install and run the Informatica platform. If the machine where you install the Informatica services is not configured correctly, the installation can fail.

When you install the Informatica services, you create a domain configuration repository in a relational database to store domain metadata and user accounts. Before you run the installer, set up the database for the domain configuration repository.

Informatica Services Pre-Installation Tasks on UNIX

Before you install the Informatica services on UNIX or Linux, complete the pre-installation tasks.

Install the Java Development Kit

If you are installing Informatica on AIX, HP-UX, or zLinux, install the Java Development Kit (JDK).

You can download the JDK from the following web sites:
- For AIX: http://www.ibm.com/developerworks/java/jdk/aix/service.html#java6
- For HP-UX: https://h20392.www2.hp.com/portal/swdepot/displayProductInfo.do?productNumber=HPUXJDKJRE60
- For zLinux: http://www.ibm.com/developerworks/java/jdk/linux/download.html#java6
Informatica products are certified with a specific JDK version. To determine which JDK version to install, see the Product Availability Matrix. The Informatica Release Notes can also contain additional information about the JDK version. If you have problems installing the JDK, contact the JDK vendor.

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

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Verify the Minimum System Requirements

Verify that your machine meets the minimum system requirements to install the Informatica server component.

The following table lists the minimum system requirements:

<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>

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 following table lists the temporary disk space requirements during installation:

<table>
<thead>
<tr>
<th>Product</th>
<th>Disk Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installer</td>
<td>1 GB</td>
</tr>
<tr>
<td>Informatica Services</td>
<td>2 GB</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_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 machine with 32-bit or 64-bit SUSE Linux or Linux EMT64 operating system, 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>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 installing Informatica on HP-UX.</td>
</tr>
<tr>
<td>PATH</td>
<td>The installer appends file paths required by Informatica to the PATH environment variable. Verify that the length of the PATH environment variable does not exceed the system limits.</td>
</tr>
</tbody>
</table>

Verify the Port Availability

The installer sets up the ports for components in the Informatica domain, and it designates the ports to use for application service processes that run on the node where you install Informatica.

You can specify the port numbers to use for the components and a range of 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>Domain 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>Port Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</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>
<tr>
<td>Range of ports for application services</td>
<td>Range of port numbers that can be assigned to the application service processes that run on the node. When you create an application service in the domain, the Service Manager 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.</td>
</tr>
</tbody>
</table>

**Guidelines for Port Configuration**

The installer validates the port numbers that you specify to ensure that there will be no port conflicts in the domain.

Use the following guidelines to determine the port numbers:

- The port number you specify for the domain and for each component in the domain must be unique.
- The port number for the domain and domain components cannot be within the range of the port numbers that you specify for the application service processes.
- The highest number in the range of port numbers that you specify for the application service processes must be at least three numbers higher than the lowest port number. For example, if the minimum port number in the range is 6400, the maximum port number must be at least 6403.
- The port numbers that you specify cannot be lower than 1025 or higher than 65535.

**Create a System User Account**

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.

**Set Up a Keystore File**

During installation, you can configure Informatica to use SSL certificates for secure communication between Informatica Administrator and the Service Manager. The installer can generate a self-signed certificate, or you can provide the location of a certificate signed by a certification authority.

You can use the keytool utility to generate a keystore file to store the SSL keys and certificates for a secure connection. Keytool is a key and certificate management utility to generate and administer SSL keys and certificates. The keys and certificates are stored in a keystore file. You can use a self-signed certificate or one signed by a certification authority (CA). To use a certificate signed by a CA, use keytool to generate a Certificate Signing Request (CSR) and apply for a digital identity certificate from a CA.

You can find the keytool utility in one of the following directories:

- `JAVA_HOME\jre\bin`
- `InformaticaInstallDir\java\bin`
For more information about using keytool, see the documentation on the following web site:

Note: After installation, you can also configure a secure connection when you create a Reporting Service, Metadata Manager Service, or a Web Services Hub in the domain. Use Informatica Administrator to specify the keystore files for the application services.

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 8,000 or higher. The recommended limit is 16,000 file descriptors per process.

Set Up the X Window Server

When you run the installer in graphical mode, you must use a graphics display server. On UNIX, the graphics display server is typically an X Window server. If you do not have the X Window server installed on the machine where you want to install the product, you can run the installer using an X Window server installed on another machine. Use the DISPLAY variable to redirect output of the X Window server to another UNIX machine.

The following table lists the commands to set the DISPLAY environment variable:

<table>
<thead>
<tr>
<th>Shell</th>
<th>Command</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>setenv DISPLAY &lt;TCP/IP node of XWindow server&gt;:0</td>
<td>setenv DISPLAY 10.1.50.23:0</td>
</tr>
<tr>
<td>Bash/Korn</td>
<td>export DISPLAY=&quot;&lt;TCP/IP node of XWindow server&gt;:0&quot;</td>
<td>export DISPLAY=&quot;10.1.50.23:0&quot;</td>
</tr>
<tr>
<td>Bourne</td>
<td>DISPLAY=&quot;&lt;TCP/IP node of XWindow server&gt;:0&quot;</td>
<td>DISPLAY=&quot;10.1.50.23:0&quot;</td>
</tr>
<tr>
<td></td>
<td>export display</td>
<td>export display</td>
</tr>
</tbody>
</table>

If you do not know the IP address of a UNIX machine where the X Window server is installed, ask your network administrator. For more information about redirecting the DISPLAY variable, see the documentation from the UNIX vendor.

If the X Window server does not support the font that the installer uses, the installer can display incorrect labels on the buttons.

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.

Install the bos.adt.debug Fileset

If you are installing Informatica on IBM AIX 6.1, install the bos.adt.debug Version 6.1.5.4 Fix Pack 6100-05-07-1140 fileset. If you are installing Informatica on IBM AIX 7.1, install the bos.adt.debug Version 7.1.0.15 Fix Pack 7100-00-03-1115 fileset.

You can download the fileset from the IBM web site:
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.

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 (ESD) site to a directory on your machine and then extract the installer files.

Run the Pre-Installation (i9Pi) System Check Tool

If you are installing Informatica in silent mode, run the Pre-installation (i9Pi) System Check Tool to verify whether the machine meets the system requirements for the installation.

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 `y` 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: `@`|`$`|`#`|`%`|`{`|`}`|`,`|`'`
10. Type the starting port number for the node that is being created or upgrade on the machine.
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.
13. Enter the JDBC connection information.
   - To enter the connection information using a custom JDBC connection string, type the connection string.
     - IBM DB2: `jdbc:Informatica:db2://host_name:port_no;DatabaseName=
     - Oracle: `jdbc:Informatica:oracle://host_name:port_no;ServiceName=
     - 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 options: 1 - Oracle 2 - Microsoft SQL Server 3 - IBM DB2 4 - Sybase ASE</td>
</tr>
<tr>
<td>Database user ID</td>
<td>Name for the domain configuration database user account.</td>
</tr>
<tr>
<td>Database user password</td>
<td>Password for the domain configuration database user account.</td>
</tr>
<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>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>
</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 appears, displaying the results of the system check.

14. Analyze the results of the system check.

Each requirement is listed in the table, 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 proceeding.
♦ [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.

16. Press n to stop the Informatica services installation or upgrade.

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, it is highly recommended that you resolve the failed requirements before proceeding.

Informatica Services Pre-Installation Tasks on Windows

Before you install the Informatica services on Windows, complete the following tasks.
Verify the Minimum System Requirements

Verify that your machine meets the minimum system requirements to install the Informatica server component.

The following table lists the minimum system requirements:

<table>
<thead>
<tr>
<th>RAM</th>
<th>Disk Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 GB</td>
<td>5 GB</td>
</tr>
</tbody>
</table>

Temporary Disk Space Requirements for Installation

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 following table lists the temporary disk space requirements during installation:

<table>
<thead>
<tr>
<th>Product</th>
<th>Disk Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installer</td>
<td>1 GB</td>
</tr>
<tr>
<td>Informatica Services</td>
<td>605 GB</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 requires 1 GB disk space for temporary files. Configure the environment variable if you do not want to create temporary files in the default drive.</td>
</tr>
<tr>
<td>PATH</td>
<td>The installer appends file paths required by Informatica to the PATH environment variable. Verify that the length of the PATH environment variable does not exceed the system limits.</td>
</tr>
</tbody>
</table>

Verify the Port Availability

The installer sets up the ports for components in the Informatica domain, and it designates the ports to use for application service processes that run on the node where you install Informatica.

You can specify the port numbers to use for the components and a range of 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>Domain 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>
<tr>
<td>Range of ports for application services</td>
<td>Range of port numbers that can be assigned to the application service processes that run on the node. When you create an application service in the domain, the Service Manager 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.</td>
</tr>
</tbody>
</table>

Guidelines for Port Configuration

The installer validates the port numbers that you specify to ensure that there will be no port conflicts in the domain. Use the following guidelines to determine the port numbers:

- The port number you specify for the domain and for each component in the domain must be unique.
- The port number for the domain and domain components cannot be within the range of the port numbers that you specify for the application service processes.
- The highest number in the range of port numbers that you specify for the application service processes must be at least three numbers higher than the lowest port number. For example, if the minimum port number in the range is 6400, the maximum port number must be at least 6403.
- The port numbers that you specify cannot be lower than 1025 or higher than 65535.

Create a System User Account

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.

Set Up a Keystore File

During installation, you can configure Informatica to use SSL certificates for secure communication between Informatica Administrator and the Service Manager. The installer can generate a self-signed certificate, or you can provide the location of a certificate signed by a certification authority.

You can use the keytool utility to generate a keystore file to store the SSL keys and certificates for a secure connection. Keytool is a key and certificate management utility to generate and administer SSL keys and certificates. The keys and certificates are stored in a keystore file. You can use a self-signed certificate or one signed by a certification authority (CA). To use a certificate signed by a CA, use keytool to generate a Certificate Signing Request (CSR) and apply for a digital identity certificate from a CA.

You can find the keytool utility in one of the following directories:

- %JAVA_HOME%/jre/bin
- InformaticaInstallDir/java/bin

For more information about using keytool, see the documentation on the following web site:

Note: After installation, you can also configure a secure connection when you create a Reporting Service, Metadata Manager Service, or a Web Services Hub in the domain. Use Informatica Administrator to specify the keystore files for the application services.

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 (END) site to a directory on your machine and then extract the installer files.

Run the Pre-Installation (i9Pi) System Check Tool

If you are installing Informatica in silent mode, run the Pre-installation (i9Pi) System Check Tool to verify whether the machine meets the system requirements for the installation.

1. Log in to the machine with a system user account.
2. Close all other applications.
3. Run the install.bat file from the root directory.
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 default directory is C:\.
   The directory names in the path must not contain spaces or the following special characters: @ | * $ ! % ( ) { } [ ] , ; '\n
9. Enter the starting port number for the node that is being created 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 domain configuration repository database information.
    The following table describes the database information for the domain configuration repository:

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

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.</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>
• To enter the connection information using a custom JDBC connection string, select **Custom JDBC connection string** and type the connection string.
  
  **IBM DB2:** jdbc:Informatica:db2://host_name:port_no;DatabaseName=
  
  **Oracle:** jdbc:Informatica:oracle://host_name:port_no;ServiceName=
  
  **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 proceeding 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.html.

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, it is highly recommended that you resolve the failed requirements before proceeding.

---

**Before you Create the Informatica Domain**

Informatica components store metadata in relational database repositories. The database requirements depend on the application services that you create in the domain and the number of data integration objects that you build and store in the repositories.

The domain stores configuration and user information in a domain configuration repository. You must set up the database for the domain configuration repository before installation. You specify the database connection information during installation.

Before you install the Informatica services, complete the following database setup tasks:

• Verify the database requirements.

• Set up the database for the domain configuration repository.
Verify the Database Requirements

Before you start the installation process, verify that the database server has adequate disk space for the domain configuration repository and other repositories in the domain.

You must set up the database for a repository before you create the application service in the domain. You specify the database connection information when you create the service.

The following table describes the database requirements for the domain configuration repository and other repositories in the domain:

<table>
<thead>
<tr>
<th>Informatica Component</th>
<th>Database Type</th>
<th>Disk Space</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informatica domain configuration repository</td>
<td>IBM DB2 UDB Microsoft SQL Server Oracle Sybase ASE</td>
<td>200 MB</td>
<td>Set up the database schema before you start the installation process.</td>
</tr>
<tr>
<td>Data Analyzer repository</td>
<td>IBM DB2 UDB Microsoft SQL Server Oracle Sybase ASE</td>
<td>60 MB</td>
<td>Set up the database before you create the Reporting Service.</td>
</tr>
<tr>
<td>Metadata Manager repository</td>
<td>IBM DB2 UDB Microsoft SQL Server Oracle</td>
<td>1 GB</td>
<td>Set up the database before you create the Metadata Manager Service.</td>
</tr>
<tr>
<td>PowerCenter data profiling warehouse</td>
<td>IBM DB2 UDB Microsoft SQL Server Oracle Sybase ASE</td>
<td>256 MB</td>
<td>Set up the database before you create the PowerCenter Repository Service.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Allocate more space based on the following factors:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- The amount of data you intend to profile.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Mode you run profile sessions: verbose or normal.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Types of tables: full or sampling.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Frequency you purge the data profiling warehouse.</td>
</tr>
<tr>
<td>PowerCenter repository</td>
<td>IBM DB2 UDB Microsoft SQL Server Oracle Sybase ASE</td>
<td>35 MB</td>
<td>Set up the database before you create the PowerCenter Repository Service.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Allocate more space based on the amount of metadata you want to store.</td>
</tr>
<tr>
<td>Reporting and Dashboards Service repository</td>
<td>IBM DB2 Microsoft SQL Server Oracle</td>
<td>10 MB</td>
<td>Set up the database before you create the Reporting and Dashboards Service.</td>
</tr>
</tbody>
</table>

Set Up the Domain Configuration Repository Database

Set up a database and user account for the domain configuration repository. The domain configuration repository stores metadata for the domain. When you install Informatica, you provide the database and user account information for the domain configuration repository. The Informatica installer uses JDBC to communicate with the domain configuration repository.
Use the following rules and guidelines when you set up the domain configuration database and user account:

- The database must be accessible to all gateway nodes in the Informatica domain.
- To prevent database errors in the domain configuration repository from affecting other repositories in the domain, create the domain configuration repository in a separate database schema with a different database user account.
- If you create more than one domain, each domain configuration repository must have a separate user account.

For more information about configuring the database, see the documentation for your database system.

**Oracle Database Requirements**

Use the following guidelines when you set up the repository on Oracle:

- Set the open_cursors parameter to 1000 or higher.
- Verify that the database user has CONNECT, RESOURCE, and CREATE VIEW privileges.

**IBM DB2 Database Requirements**

Use the following guidelines when you set up the repository on IBM DB2:

- If the repository is in an IBM DB2 9.7 database, verify that IBM DB2 Version 9.7 Fix Pack 7 or a later fix pack is installed.
- On the IBM DB2 instance where you create the database, set the following parameters to ON:
  - DB2_SKIPINSERTED
  - DB2_EVALUNCOMMITTED
  - DB2_SKIPDELETED
  - AUTO_RUNSTATS
- On the database, set the configuration parameters.
  The following table lists the configuration parameters that you must set:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>applheapsz</td>
<td>8192</td>
</tr>
<tr>
<td>appl_ctl_heap_sz</td>
<td>8192</td>
</tr>
<tr>
<td>logfilisz</td>
<td>8000</td>
</tr>
<tr>
<td>DynamicSections</td>
<td>3000</td>
</tr>
<tr>
<td>maxlocks</td>
<td>98</td>
</tr>
<tr>
<td>locklist</td>
<td>50000</td>
</tr>
<tr>
<td>auto_stmt_stats</td>
<td>ON  For IBM DB2 9.5 only.</td>
</tr>
</tbody>
</table>

- Set the tablespace pageSize parameter to 32768 bytes.
  In a single-partition database, specify a tablespace that meets the pageSize requirements. If you do not specify a tablespace, the default tablespace must meet the pageSize requirements.
In a multi-partition database, specify a tablespace that meets the pageSize requirements. Define the tablespace in the catalog partition of the database.

- Verify that the database user has CREATETAB, CONNECT, and BINDADD privileges.

**Note:** The default value for DynamicSections in DB2 is too low for the Informatica repositories. Informatica requires a larger DB2 package than the default. When you set up the DB2 database for the domain configuration repository or a Model repository, you must set the DynamicSections parameter to at least 3000. If the DynamicSections parameter is set to a lower number, you can encounter problems when you install or run Informatica. The following error message can appear:

```
[informatica][DB2 JDBC Driver]No more available statements. Please recreate your package with a larger dynamicSections value.
```

**Microsoft SQL Server Database Requirements**

Use the following guidelines when you set up the repository on Microsoft SQL Server:

- Set the read committed isolation level to READ_COMMITTED_SNAPSHOT to minimize locking contention.
  To set the isolation level for the database, run the following command:
  ```
  ALTER DATABASE DatabaseName SET READ_COMMITTED_SNAPSHOT ON
  ```
  To verify that the isolation level for the database is correct, run the following command:
  ```
  SELECT is_read_committed_snapshot_on FROM sys.databases WHERE name = DatabaseName
  ```
- The database user account must have the CONNECT, CREATE TABLE, and CREATE VIEW permissions.

**Sybase ASE Database Requirements**

Use the following guidelines when you set up the repository on Sybase ASE:

- Set the database server page size to 16K or higher. You must set the page size to 16K as this is a one-time configuration and cannot be changed afterwards.
- Set the database locking configuration to use row-level locking.
  The following table describes the database locking configuration that you must set:

<table>
<thead>
<tr>
<th>Database Configuration</th>
<th>Sybase System Procedure</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lock scheme</td>
<td>sp_configure &quot;lock scheme&quot;</td>
<td>0, datarows</td>
</tr>
</tbody>
</table>

- Set the Sybase database option ddl in tran to TRUE.
- Turn ON the Sybase database option select into/bulkcopy/pllsort.
- Enable the "select" privilege for the sysobjects system table.
- Create the following login script to disable the default VARCHAR truncation:
  ```
  create procedure dbo.sp_string_rtrunc_proc as set string_rtruncation on sp_modifyplogins "user_name", "login script", sp_string_rtrunc_proc
  ```
  The login script is executed every time the user logs into the Sybase instance. The stored procedure sets the parameter at the session level. The sp_modifyplogins system procedure updates "user_name" with the stored procedure as its "login script". The user must have permission to invoke the stored procedure.
- Verify that the database user has CREATE DEFAULT, CREATE PROCEDURE, CREATE RULE, CREATE TABLE, and CREATE VIEW permissions.
- Set the database configurations to the recommended baseline values.
The following table lists the database memory configuration parameters that you must set:

<table>
<thead>
<tr>
<th>Database Configuration</th>
<th>Sybase System Procedure</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum amount of total physical memory</td>
<td>sp_configure &quot;max memory&quot;</td>
<td>2097151</td>
</tr>
<tr>
<td>Procedure cache size</td>
<td>sp_configure &quot;procedure cache size&quot;</td>
<td>500000</td>
</tr>
<tr>
<td>Number of open objects</td>
<td>sp_configure &quot;number of open objects&quot;</td>
<td>5000</td>
</tr>
<tr>
<td>Number of open indexes</td>
<td>sp_configure &quot;number of open indexes&quot;</td>
<td>5000</td>
</tr>
<tr>
<td>Number of open partitions</td>
<td>sp_configure &quot;number of open partitions&quot;</td>
<td>5000</td>
</tr>
<tr>
<td>Heap memory per user</td>
<td>sp_configure &quot;heap memory per user&quot;</td>
<td>49152</td>
</tr>
<tr>
<td>Number of locks</td>
<td>sp_configure &quot;number of locks&quot;</td>
<td>100000</td>
</tr>
</tbody>
</table>

Adjust the above recommended values according to the operations that are performed on the database.
This chapter includes the following topics:

- Informatica Services Installation Overview, 23
- Installing the Informatica Services in Graphical Mode, 23
- Installing the Informatica Services in Console Mode, 36
- Installing the Informatica Services in Silent Mode, 47

Informatica Services Installation Overview

You can install the Informatica services on a Windows or UNIX machine. On Windows, you can run the installer in graphical or silent mode. On UNIX, you can run the installer in graphical, console, or silent mode.

Complete the Informatica pre-installation tasks to prepare for the installation. You can install the Informatica services on multiple machines. After installation, use Informatica Administrator to log in to the domain and create and configure the application services.

Create or Join a Domain

Create a domain if you are installing for the first time. Join a domain if you are installing on multiple machines and you have created a domain on another machine.

The Informatica domain is the fundamental administrative unit for services, users, and resources. A node is the logical representation of a single machine. A domain contains one or more nodes.

If you are installing on multiple machines, you can create multiple domains. If you create a domain, the node on this machine becomes a gateway node in the domain. You can select Enable Transport Layer Security (TLS) to set up secure communication between services within the domain.

When you install the Informatica services, you create a node on the machine. You can create a domain and add the node to the domain. If you do not create a domain, you can join the node to another domain.

If you join a domain, you can configure the node on this machine to be a gateway node. When you configure a gateway node, you can select Enable HTTPS to configure a secure connection to Informatica Administrator.

Installing the Informatica Services in Graphical Mode

You can install the Informatica services in graphical mode on UNIX or Windows.
If you run the Pre-Installation (i9Pi) System Check Tool before you perform the installation, the installer pre-populates certain fields, including the database connection and port number fields, with the information you entered during the system check.

If you install Informatica on the SUSE Linux Enterprise 11 platform, perform the installation in console mode or silent mode.

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

```
<InformaticaInstallationDir>/server/install.exe
```

### Creating a Domain

Create a domain if you are installing for the first time or if you want to administer nodes in separate domains.

1. Log in to the machine with a system user account.
2. Close all other applications.
3. Begin the installation.
   
   On Windows:
   a. Run install.bat from the root directory.
      
      The Informatica 9.5.1 HotFix 3 page appears.
   b. Select **Install or upgrade to Informatica 9.5.1 HotFix 3**.
   c. Select **Run the Pre-Installation (i9Pi) System Check Tool** to verify whether the machine meets the system requirements for the installation or upgrade.
   d. Click **Start**.
   
   On UNIX:
   a. Use a shell command line to run install.sh from the root directory.
      
      The installer displays the message to verify that the locale environment variables are set.
   b. 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.
   c. Press **1** to install or upgrade Informatica.
   d. Press **n** to skip the Pre-Installation (i9Pi) system check.
   e. Press **g** for graphical mode.
      
      The **Installation Type** page appears.
   f. Skip to step 5.
4. If you selected **Run the Pre-Installation (i9Pi) System Check Tool**, complete the following steps:
   a. From the Informatica Pre-Installation (i9Pi) System Check Tool **Welcome** page, click **Next**.
      
      The **System Information** page appears.
   b. Enter the absolute path for the installation directory. The default directory is `C:\`
      
      The directory names in the path must not contain spaces or the following special characters: `@ | $ # ! % ( ) [ ] { } , '`. On Windows, the installation directory path must be on the machine where you are installing Informatica.
   c. Enter the starting port number for the node that is being created on the machine. The default port number for the node is 6005.
   d. Click **Next**.
The **Database and JDBC Connection Information** page appears.

e. Enter the domain configuration repository database information.

The following table lists the database connection information 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: 1 - Oracle 2 - Microsoft SQL Server 3 - IBM DB2 4 - Sybase ASE</td>
</tr>
<tr>
<td>Database user ID</td>
<td>Name for the domain configuration database user account.</td>
</tr>
<tr>
<td>Database user password</td>
<td>Password for the domain configuration database user account.</td>
</tr>
</tbody>
</table>

The domain configuration repository must be accessible to all gateway nodes in the domain.

f. 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 connection properties you must specify:

<table>
<thead>
<tr>
<th>Property</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>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.
  IBM DB2: `jdbc:Informatica:db2://host_name:port_no;DatabaseName=`
  Oracle: `jdbc:Informatica:oracle://host_name:port_no;ServiceName=`
  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.

g. Click **Test Connection** to verify that you can connect to the database.

h. 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.
i. 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 proceeding 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.html.

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

k. If the Pre-Installation (i9Pi) System Check Tool finishes with failed requirements, click Cancel to quit the installation or upgrade. Resolve the failed requirements, and run the installation or upgrade 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, it is highly recommended that you resolve the failed requirements before proceeding.

5. Select Install Informatica <Version>.

6. Click Next.

   The Installation Pre-Requisites page displays the installation requirements. Verify that all requirements are met before you continue the installation.

7. Click Next.

   The License and Installation Directory page appears.

8. Enter the path and file name of the Informatica license key.

9. Enter the absolute path for the installation directory.

   The directory names in the path must not contain spaces or the following special characters: @|* $ # ! % ( ) { }[,]'.

   On Windows, the installation directory path must be on the machine where you are installing Informatica.

10. Click Next.

   The Pre-Installation Summary page appears.

11. Review the installation information, and click Install to continue.

   The installer copies the Informatica files to the installation directory. After the installer has copied the Informatica files to the installation directory, the Domain Selection page appears.

12. Select Create a domain.

   If you create a domain, the node on the current machine becomes a gateway node on the domain. The gateway node contains a Service Manager that manages all domain operations.

13. To set up secure communication between services within the domain, select Enable Transport Layer Security (TLS) for the domain.

14. To secure the connection to Informatica Administrator, select Enable HTTPS for Informatica Administrator.
The following table describes the properties that you set for an HTTPS connection:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable HTTPS for Informatica Administrator</td>
<td>Select this option to secure the connection to Informatica Administrator. To use unsecure HTTP connection, leave the check box clear.</td>
</tr>
<tr>
<td>Port</td>
<td>The port to use for communication between Informatica Administrator and the Service Manager.</td>
</tr>
<tr>
<td>Use a keystore file generated by the installer</td>
<td>Use a self-signed keystore file generated by the installer. The installer creates a keystore file named Default.keystore in the following location: <code>&lt;InformaticaInstallationDir&gt;\tomcat\conf</code></td>
</tr>
<tr>
<td>Use an existing keystore</td>
<td>Use a keystore file that you create. You can use a keystore file with a self-signed certificate or a certificate signed by a certification authority.</td>
</tr>
<tr>
<td>Keystore password</td>
<td>A plain-text password for the keystore file. Required if you use a keystore file that you create.</td>
</tr>
<tr>
<td>Keystore file directory</td>
<td>Location of the keystore file. Required if you use a keystore file that you create.</td>
</tr>
</tbody>
</table>

15. Click **Next**.

The **Domain Configuration Repository** page appears.

16. Enter the database and user account information for the domain configuration repository.

   The domain configuration repository stores metadata for domain operations and user authentication. The database must be accessible to all gateway nodes in the domain.

   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. In a single partition database, if this option is not selected, the installer creates the tables in the default tablespace. In a multi-partition database, select this option and specify the name of the tablespace that resides in the catalog partition of the database.</td>
</tr>
</tbody>
</table>
17. 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 connection properties you must specify:

<table>
<thead>
<tr>
<th>Property</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>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.
   IBM DB2: jdbc:Informatica:db2://host_name:port_no;DatabaseName=
   Oracle: jdbc:Informatica:oracle://host_name:port_no;ServiceName=
   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.

18. Click Test Connection to verify that you can connect to the database, and then click OK to continue.
19. Click Next.
   The Domain and Node Configuration page appears.
20. Enter the information for the domain and the node that you want to create.
The following table describes the properties that you set for the domain and gateway node.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain name</td>
<td>Name of the domain to create. 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: ` % * + ; * ? , &lt; &gt; /</td>
</tr>
<tr>
<td>Node host name</td>
<td>Host name of the machine on which to create the node. The node host name cannot contain the underscore (_) character. If the machine has a single network name, use the default host name. If the a 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. <strong>Note:</strong> Do not use localhost. The host name must explicitly identify the machine.</td>
</tr>
<tr>
<td>Node name</td>
<td>Name of the node to create on this machine. The node name is not the host name for the machine.</td>
</tr>
<tr>
<td>Node port number</td>
<td>Port number for the node. The default port number for the node is 6005. If the port number is not available on the machine, the installer displays the next available port number.</td>
</tr>
</tbody>
</table>
| Domain user name      | User name for the domain administrator. You can use this user name to initially log in to Informatica Administrator. Use the following guidelines:  
- The name is not case sensitive and cannot exceed 128 characters.  
- The name cannot include a tab, newline character, or the following special characters: % * + / ? ; < >  
- The name can include an ASCII space character except for the first and last character. Other space characters are not allowed. |
| Domain password       | Password for the domain administrator. The password must be more than 2 characters and must not exceed 16 characters.                        |
| Confirm password      | Enter the password again to confirm.                                                                                                        |

21. To display the default ports for the domain and node components assigned by the installer, select **Display advanced port configuration page**.

   The installer displays the default port numbers assigned to the domain and node. You can modify the port numbers and specify a different range of port numbers for the application service processes. If you do not select the option, the installer does not display the default port numbers and you cannot modify the assigned port numbers.
   a. Click **Next**.
   b. In the **Port Configuration** page, enter the port numbers to use.

   Specify the port numbers to use for the domain and node components. Also specify a range of port numbers to use for the service processes that will run on the node. You can use the default port numbers or specify new port numbers. Verify that the port numbers you enter are not used by other applications.
The following table describes the ports you can set:

<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 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>
<tr>
<td>Maximum port number</td>
<td>Highest port number in the range of port numbers that can be assigned to the application service processes that run on this node. Default is 6113.</td>
</tr>
</tbody>
</table>

22. Click **Next**.

If you are installing on UNIX, the **Post-Installation Summary** page appears, indicating whether the installation completed successfully. It also shows the status of the installed components and their configuration. Click **Done** to close the installer.

If you are installing on Windows, the installer 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.

a. 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>
</tbody>
</table>
| User name                                     | 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. |
| Password                                      | Password for the user account with which to run the Informatica Windows service.  |

b. Click **Next**. The **Post-Installation Summary** page appears, indicating whether the installation completed successfully. It also shows the status of the installed components and their configuration.
c. Click **Done** to close the installer.

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

**Joining a Domain**

You can join a domain if you are installing on multiple machines and you have created a domain on another machine.

1. Log in to the machine with a system user account.
2. Close all other applications.
3. Begin the installation.
   
   **On Windows:**
   a. Run `install.bat` from the root directory.
      
      The **Informatica 9.5.1 HotFix 3** page appears.
   b. Select **Install or upgrade to Informatica 9.5.1 HotFix 3**.
   c. Select **Run the Pre-Installation (i9Pi) System Check Tool** to verify whether the machine meets the system requirements for the installation or upgrade.
   d. Click **Start**.
   
   **On UNIX:**
   a. Use a shell command line to run `install.sh` from the root directory.
      
      The installer displays the message to verify that the locale environment variables are set.
   b. 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.
   c. Press `1` to install or upgrade Informatica.
   d. Press `n` to skip the Pre-Installation (i9Pi) system check.
   e. Press `g` for graphical mode.
      
      The **Installation Type** page appears.
   f. Skip to step 5.
4. If you selected **Run the Pre-Installation (i9Pi) System Check Tool**, complete the following steps:
   a. From the Informatica Pre-Installation (i9Pi) System Check Tool **Welcome** page, click **Next**.
      
      The **System Information** page appears.
   b. Enter the absolute path for the installation directory. The default directory is `C:\`.
      
      The directory names in the path must not contain spaces or the following special characters: `@ | * $ # ! % ( ) [ ] , ;`.
      
      On Windows, the installation directory path must be on the machine where you are installing Informatica.
   c. Enter the starting port number for the node that is being created on the machine. The default port number for the node is 6005.
   d. Click **Next**.
      
      The **Database and JDBC Connection Information** page appears.
   e. Enter the domain configuration repository database information.
The following table lists the database connection information 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: 1 - Oracle 2 - Microsoft SQL Server 3 - IBM DB2 4 - Sybase ASE</td>
</tr>
<tr>
<td>Database user ID</td>
<td>Name for the domain configuration database user account.</td>
</tr>
<tr>
<td>Database user password</td>
<td>Password for the domain configuration database user account.</td>
</tr>
</tbody>
</table>

The domain configuration repository must be accessible to all gateway nodes in the domain.

f. 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 connection properties you must specify:

<table>
<thead>
<tr>
<th>Property</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>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.
  IBM DB2: jdbc:Informatica:db2://host_name:port_no;DatabaseName=  
  Oracle: jdbc:Informatica:oracle://host_name:port_no;ServiceName=  
  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.

g. Click Test Connection to verify that you can connect to the database.

h. 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.

i. 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 proceeding 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.html`.

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

The **Installation Type** page appears.

k. If the Pre-Installation (i9Pi) System Check Tool finishes with failed requirements, click **Cancel** to quit the installation or upgrade. Resolve the failed requirements, and run the installation or upgrade 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, it is highly recommended that you resolve the failed requirements before proceeding.

5. Select **Install Informatica <Version>**.

6. Click **Next**.

   The **Installation Pre-Requisites** page displays the installation requirements. Verify that all requirements are met before you continue the installation.

7. Click **Next**.

   The **License and Installation Directory** page appears.

8. Enter the path and file name of the Informatica license key.

9. Enter the absolute path for the installation directory.

   The directory names in the path must not contain spaces or the following special characters: @|$!%^(){}[],;'.

   On Windows, the installation directory path must be on the machine where you are installing Informatica.

10. Click **Next**.

   The **Pre-Installation Summary** page appears.

11. Review the installation information, and click **Install** to continue.

   The installer copies the Informatica files to the installation directory. After the installer has copied the Informatica files to the installation directory, the **Domain Selection** page appears.

12. Select **Join a Domain**.

13. Select the type of node that you want to create.

   To create a gateway node, select **Configure this node as a gateway**. To create a worker node, clear the option.

14. Click **Next**.

   The **Domain Configuration** page appears.

15. Enter the information for the domain that you want to join.
The following table describes the properties that you specify for the domain:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain name</td>
<td>Name of the domain to join.</td>
</tr>
<tr>
<td>Gateway node host</td>
<td>Host name of the machine that hosts the gateway node for the domain.</td>
</tr>
<tr>
<td>Gateway node port</td>
<td>Port number of the gateway node.</td>
</tr>
<tr>
<td>Domain user name</td>
<td>User name of the administrator for the domain you want to join.</td>
</tr>
<tr>
<td>Domain password</td>
<td>Password for the domain administrator.</td>
</tr>
</tbody>
</table>


17. Enter the information for the node you want to create.

The following table describes the properties that you set for the node:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host name</td>
<td>Host name for the node. The node host name cannot contain the underscore (_) character.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> Do not use localhost. The host name must explicitly identify the machine.</td>
</tr>
<tr>
<td>Node name</td>
<td>Name of the node to create on this machine. The node name is not the host name for the machine.</td>
</tr>
<tr>
<td>Port number</td>
<td>Port number for the node.</td>
</tr>
</tbody>
</table>

18. To display the default ports for the domain and node components assigned by the installer, select Display advanced port configuration page.

The installer displays the default port numbers assigned to the domain and node. You can modify the port numbers and specify a different range of port numbers for the application service processes. If you do not select the option, the installer does not display the default port numbers and you cannot modify the assigned port numbers.

   a. Click Next.
   b. In the Port Configuration page, enter the port numbers to use.

   Specify the port numbers to use for the domain and node components. Also specify a range of port numbers to use for the service processes that will run on the node. You can use the default port numbers or specify new port numbers. Verify that the port numbers you enter are not used by other applications.
The following table describes the ports you can set:

<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 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>
<tr>
<td>Minimum port number</td>
<td>Lowest port number in the range of port numbers that can be assigned to the application service processes that run on this node. Default is 6013.</td>
</tr>
<tr>
<td>Maximum port number</td>
<td>Highest port number in the range of port numbers that can be assigned to the application service processes that run on this node. Default is 6113.</td>
</tr>
</tbody>
</table>

19. Click **Next**.

The **Port Configuration** page appears.

20. Enter the port numbers to use for the Informatica domain components.

Specify the port numbers to use for the domain and node components. Also specify a range of port numbers to use for the service processes that will run on the node. You can use the default port numbers or specify new port numbers. Verify that the port numbers you enter are not used by other applications.

The following table describes the ports that you specify:

<table>
<thead>
<tr>
<th>Port Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<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>Minimum port number</td>
<td>Lowest port number in the range of port numbers that can be assigned to the application service processes that run on this node.</td>
</tr>
<tr>
<td>Maximum port number</td>
<td>Highest port number in the range of port numbers that can be assigned to the application service processes that run on this node.</td>
</tr>
</tbody>
</table>

21. Click **Next**.
If you are installing on UNIX, the Post-Installation Summary page appears, indicating whether the installation completed successfully. It also shows the status of the installed components and their configuration. Click Done to close the installer.

If you are installing on Windows, the installer 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.

a. 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></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 service.</td>
</tr>
</tbody>
</table>

b. Click Next. The Post-Installation Summary page appears, indicating whether the installation completed successfully. It also shows the status of the installed components and their configuration.

b. Click Done to close the installer.

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

**Installing the Informatica Services in Console Mode**

You can install the Informatica services in console mode on UNIX.

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

If you run the Pre-Installation (i9Pi) System Check Tool before you perform the installation, the installer pre-populates certain input fields, including the database connection and port number fields, with the information you entered during the system check.

**Creating a Domain**

Create a domain if you are installing for the first time or if you want to administer nodes in separate domains.

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 y to run the Pre-Installation (i9Pi) System Check Tool that verifies whether the machine meets the system requirements for the installation or upgrade.

7. If you entered y to run the Pre-Installation (i9Pi) System Check Tool, complete the following steps:
   a. From the Informatica Pre-Installation (i9Pi) System Check Tool Welcome section, press Enter. The System Information section appears.
   b. Type the absolute path for the installation directory. The directory names in the path must not contain spaces or the following special characters: @|* $ ! % ( ) { } [ ] , ; ' Default is /home/toolinst.
   c. Press Enter.
   d. Type the starting port number for the node that is being created or upgrade on the machine. Default is 6005.
   e. Press Enter.
   f. 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.
   g. Enter the JDBC connection information.
      ◆ To enter the connection information using a custom JDBC connection string, type the connection string.
         IBM DB2: jdbc:Informatica:db2://host_name:port_no;DatabaseName=
         Oracle: jdbc:Informatics:oracle://host_name:port_no;ServiceName=
         SQL Server: jdbc:Informatica:sqiserver://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 lists the database connection information 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: 1 - Oracle 2 - Microsoft SQL Server 3 - IBM DB2 4 - Sybase ASE</td>
</tr>
<tr>
<td>Database user ID</td>
<td>Name for the domain configuration database user account.</td>
</tr>
<tr>
<td>Database user password</td>
<td>Password for the domain configuration database user account.</td>
</tr>
<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>Database service name</td>
<td>Password for the domain configuration database user account.</td>
</tr>
<tr>
<td></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 appears, displaying the results of the system check.

h. Analyze the results of the system check.

Each requirement is listed in the table, 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 proceeding.
- **[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.

i. Press **Enter** to close the Pre-Installation (i9Pi) System Check Tool.

j. If the Pre-Installation (i9Pi) System Check Tool finishes with failed requirements, press **n** to quit the installation or upgrade. Resolve the failed requirements, and run the installation or upgrade 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, it is highly recommended that you resolve the failed requirements before proceeding.

8. Press **y** to proceed.
9. Press **c** for console mode.
10. Press **1** to install Informatica.
11. Type the path and file name of the Informatica license key.
12. Press **Enter**.
13. Type the absolute path for the installation directory.
   The directory names in the path must not contain spaces or the following special characters: @|* $ ! % \(){}\[\] , ;
   * Default is /home/toolinst.

14. Press Enter.

15. Review the installation information and press Enter to continue.
   The installer copies the Informatica files to the installation directory.

16. Enter 1 to create a domain.
   If you create a domain, the node on the current machine becomes a gateway node on the domain. The gateway
   node contains a Service Manager that manages all domain operations.

   If you enable Transport Layer Security (TLS), you set up secure communication between services within the
   domain.

18. Specify the connection details to Informatica Administrator.
   a. Select whether to set up a secure connection to Informatica Administrator.
      The following table describes the options available to create or disable a secure connection to Informatica
      Administrator:

      | Option                        | Description                                      |
      |-------------------------------|--------------------------------------------------|
      | 1 - Enable HTTPS for Informatica Administrator | Set up a secure connection to Informatica Administrator. |
      | 2 - Disable HTTPS              | Do not set up a secure connection to Informatica Administrator. |

   b. If you are enabling HTTPS, enter the keystore file and port number to use to secure the connection.
      The following table describes the HTTPS connection information you must enter if you enable HTTPS:

      | Option      | Description                                      |
      |-------------|--------------------------------------------------|
      | Port        | Port number for the HTTPS connection.            |
      | Keystore file| Select whether to use a keystore file generated by the installer or a keystore file you create. You can use a keystore file with a self-signed certificate or a certificate signed by a certification authority.  
      |             | 1 - Use a keystores generated by the installer  |
      |             | 2 - Use an existing keystore                    |
      |             | If you select to use a keystore file generated by the installer, the installer creates a self-signed keystore file named Default.keystore in the following location: <InformaticaInstallationDir>/tomcat/conf/ |
      |             | If you use an existing keystore, enter the password and location of the keystore file. |

19. Select the database to use for the domain configuration repository.
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>

The Informatica domain configuration repository stores metadata for domain operations and user authentication. The domain configuration repository must be accessible to all gateway nodes in the domain.

20. 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>

21. 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 tables in the default tablespace. In a multi-partition database, you must select Yes.</td>
</tr>
<tr>
<td>Tablespace</td>
<td>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 you select Yes to configure the tablespace, enter the name of the tablespace in which to create the tables.</td>
</tr>
<tr>
<td></td>
<td>In a multi-partition database, specify the name of the tablespace that resides in the catalog partition of the database.</td>
</tr>
</tbody>
</table>

22. If you select Microsoft SQL Server, enter the following information at the prompt:

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 parameter is blank, the installer creates the tables in the default schema.</td>
</tr>
</tbody>
</table>

23. 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.
24. Enter the JDBC connection information.
   ♦ To enter the connection information using a custom JDBC connection string, type the connection string.
     IBM DB2: jdbc:Informatica:db2://host_name:port_no;DatabaseName=
     Oracle: jdbc:Informatica:oracle://host_name:port_no;ServiceName=
     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 database connection information:

     | Prompt                      | Description                                                                 |
     |-----------------------------|-----------------------------------------------------------------------------|
     | Database type               | Type of database for the domain configuration repository. Select from the following options: |
     |                             | 1 - Oracle                                                                  |
     |                             | 2 - Microsoft SQL Server                                                    |
     |                             | 3 - IBM DB2                                                                 |
     |                             | 4 - Sybase ASE                                                              |
     | Database user ID            | Name for the domain configuration database user account.                    |
     | Database user password      | Password for the domain configuration database user account.                |
     | Database host name          | Host name for the database.                                                |
     | Database port number        | Port number for the database.                                              |
     | Database service name       | 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. |

25. If the database contains a domain configuration repository for a previous domain, select to overwrite the data or set up another database.
    The following table describes the options of overwriting the data or setting up another database when you create a domain configuration repository for a previous domain:

     | Option  | Description                                                                 |
     |---------|-----------------------------------------------------------------------------|
     | 1 - OK  | Enter the connection information for a new database.                        |
     | 2 - Continue | The installer overwrites the data in the database with new domain configuration. |

26. Enter the information for the domain and node that you want to create.
The following table describes the properties that you set for the domain and node:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain name</td>
<td>Name of the domain to create. 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: ` % * + ; * ? , &lt; &gt; \ /</td>
</tr>
<tr>
<td>Node host name</td>
<td>Host name of the machine on which to create the node. The node host name cannot contain the underscore (_) character. If the machine has a single network name, use the default host name. If the a 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. <strong>Note:</strong> Do not use localhost. The host name must explicitly identify the machine.</td>
</tr>
<tr>
<td>Node name</td>
<td>Name of the node to create on this machine. The node name is not the host name for the machine.</td>
</tr>
<tr>
<td>Node port number</td>
<td>Port number for the node. The default port number for the node is 6005. If the port number is not available on the machine, the installer displays the next available port number.</td>
</tr>
</tbody>
</table>
| Domain user name  | User name for the domain administrator. You can use this user name to initially log in to Informatica Administrator. Use the following guidelines:  
|                   | - The name is not case sensitive and cannot exceed 128 characters. 
|                   | - The name cannot include a tab, newline character, or the following special characters: % * + / ; < > 
|                   | - The name can include an ASCII space character except for the first and last character. Other space characters are not allowed. |
| Domain password   | Password for the domain administrator. The password must be more than 2 characters and must not exceed 16 characters.                        |
| Confirm password  | Enter the password again to confirm.                                                                                                           |

27. Select whether to display the default ports for the domain and node components assigned by the installer. The following table describes the advanced port configuration page:

<table>
<thead>
<tr>
<th>Prompt</th>
<th>Description</th>
</tr>
</thead>
</table>
| Display advanced port configuration page    | Select whether to display the port numbers for the domain and node components assigned by the installer: 
|                                             | 1 - No 
|                                             | 2 - Yes 
|                                             | If you select Yes, the installer displays the default port numbers assigned to the domain components. You can specify the port numbers to use for the domain and node components. You can also specify a range of port numbers to use for the service process that will run on the node. You can use the default port numbers or specify new port numbers. Verify that the port numbers you enter are not used by other applications. |

28. If you display the port configuration page, enter new the port numbers at the prompt or press Enter to use the default port numbers.
The following table describes the port types that are listed in the advanced port configuration page:

<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 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</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>port</td>
<td></td>
</tr>
<tr>
<td>Informatica Administrator</td>
<td>Port number used by Informatica Administrator. Default is 6008.</td>
</tr>
<tr>
<td>port</td>
<td></td>
</tr>
<tr>
<td>Informatica Administrator</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>
<tr>
<td>shutdown port</td>
<td></td>
</tr>
<tr>
<td>Minimum port number</td>
<td>Lowest port number in the range of port numbers that can be assigned to the application service processes that run on this node. Default is 6013.</td>
</tr>
<tr>
<td>Maximum port number</td>
<td>Highest port number in the range of port numbers that can be assigned to the application service processes that run on this node. Default is 6113.</td>
</tr>
</tbody>
</table>

The Post-installation Summary indicates whether the installation completed successfully. You can view the installation log files to get more information about the tasks performed by the installer and to view configuration properties for the installed components.

**Joining a Domain**

You can join a domain if you are installing on multiple machines and you have created a domain on another machine.

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 `y` to run the Pre-Installation (i9Pi) System Check Tool that verifies whether the machine meets the system requirements for the installation or upgrade.
7. If you entered `y` to run the Pre-Installation (i9Pi) System Check Tool, complete the following steps:
   a. From the Informatica Pre-Installation (i9Pi) System Check Tool **Welcome** section, press **Enter**.
      The **System Information** section appears.
   b. Type the absolute path for the installation directory.
      The directory names in the path must not contain spaces or the following special characters: `@*$#!%{ } [ ] ; :` 'Default is `/home/toolinst`. 
c. Press Enter.

d. Type the starting port number for the node that is being created or upgrade on the machine. Default is 6005.

e. Press Enter.

f. 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.

g. Enter the JDBC connection information.

- To enter the connection information using a custom JDBC connection string, type the connection string.
  - **IBM DB2**: `jdbc:Informatica:db2://host_name:port_no;DatabaseName=
  - **Oracle**: `jdbc:Informatica:oracle://host_name:port_no;ServiceName=
  - **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 lists the database connection information 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>
<tr>
<td>Database user ID</td>
<td>Name for the domain configuration database user account.</td>
</tr>
<tr>
<td>Database user password</td>
<td>Password for the domain configuration database user account.</td>
</tr>
<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>Database service name</td>
<td>Password for the domain configuration database user account.</td>
</tr>
<tr>
<td></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 appears, displaying the results of the system check.

h. Analyze the results of the system check.
Each requirement is listed in the table, 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 proceeding.
- **[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.

i. Press **Enter** to close the Pre-Installation (i9Pi) System Check Tool.

j. If the Pre-Installation (i9Pi) System Check Tool finishes with failed requirements, press **n** to quit the installation or upgrade. Resolve the failed requirements, and run the installation or upgrade 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, it is highly recommended that you resolve the failed requirements before proceeding.

8. Press **y** to proceed.

9. Press **c** for console mode.

10. Press **1** to install Informatica.

11. Type the path and file name of the Informatica license key.

12. Press **Enter**.

13. Type the absolute path for the installation directory.

   The directory names in the path must not contain spaces or the following special characters: `@!$%^(){}[].;`

   * Default is `/home/toolinst`.

14. Press **Enter**.

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

   The installer copies the Informatica files to the installation directory.

16. Press **2** to join a domain.

   The installer creates a node on this machine. You can specify the type of node to create and the domain to join.

17. Select the type of node you want to create.

   The following table describes that types of nodes that you can create:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configure this node as a</td>
<td>Select whether to configure the node as a gateway or worker node.</td>
</tr>
<tr>
<td>gateway</td>
<td>1 - Yes</td>
</tr>
<tr>
<td></td>
<td>2 - No</td>
</tr>
<tr>
<td></td>
<td>Select 1 to configure a gateway node or 2 to configure a worker node.</td>
</tr>
</tbody>
</table>

18. At the prompt, enter the information for the domain that you want to join.
The following table describes the properties that you specify for the domain:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain name</td>
<td>Name of the domain to join.</td>
</tr>
<tr>
<td>Gateway node host</td>
<td>Host name of the machine that hosts the gateway node for the domain.</td>
</tr>
<tr>
<td>Gateway node port</td>
<td>Port number of the gateway node.</td>
</tr>
<tr>
<td>Domain user name</td>
<td>User name of the administrator for the domain you want to join.</td>
</tr>
<tr>
<td>Domain password</td>
<td>Password for the domain administrator.</td>
</tr>
</tbody>
</table>

19. At the prompt, enter the information for the node that you want to create. The following table describes the properties that you specify for the node:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host name</td>
<td>Host name for the node. The node host name cannot contain the underscore (_).</td>
</tr>
<tr>
<td></td>
<td>Note: Do not use localhost. The host name must explicitly identify the machine.</td>
</tr>
<tr>
<td>Node name</td>
<td>Name of the node to create on this machine. The node name is not the host name for the machine.</td>
</tr>
<tr>
<td>Port number</td>
<td>Port number for the node.</td>
</tr>
</tbody>
</table>

20. Select whether to display the default ports for the domain and node components assigned by the installer. The following table describes the advanced port configuration page:

<table>
<thead>
<tr>
<th>Prompt</th>
<th>Description</th>
</tr>
</thead>
</table>
| Display advanced port configuration page | Select whether to display the port numbers for the domain and node components assigned by the installer: 1 - No 2 - Yes  
If you select Yes, the installer displays the default port numbers assigned to the domain components. You can specify the port numbers to use for the domain and node components. You can also specify a range of port numbers to use for the service process that will run on the node. You can use the default port numbers or specify new port numbers. Verify that the port numbers you enter are not used by other applications. |

21. If you display the port configuration page, enter new port numbers at the prompt or press Enter to use the default port numbers.
The following table describes the port types that are listed in the advanced port configuration page:

<table>
<thead>
<tr>
<th>Port Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<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>Minimum port number</td>
<td>Lowest port number in the range of port numbers that can be assigned to the application service processes that run on this node.</td>
</tr>
<tr>
<td>Maximum port number</td>
<td>Highest port number in the range of port numbers that can be assigned to the application service processes that run on this node.</td>
</tr>
</tbody>
</table>

The Post-installation Summary indicates whether the installation completed successfully. You can view the installation log files to get more information about the tasks performed by the installer and to view configuration properties for the installed components.

### Installing the Informatica Services in Silent Mode

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

Copy the Informatica installation files to the hard disk on the machine where you plan to install the Informatica. If you install on a remote machine, verify that you can access and create files on the remote machine.

To install in silent mode, complete the following tasks:

1. Configure the installation properties file and specify the installation options in the properties file.
2. Run the installer with the installation properties file.

### Configuring the Properties File

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

The sample SilentInput.properties file is stored in the root directory of the DVD or the installer download location. After you customize the file, re-save it with the file name SilentInput.properties.

1. Go to the root of the directory that contains the installation files.
2. Locate the sample SilentInput.properties file.
3. Create a backup copy of the SilentInput.properties file.
4. Use a text editor to open the file and modify the values of the installation parameters.
The following table describes the installation parameters that you can modify:

<table>
<thead>
<tr>
<th>Property Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LICENSE_KEY_LOC</td>
<td>Absolute path and file name of the license key file.</td>
</tr>
<tr>
<td>USER_INSTALL_DIR</td>
<td>Directory in which to install Informatica.</td>
</tr>
<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>HTTPS_ENABLED</td>
<td>Indicates whether to secure the connection to Informatica Administrator. If the value is 0, the installer sets up an unsecure HTTP connection to Informatica Administrator. If the value is 1, the installer sets up a secure HTTPS connection to Informatica Administrator.</td>
</tr>
<tr>
<td>DEFAULT_HTTPS_ENABLED</td>
<td>Indicates whether the installer creates a keystore file. If the value is 1, the installer creates a keystore and uses it for the HTTPS connection. If the value is 0, the installer uses a keystore file that you specify.</td>
</tr>
<tr>
<td>CUSTOM_HTTPS_ENABLED</td>
<td>Indicates whether the installer uses an existing keystore file. If the value is 1, the installer uses a keystore file that you specify. If DEFAULT_HTTPS_ENABLED=1, you must set this parameter to 0. If DEFAULT_HTTPS_ENABLED=0, you must set this parameter to 1.</td>
</tr>
<tr>
<td>KSTORE_PSSWD</td>
<td>Plain text password for the keystore file.</td>
</tr>
<tr>
<td>KSTORE_FILE_LOCATION</td>
<td>Absolute path and file name of the keystore file.</td>
</tr>
<tr>
<td>HTTPS_PORT</td>
<td>Port number to use for the secure connection to Informatica Administrator.</td>
</tr>
<tr>
<td>CREATE_DOMAIN</td>
<td>Indicates whether to create an Informatica domain. If the value is 1, the installer creates a node and an Informatica domain. If the value is 0, the installer creates a node and joins the node to another domain created in a previous installation.</td>
</tr>
<tr>
<td>JOIN_DOMAIN</td>
<td>Indicates whether to join the node to another domain created in a previous installation. If the value is 1, the installer creates a node and joins the node to another domain. If CREATE_DOMAIN=1, you must set this parameter to 0. If CREATE_DOMAIN=0, you must set this parameter to 1.</td>
</tr>
<tr>
<td>SSL_ENABLED</td>
<td>Enables or disables Transport Layer Security (TLS). Indicates whether to set up secure communication between services within the domain. If the value is true, secure communication between services within the domain is enabled. You can set this property to true if CREATE_DOMAIN=1. You must set this property to true if JOIN_DOMAIN=1.</td>
</tr>
<tr>
<td>SERVES_AS_GATEWAY</td>
<td>Indicates whether to create a gateway or worker node. If the value is 1, the installer configures the node as a gateway node. If the value is 0, the installer configures the node as a worker node.</td>
</tr>
<tr>
<td>Property Name</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| **DB_TYPE**   | Database for the domain configuration repository. Enter one of the following values:  
- Oracle  
- MSSQLServer  
- DB2  
- Sybase |
| **DB_UNAME**  | Database user account name for the domain configuration repository. |
| **DB_PASSWD** | Password for the database user account. |
| **SQLSERVER_SCHEMA_NAME** | 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. |
| **TRUSTED_CONNECTION** | 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. |
| **DB2_TABLESPACE** | For IBM DB2. Name of the tablespace in which to create the tables. Specify a tablespace that meets the pageSize requirement of 32768 bytes.  
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. |
| **DB_CUSTOM_STRING_SELECTION** | Determines whether to use a JDBC URL or a custom connection string to connect to the domain configuration 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. |
| **DB_SERVICENAME** | Required if DB_CUSTOM_STRING_SELECTION=0.  
Service name for Oracle and IBM DB2 databases.  
Database name for Microsoft SQL Server and Sybase ASE. |
| **DB_ADDRESS** | Required if DB_CUSTOM_STRING_SELECTION=0.  
Host name and port number for the database instance in the format HostName:Port. |
| **ADVANCE_JDBC_PARAM** | You can set this parameter if DB_CUSTOM_STRING_SELECTION=0.  
Optional parameters to include in the JDBC URL connection string. Verify that the parameter string is valid. The installer does not validate the parameter string before it adds the string to the JDBC URL. If this parameter is empty, the installer creates the JDBC URL without additional parameters. |
| **DB_CUSTOM_STRING** | Required if DB_CUSTOM_STRING_SELECTION=1.  
Valid custom JDBC connection string. |
<table>
<thead>
<tr>
<th>Property Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOMAIN_NAME</td>
<td>Required if CREATE_DOMAIN=1. Name of the domain to create. 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: ` % * + ; * ? , &lt; &gt; /</td>
</tr>
</tbody>
</table>
| DOMAIN_HOST_NAME   | If you create a domain, this is the host name of the machine on which to create the node. 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.  
If you join a domain, this is the host name of the machine that hosts the gateway node of the domain you want to join. 
Note: Do not use localhost. The host name must explicitly identify the machine. |
| NODE_NAME          | Name of the node to create on this machine. The node name is not the host name for the machine.                                                                                                               |
| DOMAIN_PORT        | If you create a domain, this is the port number for the node to create. The default port number for the node is 6005. If the default port number is not available on the machine, the installer displays the next available port number. 
If you join a domain, this is the port number of the gateway node of the domain you want to join. |
| DOMAIN_USER        | User name for the domain administrator. If you create a domain, you can use this user name to initially log in to Informatica Administrator. Use the following guidelines:  
- The name is not case sensitive and cannot exceed 128 characters.  
- The name cannot include a tab, newline character, or the following special characters: ``` 
  % * + / . ? ; < > ```  
- The name can include an ASCII space character except for the first and last character. Other space characters are not allowed.  
If you join a domain, this is the user name to use to log in to the domain that you want to join. |
<p>| DOMAIN_PSSWD       | Password for the domain administrator. The password must be more than 2 characters but cannot exceed 16 characters.                                                                                           |
| DOMAIN_CNFRM_PSSWD | Enter the password again to confirm.                                                                                                                                                                         |
| JOIN_NODE_NAME     | Required if JOIN_DOMAIN=1. Name of the node to create on this machine. The node name is not the host name for the machine.                                                                                  |
| JOIN_HOST_NAME     | Required if JOIN_DOMAIN=1. Host name of the machine that hosts the gateway node of the domain you want to join.                                                                                             |
| JOIN_DOMAIN_PORT   | Required if JOIN_DOMAIN=1. Port number of the gateway node of the domain you want to join.                                                                                                                    |</p>
<table>
<thead>
<tr>
<th>Property Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADVANCE_PORT_CONFIG</td>
<td>Indicates whether to display the list of port numbers for the domain and node components. If the value is 0, the installer assigns default port numbers to the domain and node components. If the value is 1, you can set the port numbers for the domain and node components.</td>
</tr>
<tr>
<td>MIN_PORT</td>
<td>You can set this parameter if ADVANCE_PORT_CONFIG=1. Lowest port number in the range of port numbers that can be assigned to the application service processes that run on this node.</td>
</tr>
<tr>
<td>MAX_PORT</td>
<td>You can set this parameter if ADVANCE_PORT_CONFIG=1. Highest port number in the range of port numbers that can be assigned to the application service processes that run on this node.</td>
</tr>
<tr>
<td>TOMCAT_PORT</td>
<td>You can set this parameter if ADVANCE_PORT_CONFIG=1. 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>AC_PORT</td>
<td>You can set this parameter if CREATE_DOMAIN=1 and ADVANCE_PORT_CONFIG=1. Port number used by Informatica Administrator. Default is 6007.</td>
</tr>
<tr>
<td>SERVER_PORT</td>
<td>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. Default is 6008.</td>
</tr>
<tr>
<td>AC_SHUTDWN_PORT</td>
<td>You can set this parameter if CREATE_DOMAIN=1 and ADVANCE_PORT_CONFIG=1. 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>

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

The following table describes the properties that you set if you want to run the Informatica service under a different user account:

<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>
</tbody>
</table>
| WIN_USER_ID               | 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. |
| WIN_USER_PSSWD            | Password for the user account with which to run the Informatica Windows service. |

6. Save the properties file with the name SilentInput.properties.
Sample Properties File

The following example shows the contents of the sample SilentInput.properties file:

```
# Informatica Installer Build Details
# Copyright (c) Informatica Corporation 1998 - 2012
# This software contains confidential and proprietary
# information of Informatica Corporation.
# All Rights Reserved.

###

# Use this file (SilentInput.properties) to install Informatica services without user interaction.
# Use this sample properties file to define the parameters for the silent installation.
# To upgrade Informatica, use the SilentInput_upgrade.properties or
# SilentInput_upgrade_NewConfig.properties file.
# Use the following guidelines when you edit this file:
# Back up the file before you modify it.
# Any error condition that causes the installation to fail, such as an installation directory
# that is not valid,
# generates a log file in SYSTEM_DRIVE_ROOT. For example: c:silentErrorLog.log

###

# The LICENSE_KEY_LOC property represents the absolute path and file name of the license key file.
# Set the property if you are installing or upgrading Informatica.

LICENSE_KEY_LOC=c:\license.key

# The USER_INSTALL_DIR property represents the directory in which to install the new version of
# Informatica.
# Set the property if you are installing or upgrading Informatica.
# The property must point to a valid directory with write permissions enabled.

USER_INSTALL_DIR=c:\Informatica\9.5.1

# The INSTALL_TYPE property determines whether to install or upgrade Informatica.
# Set INSTALL_TYPE=0 to perform a new installation of Informatica.
# To upgrade Informatica, use the SilentInput_upgrade.properties file.
# To upgrade Informatica to a different node configuration, use the
# SilentInput_upgrade_NewConfig.properties file.

INSTALL_TYPE=0

# The HTTPS_ENABLED property determines whether to secure the connection to Informatica
# Administrator.
# Value 0 Use HTTP connection. Set up an unsecure HTTP connection to Informatica
# Administrator.
# Value 1 Use HTTPS connection. Set up a secure HTTPS connection to the Informatica
# Administrator.

HTTPS_ENABLED=0

# The DEFAULT_HTTPS_ENABLED property determines whether the installer creates a keystore file.
# Set the property if HTTPS_ENABLED=1 (uses HTTPS connection).
# Value 0 Use a keystore file that you specify.
# Value 1 Create a keystore and use it for the HTTPS connection.

DEFAULT_HTTPS_ENABLED=1

# The CUSTOM_HTTPS_ENABLED property determines whether the installer uses an existing keystore file.
# Value 0 Set the property to 0 if DEFAULT_HTTPS_ENABLED=1.
# Value 1 Install Informatica using a keystore file that you specify. Set the property to 1
# if DEFAULT_HTTPS_ENABLED=0.

CUSTOM_HTTPS_ENABLED=0
```
# The KSTORE_PSSWD property represents the password for the keystore file.
# Set the property to the plain text password for the keystore file if CUSTOM_HTTPS_ENABLED=1.
KSTORE_PSSWD=MyKeystorePassword

# The KSTORE_FILE_LOCATION property represents the location of the keystore file.
# Set the property to the absolute path and file name of the keystore file if CUSTOM_HTTPS_ENABLED=1.
KSTORE_FILE_LOCATION=c:\MyKeystoreFile

# The HTTPS_PORT property represents the port number to use for the secure connection to Informatica Administrator.
HTTPS_PORT=8443

# The CREATE_DOMAIN property determines whether to create an Informatica domain.
# Value 0 Create a node and join the node to another domain created in a previous installation. Set the property to 0 if JOIN_DOMAIN=1.
# Value 1 Create a node and an Informatica domain.
CREATE_DOMAIN=1

# The JOIN_DOMAIN property determines whether to join the node to another domain created in a previous installation.
# Value 0 Create a node and an Informatica domain. Set the property to 0 if CREATE_DOMAIN=1.
# Value 1 Create a node and join the node to another domain created in a previous installation. Set the property to 1 if CREATE_DOMAIN=0.
JOIN_DOMAIN=0

# The SSL_ENABLED property enables or disables Transport Layer Security (TLS).
# Set the property to true to enable secure communication between services within the domain.
# Set the property to true or false if CREATE_DOMAIN=1.
# The property will not be used if JOIN_DOMAIN=1, as the node will get added on the basis of domain security.
SSL_ENABLED=false

# The SERVES_AS_GATEWAY property determines whether to create a gateway or worker node.
# Set the property if JOIN_DOMAIN=1.
# Value 0 The installer configures the node as a worker node.
# Value 1 The installer configures the node as a gateway node.
SERVES_AS_GATEWAY=0

# The DB_TYPE property represents the database type for the domain configuration database.
# Set the property to one of the following database types (case-sensitive): Oracle, MSSQLServer, DB2, or Sybase
DB_TYPE=Oracle/MSSQLServer/DB2/Sybase

# The DB_UNAME property represents the database user account name for the domain configuration repository.
DB_UNAME=UserName

# The DB_PASSWD property represents the database password for the database user account.
DB_PASSWD=UserPassword
The SQLSERVER_SCHEMA_NAME property represents the name of the schema that will contain domain configuration tables.
# Set the property if DB_TYPE= MSSQLServer.
# If SQLSERVER_SCHEMA_NAME is empty, the installer creates the tables in the default schema.
SQLSERVER_SCHEMA_NAME=

The TRUSTED_CONNECTION property determines whether to connect to the Microsoft SQL Server database through a trusted connection using the Windows credentials of the current user account.
# Set the property if DB_TYPE=MSSQLServer and you are installing on Windows.
# Set TRUSTED_CONNECTION=0 if DB_TYPE is set to another database type or if you are installing Informatica on Linux or UNIX.
# If the property is empty, the installer uses Microsoft SQL Server authentication.
# Value 0 Connect to the Microsoft SQL Server database using a Microsoft SQL Server user account.
# Value 1 Connect to the Microsoft SQL Server database through a trusted connection using the Windows credentials of the current user account.
TRUSTED_CONNECTION=0

The DB2_TABLESPACE property represents the name of the tablespace in which to create the tables.
# Set the property if DB_TYPE=DB2.
# Specify a tablespace that meets the pageSize requirement of 32768 bytes.
# 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.
DB2_TABLESPACE=

The DB_CUSTOM_STRING_SELECTION property determines whether to use a JDBC URL or a custom connection string to connect to the domain configuration database.
# Set DB_CUSTOM_STRING_SELECTION=1 if TRUSTED_CONNECTION=1. Also provide the default valid connection string in DB_CUSTOM_STRING.
# Value 0 The installer creates a JDBC URL from the database properties you provide.
# Value 1 The installer uses the custom connection string you provide.
DB_CUSTOM_STRING_SELECTION=0

The DB_SERVICE_NAME property represents the service name or database name of the database.
# Set the property if DB_CUSTOM_STRING_SELECTION=0.
# Set the property to the service name for Oracle and IBM DB2 databases.
# Set the property to the database name for Microsoft SQL Server and Sybase ASE databases.
# Leave the property blank if DB_CUSTOM_STRING_SELECTION=1.
DB_SERVICE_NAME= DBServiceName

The DB_ADDRESS property represents the host name and port number for the database instance.
# Set the property if DB_CUSTOM_STRING_SELECTION=0.
# Set the property in the format HostName:PortNumber.
# Leave the property blank if DB_CUSTOM_STRING_SELECTION=1.
DB_ADDRESS= HostName:PortNumber

The ADVANCE_JDBC_PARAM property represents additional parameters in the JDBC URL connection string.
# If DB_CUSTOM_STRING_SELECTION=0, you can set the property to include optional parameters in the JDBC URL connection string.
# The parameter string must be valid.
# If the parameter is empty, the installer creates the JDBC URL without additional parameters.
ADVANCE_JDBC_PARAM=
# The DB_CUSTOM_STRING property represents a valid custom JDBC connection string.
# Set the property if DB_CUSTOM_STRING_SELECTION=1.

DB_CUSTOM_STRING=

# The DOMAIN_NAME property represents the name of the domain to create. The default domain name is Domain_<MachineName>.
# Set the property if CREATE_DOMAIN=1.
# The domain name must not exceed 128 characters and must be 7-bit ASCII only. It cannot contain a space or any of the following characters: ` % * ; " ? , < > / 

DOMAIN_NAME=DomainName

# The DOMAIN_HOST_NAME property represents the host name of the machine.
# * If you create a domain, this is the host name of the machine on which to create the node.
#   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.
# * If you join a domain, this is the host name of the machine that hosts the gateway node of the domain you want to join.
# Do not use localhost. The host name must explicitly identify the machine.

DOMAIN_HOST_NAME=HostName

# The NODE_NAME property represents the node to create on the machine. The node name is not the host name for the machine.

NODE_NAME=NodeName

# The DOMAIN_PORT property represents the port number.
# * If you create a domain, set the property to the port number for the node to create.
#   The default port number for the node is 6005.
#   If the default port number is not available on the machine, the installer displays the next available port number.
# * If you join a domain, set the property to the port number of the gateway node of the domain you want to join.

DOMAIN_PORT=

# The DOMAIN_USER property represents the user name for the domain administrator.
# If you create a domain, you can use this user name to initially log in to the Informatica Administrator.
# If you join a domain, this is the user name to use to log in to the domain that you want to join.

DOMAIN_USER=AdminUser

# The DOMAIN_PSSWD property represents the password for the domain administrator.
# The password must be more than 2 characters but cannot exceed 16 characters.

DOMAIN_PSSWD=AdminUserPassword

# The DOMAIN_CNFRM_PSSWD property confirms the password you set for the domain administrator.
# Set the property to the password you set in the DOMAIN_PSSWD property to confirm the password.

DOMAIN_CNFRM_PSSWD=AdminUserPassword

# The JOIN_NODE_NAME property represents the name of the node to create on this machine. The node name is not the host name for the machine.
# Set the property if JOIN_DOMAIN=1.

JOIN_NODE_NAME=NodeName
# The JOIN_HOST_NAME property represents the host name of the machine that hosts the gateway node of the domain you want to join.
# Set the property if JOIN_DOMAIN=1.
JOIN_HOST_NAME=DomainHostName

# The JOIN_DOMAIN_PORT property represents the port number of the gateway node of the domain you want to join.
# Set the property if JOIN_DOMAIN=1.
JOIN_DOMAIN_PORT=

# The ADVANCE_PORT_CONFIG property determines whether to display the list of port numbers for the domain and node components.
# If ADVANCE_PORT_CONFIG=1, set the MIN_PORT, MAX_PORT, TOMCAT_PORT, AC_PORT, SERVER_PORT, and AC_SHUTDOWN_PORT properties.
# Value 0 The installer assigns default port numbers to the domain and node components.
# Value 1 You can manually set the port numbers for the domain and node components.
ADVANCE_PORT_CONFIG=0

# The MIN_PORT property represents the lowest port number in the range of port numbers that can be assigned to the application service processes that run on this node.
# Set the property if ADVANCE_PORT_CONFIG=1.
MIN_PORT=

# The MAX_PORT property represents the highest port number in the range of port numbers that can be assigned to the application service processes that run on this node.
# Set the property if ADVANCE_PORT_CONFIG=1.
MAX_PORT=

# The TOMCAT_PORT property represents the port number used by the Service Manager on the node. Default is 8086.
# Set the property if ADVANCE_PORT_CONFIG=1.
# 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 with the domain.
# This is also the port for the SQL data service JDBC/ODBC driver.
TOMCAT_PORT=

# The AC_PORT property represents the port number used by Informatica Administrator. Default is 6007.
# Set the property if CREATE_DOMAIN=1 and ADVANCE_PORT_CONFIG=1.
AC_PORT=

# The SERVER_PORT property controls the server shutdown for the domain Service Manager. The Service Manager listens for shutdown commands on this port. Default is 6008.
# Set the property if ADVANCE_PORT_CONFIG=1.
SERVER_PORT=

# The AC_SHUTDOWN_PORT property represents the port number that controls the server shutdown for Informatica Administrator. Default is 6009.
# Set the property if ADVANCE_PORT_CONFIG=1.
# Informatica Administrator listens for shutdown commands on this port.
Running the Silent Installer

After you configure the properties file, open a command window to start the silent installation.

1. Open a command window.
2. Go to the root of the directory that contains the installation files.
3. Verify that the directory contains the file SilentInput.properties that you edited and resaved.
4. Run the silent installation. On Windows, double-click the file silentInstall.bat. On UNIX, run silentInstall.sh.

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

The silent installation fails if you incorrectly configure the properties file or if the installation directory is not accessible. View the installation log files and correct the errors. Then run the silent installation again.
Informatica Services Post-Installation Tasks

This chapter includes the following topics:

- Informatica Services Post-Installation Tasks Overview, 58
- Configure the Environment Variables, 58
- Verify the System Requirements for the Domain and Application Services, 62
- Verify the Setup for 32-bit and 64-bit Platforms, 63
- Install the Database Client Software, 64
- Verify Third Party Software Requirements, 65
- Verify Code Page Compatibility, 66

Informatica Services Post-Installation Tasks Overview

After you install the Informatica services, perform the post-installation tasks to ensure that the domain and services run properly.

Configure the 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.
The following table describes the environment variables you configure:

<table>
<thead>
<tr>
<th>Variable Type</th>
<th>Operating System</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informatica</td>
<td>Windows, UNIX</td>
<td>Configure variables for the following Informatica properties: - Informatica installation directory. - Location of domains.infa. - Informatica memory usage. To apply changes, restart the node.</td>
</tr>
<tr>
<td>Locale environment</td>
<td>UNIX</td>
<td>Use LANG or LC_ALL to set the UNIX code page for the repository.</td>
</tr>
<tr>
<td>variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Java components</td>
<td>AIX, HP-UX</td>
<td>Java Runtime Environment location for Java-based components.</td>
</tr>
<tr>
<td>Library path</td>
<td>UNIX</td>
<td>Location of the database client libraries.</td>
</tr>
</tbody>
</table>

**Informatica Environment Variables**

You can configure the INFA_JAVA_OPTS, INFA_DOMAINS_FILE, and INFA_HOME environment variables to store memory, domain, and location settings.

**INFA_JAVA_OPTS**

By default, Informatica uses a maximum of 512 MB of system memory.

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 PowerCenter Repository 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.

You can use the INFA_JAVA_OPTS environment variable to configure the amount of system memory used by Informatica. For example, to configure 1 GB of system memory for the Informatica daemon on UNIX in a C shell, use the following command:

```
setenv INFA_JAVA_OPTS "-Xmx1024m"
```

On Windows, configure INFA_JAVA_OPTS as a system variable.
On 64-bit HP-UX on Itanium, add the -d64 switch.

Restart the node for the changes to take effect.

**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.

**Locale Environment Variables**

Use LANG, LC_CTYPE, or LC_ALL to set the UNIX code page. Verify that the locale setting is compatible with the code page for the repository. If the locale setting is not compatible with the repository code page, you cannot create a repository service.

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
```

**Library Path Environment Variables**
Configure library path environment variables on the machines that run the PowerCenter Integration Service and PowerCenter Repository Service processes. The library path variable name and requirements depend on the UNIX platform and database.

Solaris and Linux

On 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>&lt;DatabasePath&gt;/lib</td>
</tr>
<tr>
<td>IBM DB2</td>
<td>&lt;DatabasePath&gt;/lib</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>&lt;DatabasePath&gt;/lib</td>
</tr>
<tr>
<td>Teradata</td>
<td>&lt;DatabasePath&gt;/lib</td>
</tr>
<tr>
<td>ODBC</td>
<td>&lt;CLOSEDODBCHOME&gt;/lib</td>
</tr>
</tbody>
</table>

AIX

On AIX, configure the LIBPATH environment variable.

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

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

HP-UX

On HP-UX, configure the SHLIB_PATH environment variable.

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

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

### Java Component Variables

Informatica installs the JRE to use with the following Java-based components:

- Custom transformations that use Java
- Java transformations
- PowerExchange for JMS
- PowerExchange for Web Services
- PowerExchange for webMethods

To use these components on AIX (64-bit), or HP-UX, configure the library path environment variables to point to the installed Java directory. Configure these environment variables on machines where the PowerCenter Integration Service process runs.

The following table describes the library paths you configure to use Java-based components:

<table>
<thead>
<tr>
<th>UNIX Platform</th>
<th>Environment Variable Name</th>
<th>Value</th>
</tr>
</thead>
</table>
| AIX (64-bit)  | LIBPATH                   | Set to: java/jre/bin  
Set to: java/jre/bin/classic  
Set to: /usr/lib:/lib |
| HP-UX         | SHLIB_PATH                | Set to: java/jre/lib/PA_RISC2.0/server  
Set to: java/jre/lib/PA_RISC2.0  
Set to: /usr/lib:/lib |

### Verify the System Requirements for the Domain and Application Services

You can create an Informatica domain with one node and run all application services on the same node. If you create an Informatica domain with multiple nodes, you can run the application services on separate nodes.
The following table lists the minimum system requirements for a domain with different node configurations:

<table>
<thead>
<tr>
<th>Component</th>
<th>Processor</th>
<th>RAM</th>
<th>Disk Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain with all Data Quality, Data Services, and PowerCenter services running on one node</td>
<td>4 CPU</td>
<td>10GB</td>
<td>12 GB</td>
</tr>
<tr>
<td>Domain with all PowerCenter services running on one node</td>
<td>2 CPU</td>
<td>4 GB</td>
<td>10 GB</td>
</tr>
<tr>
<td>Domain with all PowerCenter services running on one node except Metadata Manager Service and Reporting Service</td>
<td>1 CPU</td>
<td>4 GB</td>
<td>10 GB</td>
</tr>
<tr>
<td>Metadata Manager Service running on a separate node</td>
<td>2 CPU</td>
<td>4 GB</td>
<td>10 GB</td>
</tr>
<tr>
<td>Reporting Service running on a separate node</td>
<td>1 CPU</td>
<td>512 MB</td>
<td>10 GB</td>
</tr>
<tr>
<td>Metadata Manager Agent</td>
<td>1 CPU</td>
<td>512 MB</td>
<td>220 MB</td>
</tr>
</tbody>
</table>

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

Verify the Setup for 32-bit and 64-bit Platforms

You can run Informatica on 32-bit or 64-bit platforms. A 64-bit architecture provides larger memory space that can significantly reduce or eliminate disk input and output and, in turn, potentially increase session performance in the following areas:

- **Caching.** With a 64-bit platform, the PowerCenter Integration Service is not limited to the 2 GB cache limit of a 32-bit platform.

- **Data throughput.** With a larger available memory space, the reader, writer, and Data Transformation Manager (DTM) threads can process larger blocks of data.

The Informatica 64-bit platform addresses up to 18 million terabytes (2^64 bytes) of system memory and has up to 256 terabytes (2^48 bytes) available for a single application. The 32-bit platform addresses up to 4 GB (2^32 bytes) of system memory and has up to 2 GB available for any single application.

When you run Informatica on both 32-bit and 64-bit platforms, configure Informatica to use the correct libraries, database clients, and session cache sizes.

Use the following guidelines when you work with 32-bit and 64-bit platforms:

- **Libraries.** Link libraries according to the following guidelines:
  - Link 32-bit applications with 32-bit libraries. Link 64-bit applications with 64-bit libraries.
  - Link 32-bit machines running a PowerCenter Integration Service with a 32-bit database client. Link a 64-bit machine running a PowerCenter Integration Service with 64-bit database client.

- **Database clients.** Link 32-bit machines running a PowerCenter Repository Service with 32-bit database clients. Link 64-bit machines running a PowerCenter Repository Service with 64-bit database clients.
• **PowerCenter Integration Service and PowerCenter Repository Service.** 32-bit and 64-bit machines that run PowerCenter Integration Services and PowerCenter Repository Services are compatible with each other.

• **Caching.** If the total configured session cache size is 2 GB or greater (2,147,483,648 bytes), run the session using a PowerCenter Integration Service running on a 64-bit machine. The session fails if the PowerCenter Integration Service runs on a 32-bit machine.

• **Server grids.** A server grid can contain both 32-bit and 64-bit machines that run the PowerCenter Integration Service. If the total configured session cache size is 2 GB (2,147,483,648 bytes) or greater, configure the session to run on a PowerCenter Integration Service on a 64-bit machine.

## Install the Database Client Software

Install database client software and configure connectivity on the gateway node and on the nodes that will run the PowerCenter Integration Service and PowerCenter Repository Service processes.

### PowerCenter Integration Service

Depending on the types of databases that the PowerCenter Integration Service will access, install the following database clients on the machine where the PowerCenter Integration Service runs:

- Oracle client
- IBM DB2 Client Application Enabler (CAE)
- Microsoft SQL Client, with Microsoft OLE DB provider for Microsoft SQL Server
- Sybase Open Client (OCS)
- Teradata BTEQ client

### PowerCenter Repository Service

Based on the repository database, install the following database clients on the machine where the PowerCenter Repository Service runs:

- Oracle client
- IBM DB2 Client Application Enabler (CAE)
- Microsoft SQL Client, with Microsoft OLE DB provider for Microsoft SQL Server
- Sybase Open Client (OCS)

### Database Client Environment Variables

Configure database client environment variables on the machines that run PowerCenter Integration Service and PowerCenter Repository Service processes. The database client path variable name and requirements depend on the UNIX platform and repository database.

After you configure the database environment variables, you can test the connection to the database from the database client.
The following table describes 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></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Add: <code>&lt;DatabasePath&gt;/bin</code></td>
</tr>
<tr>
<td>IBM DB2</td>
<td>DB2DIR</td>
<td>db2connect</td>
<td>Set to: <code>&lt;DatabasePath&gt;</code></td>
</tr>
<tr>
<td></td>
<td>DB2INSTANCE/PATH</td>
<td></td>
<td>Set to: <code>&lt;DB2InstanceName&gt;</code></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Add: <code>&lt;DatabasePath&gt;/bin</code></td>
</tr>
<tr>
<td>Sybase ASE</td>
<td>SYBASE12 or SYBASE15</td>
<td>isql</td>
<td>Set to: <code>&lt;DatabasePath&gt;/sybase&lt;version&gt;</code></td>
</tr>
<tr>
<td></td>
<td>SYBASE_ASE</td>
<td></td>
<td>Set to: `${SYBASE[12</td>
</tr>
<tr>
<td></td>
<td>SYBASE_OCS</td>
<td></td>
<td>Set to: `${SYBASE[12</td>
</tr>
<tr>
<td></td>
<td>PATH</td>
<td></td>
<td>Add: <code>${SYBASE_ASE}/bin:${SYBASE_OCS}/bin:$PATH</code></td>
</tr>
<tr>
<td>Teradata</td>
<td>PATH</td>
<td>bteq</td>
<td>Add: <code>&lt;DatabasePath&gt;/bin</code></td>
</tr>
</tbody>
</table>

## Verify Third Party Software Requirements

Informatica requires third party software and libraries to perform certain operations. Verify that the machine where you install Informatica has the required software or library.

### Informatica Administrator

Informatica Administrator requires the following third party software to run:

**Adobe Flash Player Plug-In**

Informatica Administrator contains the Dependency Graph window, which requires the Adobe Flash Player plug-in version 10 or later. To view dependencies for application services and nodes in Informatica Administrator, download and install the Flash Player plug-in on the web browser. Get the Flash Player plug-in from the following web site:


### Reporting Service

The Reporting Service runs the Data Analyzer application and requires the following third party software to run:

**Microsoft SOAP Toolkit**

In Data Analyzer, you can export a report to an Excel file and refresh the data in Excel directly from the cached data in Data Analyzer or from the data source. To use the data refresh feature, install the Microsoft SOAP Toolkit.

**Adobe SVG Viewer**

When you display interactive report charts and chart indicators in Data Analyzer, you can click on an interactive chart to drill into the report data and view details and select sections of the chart. To view interactive charts on Internet Explorer, install Adobe SVG Viewer.
Metadata Manager Service

Metadata Manager requires the following third party software to run:

Adobe Flash Player Plug-In

Metadata Manager requires the Adobe Flash Player plug-in version 9 or later to upload PowerCenter parameter files and to display data lineage. To upload PowerCenter parameter files or to run data lineage analysis in Metadata Manager or from the Designer, download and install the Flash Player plug-in on the web browser. Get the Flash Player plug-in from the following web site:

http://www.adobe.com/products/flashplayer/

Verify Code Page Compatibility

Informatica requires that code pages for application services are compatible with code pages in the domain. The locale settings on machines that access Informatica Administrator or the Informatica client tools must also be compatible with the code pages of in the domain.

Application Services

The domain configuration database must be compatible with the code pages of the repository services you create in the domain.

The Service Manager synchronizes the list of users in the domain with the list of users and group in each application service. If a user name in the domain has characters that the code page of the application service does not recognize, characters do not convert correctly and inconsistencies occur.

Locale Settings

The locale settings on machines that access Informatica Administrator or the Informatica client tools must be compatible with code pages of repositories in the domain. On Windows, verify the locale settings in the Regional Options of the Control Panel. For more information, see the Windows documentation.
Starting Informatica Services

This chapter includes the following topics:
- Starting Informatica Services Overview, 67
- Starting and Stopping Informatica, 67
- Getting Started with the PowerCenter Services, 69
- Logging in to Informatica Administrator, 70
- Configuring the Informatica Windows Service, 71

Starting Informatica Services Overview

On each node where you install Informatica, the installer creates a Windows service or UNIX daemon to run Informatica. When the installation completes successfully, the installer starts the Informatica service on Windows or the Informatica daemon on UNIX.

You can configure the behavior of the Informatica Windows service.

The Informatica service runs the Service Manager on the node. The Service Manager runs the application services on the node. The method you use to start or stop Informatica depends on the operating system. You can use Informatica Administrator to shut down a node. When you shut down a node, you stop Informatica on the node.

The Informatica service also runs Informatica Administrator. You use Informatica Administrator to administer the Informatica domain objects and user accounts. Log in to Informatica Administrator to create the user accounts for users of Informatica and to create and configure the application services in the domain.

Starting and Stopping Informatica

On UNIX, use a command line program to start or stop the Informatica daemon. On Windows, you can start or stop the Informatica service from the Control Panel or the Start menu.
Starting and Stopping Informatica on UNIX

On UNIX, run infaservice.sh to start and stop the Informatica daemon. By default, infaservice.sh is installed in the following directory:

<br />

1. Go to the directory where infaservice.sh is located.
2. At the command prompt, enter the following command to start the daemon:

   infaservice.sh startup

   Enter the following command to stop the daemon:

   infaservice.sh shutdown

   **Note:** If you use a softlink to specify the location of infaservice.sh, set the INFA_HOME environment variable to the location of the Informatica installation directory.

Starting and Stopping Informatica on Windows

You can use the Services window in the Control Panel or the Start menu shortcut to start or stop the Informatica services.

Starting or Stopping Informatica from the Start Menu

To start Informatica from the Windows Start menu, click **Programs > Informatica[Version] > Server > Start Informatica Services**.

To stop Informatica from the Windows Start menu, click **Programs > Informatica[Version] > Server > Stop Informatica Services**.

After you start the Windows service, configure the firewall to allow client machines to access the Service Manager in the domain.

Starting or Stopping Informatica from the Control Panel

The procedure to start or stop the Informatica Windows service is the same as for all other Windows services.

1. Open the Windows Control Panel.
2. Select **Administrative Tools**.
3. Select **Services**.
4. Right-click the Informatica service.
5. If the service is running, click **Stop**.
   
   If the service is stopped, click **Start**.

After you start the Windows service, configure the firewall to allow client machines to access the Service Manager in the domain.

Configuring the Windows Firewall

When you start the Informatica Windows service, the machines where you install the Informatica clients cannot access the Service Manager in the Informatica domain. To allow the clients access to the Service Manager, you must configure the firewall to grant client machines access to the domain.

On the machine where you created the Informatica domain, add the client machines to the list of firewall exceptions.

1. On the Windows Control Panel, open **Windows Firewall**.
2. On the Windows Firewall window, click the Exceptions tab.
3. Click Add Program.
4. On the Add a Program window, click Browse.
   The infasvcs.exe file runs the Service Manager in the domain.
5. Go to the following directory in the Informatica installation directory:
   <InformaticaInstallationDir>\tomcat\bin
6. Select infasvcs.exe and click Open.
   The infasvcs.exe file appears in the list of programs.
   You can click Change Scope to specify the machines that you want to access Informatica.
7. Verify that the infasvcs.exe file appears in the list of programs and services and that it is enabled.
8. Click OK.

Stopping Informatica in Informatica Administrator

When you shut down a node using Informatica Administrator, you stop the Informatica service on that node.
You can abort the processes that are running or allow them to complete before the service shuts down. If you shut down a node and abort the repository service processes running on the node, you can lose changes that have not yet been written to the repository. If you abort a node running integration service processes, the workflows will abort.

1. Log in to Informatica Administrator.
2. In the Navigator, select the node to shut down.

Rules and Guidelines for Starting or Stopping Informatica

Use the following rules and guidelines when starting and stopping Informatica on a node:

◦ When you shut down a node, the node is unavailable to the domain. If you shut down a gateway node and do not have another gateway node in the domain, the domain is unavailable.

◦ When you start Informatica, verify that the port used by the service on the node is available. For example, if you stop Informatica on a node, verify that the port is not used by any other process on the machine before you restart Informatica. If the port is not available, Informatica will fail to start.

◦ If you do not use Informatica Administrator to shut down a node, any process running on the node will be aborted. If you want to wait for all processes to complete before shutting down a node, use Informatica Administrator.

◦ If you have two nodes in a domain with one node configured as a primary node for an application service and the other node configured as a backup node, start Informatica on the primary node before you start the backup node. Otherwise, the application service will run on the backup node and not the primary node.

Getting Started with the PowerCenter Services

After you install and configure the Informatica services, you can start working with the PowerCenter application services.

1. Start Informatica.
2. Log in to Informatica Administrator to create and manage the PowerCenter application services and components.

3. Create the following application services:
   - **PowerCenter Repository Service**
     This service manages the PowerCenter repository. It retrieves, inserts, and updates metadata in the PowerCenter repository database tables. When you create the PowerCenter Repository Service, specify the database in which to create the PowerCenter repository.
   - **PowerCenter Integration Service**
     This service runs PowerCenter sessions and workflows. When you create the PowerCenter Integration Service, you must associate it with a PowerCenter Repository Service.

4. To use the Metadata Manager application, create a Metadata Manager Service.
   The Metadata Manager service runs the Metadata Manager application and manages connections between the Metadata Manager components. To use Metadata Manager to browse and analyze metadata from disparate source repositories, create a Metadata Manager Service. When you create the Metadata Manager Service, specify the PowerCenter Integration Service to associate with it and specify the database in which to create the Metadata Manager repository.

5. To use the Data Analyzer application, create a Reporting Service.
   The Reporting Service runs the Data Analyzer application. To use Data Analyzer to create and run reports, create a Reporting Service. When you create the Reporting Service, specify the reporting source to associate with it and specify the database in which to create the Data Analyzer repository.

6. To use the JasperReports application, create a Reporting and Dashboards Service.

7. Start PowerCenter Client.

---

**Logging in to Informatica Administrator**

You must have a user account to log in to Informatica Administrator.

1. Start a Microsoft Internet Explorer or Mozilla Firefox browser.
2. In the **Address** field, enter the URL for Informatica Administrator:
   
   http://<host>:<port>/administrator

   Host and port in the URL represent the host name of the master gateway node and the port number for Informatica Administrator. If you configure Informatica Administrator to use HTTPS, the URL redirects to the HTTPS site:
   
   https://<host>:<https_port>/administrator

3. On the login page, enter the user name and password.
4. Select **Native** or the name of a specific security domain.
   The **Security Domain** field appears when the Informatica domain contains an LDAP security domain. If you do not know the security domain that your user account belongs to, contact the Informatica domain administrator.
5. Click **Login**.
6. If this is the first time you log in with the user name and password provided by the domain administrator, change your password to maintain security.
Configuring the Informatica Windows Service

You can configure the behavior of the Informatica Windows service when the operating system starts or when the service fails. You can also configure the user account that logs in to the service.

Use the following rules and guidelines when you configure the user account that logs in to the service:

- If you store files on a network drive, use a system account instead of the Local System account to run the Informatica service.
- If you configure shared storage on a network drive to store files used by the domain or the application services that run on the domain, the user account that runs the Informatica service must have access to the shared location.
- If you want to use the Local System account, verify that the user starting the Informatica service has access to the network location.
- If the user that starts the Informatica service cannot access the shared storage location, service processes on the node fail or the node or domain will not start.
- If you configure a system user account, the user account must have the Act as operating system permission. For more information, see the Windows documentation.

To configure the Informatica Windows service:

1. Open the Windows Control Panel.
2. Select Administrative Tools.
   The Informatica <Version> Properties dialog box appears.
5. Click the Log On tab.
6. Select This account.
7. Enter the domain and user name or click Browse to locate a system user.
8. Enter and confirm the password for the selected user account.
9. Click the Recovery tab. Select the options to restart the Informatica service if the service fails.

For more information about configuring system accounts for services and service restart options on Windows, see the Windows documentation.
Informatica Clients Pre-Installation Tasks

This chapter includes the following topics:

- Informatica Clients Pre-Installation Tasks Overview, 72
- Verify System User Account, 73

Informatica Clients Pre-Installation Tasks Overview

Before you install the Informatica clients on Windows, verify that the minimum system and third party software requirements are met. If the machine where you install the Informatica clients is not configured correctly, the installation can fail.

Verify the Minimum System Requirements

You can install all Informatica client tools on the same machine or on separate machines. You can also install the clients on multiple machines. The requirements for the Informatica clients depend on the client tools you install.

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>

Temporary Disk Space Requirements for Installation

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 following table lists the temporary disk space requirements during installation:

<table>
<thead>
<tr>
<th>Product</th>
<th>Disk Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installer</td>
<td>1 GB</td>
</tr>
<tr>
<td>Informatica Clients</td>
<td>550 MB</td>
</tr>
</tbody>
</table>

**Verify the Third Party Software Required by the PowerCenter Client Tools**

The following table lists the third party software requirements for the PowerCenter Client tools:

<table>
<thead>
<tr>
<th>Client</th>
<th>Third Party Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>PowerCenter Mapping Architect for Visio</td>
<td>Microsoft Visio</td>
</tr>
<tr>
<td></td>
<td>.NET Framework</td>
</tr>
<tr>
<td>PowerCenter Mapping Analyst for Excel</td>
<td>Microsoft Office Excel</td>
</tr>
</tbody>
</table>

**PowerCenter Mapping Architect for Visio**

The PowerCenter Client installation includes Mapping Architect for Visio, which requires Microsoft Visio and the .NET Framework. The machine where you install PowerCenter Client must have Microsoft Visio version 2003 or 2007 installed before you start the installation.

**PowerCenter Mapping Analyst for Excel**

The PowerCenter Client installation includes Mapping Analyst for Excel, which requires the following software:

- Microsoft Office Excel version 2007 or Microsoft Office Excel version 2003 with the 2007 Office Compatibility Pack
- Java version 1.5 or later

The machine where you install PowerCenter Client must have Microsoft Excel and Java installed before you start the installation.

Mapping Analyst for Excel includes an Excel add-in that adds a Metadata menu or ribbon to Microsoft Excel. You can install the add-in for Excel 2003 or 2007. However, use Excel 2007 to use the improved user interface.

**Verify System User Account**

Verify that the user account that you use to install the Informatica clients has write permission on the installation directory and Windows registry.
Informatica Clients Installation Overview

You can install the Informatica clients on Windows in graphical or silent mode.

Complete the pre-installation tasks to prepare for the installation. You can install the Informatica clients on multiple machines.

Installing in Graphical Mode

You can install the Informatica clients in graphical mode on Windows.

1. Close all other applications.
2. Run install.bat from the root directory.
   
   If you encounter problems when you run the install.bat file from the root directory, run the following file:

   `<InformaticaInstallationDir>/client/install.exe`

3. Select Install Informatica <Version> Clients and click Next.
   
   The Installation Pre-requisites page displays the system requirements. Verify that all installation requirements are met before you continue the installation.

4. Click Next.
   
   On the Application Client Selection page, select the Informatica clients you want to install.

   You can install the following Informatica client applications on the same machine:
   
   - Informatica Developer
   - PowerCenter Client
   - Data Transformation Studio
   
   You can install multiple clients at the same time.

   If you install Informatica Developer, you must also install Data Transformation Studio.
5. On the **Installation Directory** page, enter the absolute path for the installation directory.  
   The installation directory must be on the current computer. The directory names in the path must not contain  
   spaces or the dollar sign ($). The maximum length of the path must be less than 260 characters.  
   If you are installing Data Transformation Studio, the **Data Transformation Studio Configuration** page  
   appears.  
   If you are not installing Data Transformation Studio, the **Pre-Installation Summary** page appears.  

6. Click **Next**.

7. If you are installing Data Transformation Studio, select the Eclipse installation option for Data Transformation  
   Studio, and then click **Next**.

8. On the **Pre-Installation Summary** page, review the installation information, and click **Install**.  
   The installer copies the Informatica client files to the installation directory.  
   The **Post-installation Summary** page indicates whether the installation completed successfully.

9. Click **Done** to close the installer.

   You can view the installation log files to get more information about the tasks performed by the installer.

---

### Installing in Silent Mode

To install the Informatica clients without user interaction, install in silent mode.

Use a properties file to specify the installation options. The installer reads the file to determine the installation options.  
You can use silent mode installation to install the Informatica clients on multiple machines on the network or to  
standardize the installation across machines.

To install in silent mode, complete the following tasks:

1. Configure the installation properties file and specify the installation options in the properties file.
2. Run the installer with the installation properties file.

### Configuring the Properties File

Informatica provides a sample properties file that includes the properties required by the installer. Customize the  
sample properties file to create a properties file and specify the options for your installation. Then run the silent  
installation.

The sample SilentInput.properties file is stored in the root directory of the DVD or the installer download location.  

1. Go to the root of the directory that contains the installation files.
2. Locate the sample `SilentInput.properties` file.
3. Create a backup copy of the SilentInput.properties file.
4. Use a text editor to open and modify the values of the properties in the file.
The following table describes the installation properties 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 the Informatica clients. If the value is 0, the Informatica clients are installed in the directory you specify. If the value is 1, the Informatica clients are upgraded. Default is 0.</td>
</tr>
<tr>
<td>UPG_BACKUP_DIR</td>
<td>Directory of the previous version of the Informatica client that you want to upgrade.</td>
</tr>
<tr>
<td>USER_INSTALL_DIR</td>
<td>Informatica client installation directory.</td>
</tr>
<tr>
<td>DXT_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. Default is 1.</td>
</tr>
<tr>
<td>CLIENT_COMP</td>
<td>Indicates whether to install PowerCenter Client. If the value is 1, PowerCenter Client will be installed. If the value is 0, 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>

5. Save the properties file.

**Sample Properties File**

The following example shows the contents of the sample SilentInput.properties file:

```plaintext
# Informatica Installer Build Details
# Copyright (c) Informatica Corporation 1998 - 2012
# This software contains confidential and proprietary
# information of Informatica Corporation.
# All Rights Reserved.
#******************************************************************************

#####
# Use this file (SilentInput.properties) to install or upgrade the Informatica clients without user interaction.
```
Use this sample properties file to define the parameters for the silent installation or upgrade.
Use the following guidelines when you edit this file:
Back up the file before you modify it.
Any error condition that causes the installation or upgrade to fail, such as an installation directory that is not valid, generates a log file in SYSTEM_DRIVE_ROOT. For example: c:\silentErrorLog.log

The INSTALL_TYPE property determines whether to install or upgrade Informatica.
 Value 0 Perform a new installation of Informatica.
 Value 1 Upgrade a previous version of Informatica.

INSTALL_TYPE=0

The USER_INSTALL_DIR property represents the directory in which to install the new version of Informatica.
 Set the property if you are installing or upgrading Informatica.
 The property must point to a valid directory with write permissions enabled.

USER_INSTALL_DIR=c:\Informatica\9.5.1

The UPG_BACKUP_DIR property represents the directory that contains the PowerCenter or Informatica version that you want to upgrade.
 Set the property if you are upgrading Informatica.
 This property must point to a valid PowerCenter or Informatica client installation.

UPG_BACKUP_DIR=c:\Informatica\9.5.0

The DXT_COMP property determines whether to install Informatica Developer.
 Set the property if you are installing or upgrading Informatica.
 Value 1 Install Informatica Developer.
 Value 0 Do not install Informatica Developer.

DXT_COMP=1

The CLIENT_COMP property determines whether to install the PowerCenter Client.
 Set the property if you are installing or upgrading Informatica.
 Value 1 Install the PowerCenter Client.
 Value 0 Do not install the PowerCenter Client.

CLIENT_COMP=1

The DT_COMP property determines whether to install the Data Transformation Studio.
 Set the property if you are installing or upgrading Informatica.
 If DT_COMP=1, set the property to 1.
 Value 1 Install Data Transformation Studio.
 Value 0 Do not install Data Transformation Studio.

DT_COMP=1

The NEW_ECLIPSE_SELECTION property determines 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.
 Set the property if DT_COMP=1.
 Value 0 Install Data Transformation Studio to use the Eclipse development environment that is already installed on your machine.
 Value 1 Install Data Transformation Studio to use the copy of Eclipse that is bundled with the installer.

NEW_ECLIPSE_SELECTION=1

The ECLIPSE_LOCATION property represents the directory that contains the existing eclipse.exe file.
Running the Installer

After you configure the properties file, open a command window to start the silent installation.

1. Open a command window.
2. Go to the root of the directory that contains the installation files.
3. Verify that the directory contains the file SilentInput.properties that you edited and resaved.
4. To run the silent installation, double-click the file silentInstall.bat.

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

The silent installation fails if you incorrectly configure the properties file or if the installation directory is not accessible. View the installation log files and correct the errors. Then run the silent installation again.
Chapter 9

Informatica Clients Post-Installation Tasks

This chapter includes the following topics:

- Informatica Clients Post-Installation Tasks Overview, 79
- Verify that a Graphics Display Server is Available, 79
- Configure the Web Browser, 80
- Install the Languages for the Client Tools, 80

Informatica Clients Post-Installation Tasks Overview

After you install the Informatica clients, perform the post-installation tasks to ensure that the clients run properly.

Verify that a Graphics Display Server is Available

The gateway nodes on UNIX require a graphics display server to run domain reports in Informatica Administrator. If you do not have a graphics display server, you can install and configure X Virtual Frame Buffer (Xvfb). Xvfb is an X server that renders graphics to virtual memory rather than to a graphics display device.

You can download and install Xvfb for the following operating systems:

- **HP-UX.** Xvfb is part of the HP-UX operating system. Install HP-UX patches and graphical packages to run Xvfb based on when you installed or last patched the operating system.
- **AIX and Linux.** Download and install Xvfb for AIX and Linux.
- **Solaris.** Download and install Xvfb for Solaris. Use the following command to start the virtual frame buffer and send graphics outputs going to display 1 to shared memory:
  
  ```
  % /usr/X11R6/bin/Xvfb :1 -screen 0 1152x900x8 &
  ```

  This sends any graphics output going to display 1 to shared memory.

  Use the following command to set the current display to use the frame buffer for graphics display in a C shell:

  ```
  % setenv DISPLAY :1.0
  ```
Configure the Web Browser

You can use Microsoft Internet Explorer or Mozilla Firefox to launch the web client applications in the Informatica platform.

The following table describes the browser you can use with the web applications:

<table>
<thead>
<tr>
<th>Component</th>
<th>Web Browser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informatica Administrator</td>
<td>Microsoft Internet Explorer, Mozilla Firefox</td>
</tr>
<tr>
<td>Web Services Hub Console</td>
<td>Microsoft Internet Explorer, Mozilla Firefox</td>
</tr>
<tr>
<td>Metadata Manager Service</td>
<td>Microsoft Internet Explorer, Mozilla Firefox</td>
</tr>
<tr>
<td>Reporting Service</td>
<td>Microsoft Internet Explorer, Mozilla Firefox</td>
</tr>
<tr>
<td>Reporting and Dashboards</td>
<td>Microsoft Internet Explorer, Mozilla Firefox</td>
</tr>
<tr>
<td>PowerCenter Client</td>
<td>Microsoft Internet Explorer</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> Required to display the Start Page for the Designer, Repository Manager, and Workflow Manager.</td>
</tr>
</tbody>
</table>

Configure the following options in the browser to access the applications:

- **Scripting and ActiveX.** Internet Explorer requires the Active scripting, Allow paste operations, Run ActiveX controls and plug-ins, and Script ActiveX controls marked safe for scripting controls enabled. To configure the controls, click Tools > Internet Options > Security > Custom level.

- **Javascript.** Enable Javascript to use Firefox.

- **Pop-up blocking utility.** To display the Data Analyzer and Metadata Manager pages, disable any pop-up blocking utility on your browser.

- **TLS 1.0.** If you configure HTTPS for Informatica Administrator on a domain that runs on 64-bit AIX, Internet Explorer requires TLS 1.0. To enable TLS 1.0, click Tools > Internet Options > Advanced. The TLS 1.0 setting is listed below the Security heading.

- **Browser cache.** On Internet Explorer, to make sure Metadata Manager properly caches pages and applies user privileges, set the browser cache options. Click Tools > Internet Options. Under Browsing history, click Settings. Under Check for newer versions of stored pages, select Every time I visit the webpage.

- **Context menus.** On Firefox, to make sure that the shortcut menu appears in Metadata Manager, set the context menu option. Click Tools > Options. On the Content tab, click Advanced next to the Enable JavaScript option. In the Advanced JavaScript Settings dialog box, select Disable or replace context menus.

Install the Languages for the Client Tools

If you need to view languages other than the system locale and you work with repositories that use a UTF-8 code page, install additional languages on Windows for use with the Informatica clients. You also must install languages to use the Windows Input Method Editor (IME).

To install languages:

1. Click Start > Settings > Control Panel.
2. Click Regional Options.
3. Under Language settings for the system, select the languages you want to install.
4. Click Apply.

Windows might require you to restart the system.
Starting Informatica Clients

This chapter includes the following topic:
* Starting the PowerCenter Client, 82

Starting the PowerCenter Client

When you start PowerCenter Client, you connect to a PowerCenter repository.

1. From the Windows Start menu, click Programs > Informatica[Version] > Client > [Client Tool Name].
   The first time you run a PowerCenter Client tool, you must add a repository and connect to it.
2. Click Repository > Add Repository.
   The Add Repository dialog box appears.
3. Enter the repository and user name.
4. Click OK.
   The repository appears in the Navigator.
5. Click Repository > Connect.
   The Connect to Repository dialog box appears.
6. In the connection settings section, click Add to add the domain connection information.
   The Add Domain dialog box appears.
7. Enter the domain name, gateway host, and gateway port number.
8. Click OK.
9. In the Connect to Repository dialog box, enter the password for the Administrator user.
10. Select the security domain.
11. Click Connect.
    After you connect to the repository, you can create objects.
Chapter 11

Troubleshooting the Informatica Installation

This chapter includes the following topics:

- Installation Troubleshooting Overview, 83
- Installation Log Files, 83
- Troubleshooting Domains and Nodes, 85
- Troubleshooting PowerCenter Client, 87
- Troubleshooting Informatica Developer or Data Transformation Studio, 87

Installation Troubleshooting Overview

This chapter provides information about the Informatica installation process and the cause and resolution of errors that occur during installation. The examples included in this chapter describe general troubleshooting strategies and are not a comprehensive list of possible causes of installation issues.

Installation Log Files

You can use the following log files to troubleshoot an Informatica installation:

- **Installation log files.** The installer produces log files during and after the installation. You can use these logs to get more information about the tasks completed by the installer and errors that occurred during installation. The installation log files include the following logs:
  - Debug logs
  - File installation logs
- **Service Manager log files.** Log files generated when the Service Manager starts on a node.

Debug Log Files

The installer writes actions and errors to the debug log file. The name of the log file depends on the Informatica component you install.
The following table describes the properties of the debug log files:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
</table>
| Log File Name | - Informatica_<Version>_Services.log  
- Informatica_<Version>_Client.log  
- Informatica_<Version>_Services_Upgrade.log  
- Informatica_<Version>_Client_Upgrade.log |
| Location | Installation directory. |
| Usage | Get more information about the actions performed by the installer and get more information about installation errors. The installer writes information to this file during the installation. If the installer generates an error, you can use this log to troubleshoot the error. |
| Contents | Detailed summary of each action performed by the installer, the information you entered in the installer, each command line command used by the installer, and the error code returned by the command. |

The debug log contains output from the infacmd and infasetup commands used to create the domain, node, and application services. It also contains information about starting the application services.

**File Installation Log File**

The file installation log file contains information about the installed files.

The following table describes the properties of the installation log file:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
</table>
| Log File Name | - Informatica_<Version>_Services_InstallLog.log  
- Informatica_<Version>_Client_InstallLog.log |
| Location | Installation directory. |
| Usage | Get information about the files installed and registry entries created. |
| Contents | Directories created, names of the files installed and commands run, and status for each installed file. |

**Service Manager Log Files**

The installer starts the Informatica service. The Informatica service starts the Service Manager for the node. The Service Manager generates log files that indicate the startup status of a node. Use these files to troubleshoot issues when the Informatica service fails to start and you cannot log in to Informatica Administrator. The Service Manager log files are created on each node.
The following table describes the files generated by the Service Manager:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>catalina.out</td>
<td>Log events from the Java Virtual Machine (JVM) that runs the Service Manager. For example, a port is available during installation, but is in use when the Service Manager starts. Use this log to get more information about which port was unavailable during startup of the Service Manager. The catalina.out file is in the /tomcat/logs directory.</td>
</tr>
<tr>
<td>node.log</td>
<td>Log events generated during the startup of the Service Manager on a node. You can use this log to get more information about why the Service Manager for a node failed to start. For example, if the Service Manager cannot connect to the domain configuration database after 30 seconds, the Service Manager fails to start. The node.log file is in the /tomcat/logs directory.</td>
</tr>
</tbody>
</table>

**Note:** The Service Manager also uses node.log to record events when the Log Manager is unavailable. For example, if the machine where the Service Manager runs does not have enough available disk space to write log event files, the Log Manager is unavailable.

---

**Troubleshooting Domains and Nodes**

The installer can generate errors when creating and configuring domains and nodes during the Informatica installation.

You can encounter errors with the following installer tasks:

- Adding the domain configuration database
- Creating or joining a domain
- Starting Informatica
- Pinging the domain
- Adding a license

**Creating the Domain Configuration Repository**

If you create a domain, the installer creates a domain configuration repository to store domain metadata. The installer uses the options you enter during installation to add configuration metadata to the domain configuration repository. The installer uses JDBC to communicate with the database. You do not need to configure ODBC or native connectivity on the machine where you install the Informatica services.

The installer creates and drops a table in the domain configuration repository database to verify the connection information. The user account for the database must have create privileges on the database. Each domain must have a separate domain configuration repository.

**Creating or Joining a Domain**

The installer completes different tasks depending on whether you create a domain or join a domain:

- Creating a domain. The installer runs the infasetup DefineDomain command to create the domain and the gateway node for the domain on the current machine based on the information you enter in the Configure Domain window.
- **Joining a domain.** The installer runs the `infasetup DefineWorkerNode` command to create a node on the current machine, and runs the `infacmd AddDomainNode` command to add the node to the domain. The installer uses the information you enter in the Configure Domain window to run the commands.

  The `infasetup` and `infacmd` commands fail if the gateway node is unavailable. If the gateway node is unavailable, you cannot log in to Informatica Administrator.

  For example, the `DefineDomain` command fails if you click Test Connection and the connection test passes but the database becomes unavailable before you click Next. The `DefineDomain` command can also fail if the host name or IP address does not belong to the current machine. Verify that the database for the domain configuration is available and that the host name is correct and try again.

  If the `AddDomainNode` command fails, verify that the Informatica service is running on the gateway node and try again.

---

### Starting Informatica

The installer runs `infaservice` to start the Informatica service. To troubleshoot issues when Informatica fails to start, use the information in the installation debug log and the `node.log` and `catalina.out` Service Manager log files to identify the cause of the error.

If you create a domain, log in to Informatica Administrator after the Informatica service starts to verify that the domain is available. If you join a domain, log in to Informatica Administrator after the Informatica service starts to verify that the node was successfully created and started.

Informatica can fail to start for the following reasons:

- **The Service Manager is out of system memory.** The Java Runtime Environment (JRE) that starts Informatica and runs the Service Manager may not have enough system memory to start. Set the `INFA_JAVA_OPTS` environment variable to configure the amount of system memory used by Informatica. On UNIX, you can set the memory configuration when you start Informatica.

- **The domain configuration database is not available.** Informatica fails to start on a node if the Service Manager on a gateway node cannot connect to the domain configuration database within 30 seconds. Verify that the domain configuration repository is available.

- **You incorrectly configure the Informatica service user account.** Informatica fails to start if you incorrectly configure the Windows domain, user name, or password when you configure the user account to start the Informatica service on Windows. In addition, the user account must have the Act as operating system permission.

- **The content of the PATH environment variable exceeds the maximum length allowed.** On Windows, Informatica fails to start if files or libraries required by Informatica are not in the system path and cannot be accessed. This problem can occur if the total number of characters in the PATH environment variable exceeds the limit.

- **Some of the folders in the `<InformaticaInstallationDir>` directory do not have the appropriate execute permissions.** Grant execute permission on the `<InformaticaInstallationDir>` directory.

---

### Pinging the Domain

The installer runs the `infacmd Ping` command to verify that the domain is available before it continues the installation. The domain must be available so that license objects can be added to the domain. If the Ping command fails, start Informatica on the gateway node.
Adding a License

The installer runs the `infacmd AddLicense` command to read the Informatica license key file and create a license object in the domain. To run the application services in Informatica Administrator, a valid license object must exist in the domain.

If you use an incremental license and join a domain, the serial number of the incremental license must match the serial number for an existing license object in the domain. If the serial numbers do not match, the AddLicense command fails.

You can get more information about the contents of the license key file used for installation, including serial number, version, expiration date, operating systems, and connectivity options in the installation debug log. You can get more information about existing licenses for the domain in Informatica Administrator.

Troubleshooting PowerCenter Client

I installed PowerCenter Client, but Mapping Architect for Visio does not appear in the Windows Start menu, and the MappingTemplate folder in the client directory is empty.

You must have the correct version and service pack level of the Microsoft .NET Framework for Mapping Architect for Visio to install properly.

Uninstall PowerCenter Client, install the correct version of the Microsoft .NET Framework, and reinstall PowerCenter Client.

Troubleshooting Informatica Developer or Data Transformation Studio

I installed Informatica Developer or Data Transformation Studio, but the environment variables are not visible.

Restart the Windows machine to refresh the environment variables.
CHAPTER 12

Repository Database Configuration

This chapter includes the following topics:

- Repository Database Configuration Overview, 88
- Guidelines for Setting Up Database User Accounts, 88
- PowerCenter Repository Database Requirements, 89
- Data Analyzer Repository Database Requirements, 90
- Metadata Manager Repository Database Requirements, 91

Repository Database Configuration Overview

PowerCenter stores data and metadata in repositories in the domain. Before you create the PowerCenter application services, set up the databases and database user accounts for the repositories.

Set up a database and user account for the following repositories:

- PowerCenter repository
- Data Analyzer repository
- Jaspersoft repository
- Metadata Manager repository

You can create the repositories in the following relational database systems:

- Oracle
- IBM DB2
- Microsoft SQL Server
- Sybase ASE

For more information about configuring the database, see the documentation for your database system.

Guidelines for Setting Up Database User Accounts

Use the following rules and guidelines when you set up the user accounts:

- The database must be accessible to all gateway nodes in the Informatica domain.
The database user account must have permissions to create and drop tables, indexes, and views, and to select, insert, update, and delete data from tables.

- Use 7-bit ASCII to create the password for the account.
- To prevent database errors in one repository from affecting other repositories, create each repository in a separate database schema with a different database user account. Do not create the repository in the same database schema as the domain configuration repository or the other repositories in the domain.

### PowerCenter Repository Database Requirements

Verify that the configuration of the database meets the requirements of the PowerCenter repository.

#### Oracle

Use the following guidelines when you set up the repository on Oracle:

- Set the storage size for the tablespace to a small number to prevent the repository from using an excessive amount of space. Also verify that the default tablespace for the user that owns the repository tables is set to a small size.
  
  The following example shows how to set the recommended storage parameter for a tablespace named REPOSITORY.
  
  ```sql
  ALTER TABLESPACE "REPOSITORY" DEFAULT STORAGE ( INITIAL 10K NEXT 10K MAXEXTENTS UNLIMITED PCTINCREASE 50 );
  ```

  Verify or change these parameters before you create the repository.

- The database user account must have the CONNECT, RESOURCE, and CREATE VIEW privileges.

#### IBM DB2

To optimize repository performance, set up the database with the tablespace on a single node. When the tablespace is on one node, PowerCenter Client and PowerCenter Integration Service access the repository faster than if the repository tables exist on different database nodes.

Specify the single-node tablespace name when you create, copy, or restore a repository. If you do not specify the tablespace name, DB2 uses the default tablespace.

#### Sybase ASE

Use the following guidelines when you set up the repository on Sybase ASE:

- Set the database server page size to 8K or higher. This is a one-time configuration and cannot be changed afterwards.

- Set the following database options to TRUE:
  
  - allow nulls by default
  - ddl in tran

- Verify the database user has CREATE TABLE and CREATE VIEW privileges.

- Set the database memory configuration requirements.
The following table lists the memory configuration requirements and the recommended baseline values:

<table>
<thead>
<tr>
<th>Database Configuration</th>
<th>Sybase System Procedure</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of open objects</td>
<td>sp_configure &quot;number of open objects&quot;</td>
<td>5000</td>
</tr>
<tr>
<td>Number of open indexes</td>
<td>sp_configure &quot;number of open indexes&quot;</td>
<td>5000</td>
</tr>
<tr>
<td>Number of open partitions</td>
<td>sp_configure &quot;number of open partitions&quot;</td>
<td>8000</td>
</tr>
<tr>
<td>Number of locks</td>
<td>sp_configure &quot;number of locks&quot;</td>
<td>100000</td>
</tr>
</tbody>
</table>

Adjust the above recommended values according to operations that are performed on the database.

Data Analyzer Repository Database Requirements

Verify that the configuration of the database meets the requirements of the Data Analyzer repository.

Oracle

Use the following guidelines when you set up the repository on Oracle:

- Set the storage size for the tablespace to a small number to prevent the repository from using an excessive amount of space. Also verify that the default tablespace for the user that owns the repository tables is set to a small size.
  
  The following example shows how to set the recommended storage parameter for a tablespace named REPOSITORY.
  
  ```sql
  ALTER TABLESPACE "REPOSITORY" DEFAULT STORAGE ( INITIAL 10K NEXT 10K MAXEXTENTS UNLIMITED PCTINCREASE 50 )
  ``
  
  Verify or change these parameters before you create the repository.

- The database user account must have the CONNECT, RESOURCE, and CREATE VIEW privileges.

Microsoft SQL Server

Use the following guidelines when you set up the repository on Microsoft SQL Server:

- If you create the repository in Microsoft SQL Server 2005, Microsoft SQL Server must be installed with case-sensitive collation.

- If you create the repository in Microsoft SQL Server 2005, the repository database must have a database compatibility level of 80 or earlier. Data Analyzer uses non-ANSI SQL statements that Microsoft SQL Server supports only on a database with a compatibility level of 80 or earlier.
  
  To set the database compatibility level to 80, run the following query against the database:
  
  ```sql
  sp_dbcompilelevel '<DatabaseName>', 80
  ``
  
  Or open the Microsoft SQL Server Enterprise Manager, right-click the database, and select Properties > Options. Set the compatibility level to 80 and click OK.
Sybase ASE

Use the following guidelines when you set up the repository on Sybase ASE:

- Set the database server page size to 8K or higher. This is a one-time configuration and cannot be changed afterwards.

  The database for the Data Analyzer repository requires a page size of at least 8 KB. If you set up a Data Analyzer database on a Sybase ASE instance with a page size smaller than 8 KB, Data Analyzer can generate errors when you run reports. Sybase ASE relaxes the row size restriction when you increase the page size.

  Data Analyzer includes a GROUP BY clause in the SQL query for the report. When you run the report, Sybase ASE stores all GROUP BY and aggregate columns in a temporary worktable. The maximum index row size of the worktable is limited by the database page size. For example, if Sybase ASE is installed with the default page size of 2 KB, the index row size cannot exceed 600 bytes. However, the GROUP BY clause in the SQL query for most Data Analyzer reports generates an index row size larger than 600 bytes.

- Verify the database user has CREATE TABLE and CREATE VIEW privileges.

- Enable the Distributed Transaction Management (DTM) option on the database server.

- Create a DTM user account and grant the dtm_tm_role to the user.

  The following table lists the DTM configuration setting for the dtm_tm_role value:

<table>
<thead>
<tr>
<th>DTM Configuration</th>
<th>Sybase System Procedure</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distributed Transaction Management privilege</td>
<td>sp_role &quot;grant&quot;</td>
<td>dtm_tm_role, username</td>
</tr>
</tbody>
</table>

Metadata Manager Repository Database Requirements

Verify that the configuration of the database meets the requirements of the Metadata Manager repository.

Oracle

Use the following guidelines when you set up the repository on Oracle:

- Set the parameters for the tablespace on Oracle.

  The following table describes the tablespace parameters you must set:

<table>
<thead>
<tr>
<th>Property</th>
<th>Setting</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary tablespace</td>
<td>Resize to at least 2 GB</td>
<td>-</td>
</tr>
<tr>
<td>CURSOR_SHARING</td>
<td>FORCE</td>
<td>-</td>
</tr>
<tr>
<td>MEMORY_TARGET</td>
<td>At least 4 GB</td>
<td>Run SELECT * FROM v $memory_target_advice ORDER BY memory_size; to determine the optimal MEMORY_SIZE.</td>
</tr>
</tbody>
</table>
IBM DB2

Use the following guidelines when you set up the repository on IBM DB2:

- Set up system temporary table spaces larger than the default page size of 4 KB and update the heap sizes.
  Queries running against tables in table spaces defined with a page size larger than 4 KB require system temporary table spaces with a page size larger than 4 KB. If there are no system temporary table spaces defined with a larger page size, the queries can fail. The server displays the following error:

```
SQL 1585N A system temporary table space with sufficient page size does not exist.
SQLSTATE=54048
```

Create system temporary table spaces with page sizes of 8 KB, 16 KB, and 32 KB. Run the following SQL statements on each database to configure the system temporary table spaces and update the heap sizes:

```
CREATE Bufferpool RBF IMMEDIATE SIZE 1000 PAGESIZE 32K EXTENDED STORAGE;
CREATE Bufferpool STBF IMMEDIATE SIZE 2000 PAGESIZE 32K EXTENDED STORAGE;
CREATE REGULAR TABLESPACE REGTS32 PAGESIZE 32K MANAGED BY SYSTEM USING ('C:\DB2\NODE0000\reg32' ) EXTENTSIZE 16 OVERHEAD 10.5 PREFETCHSIZE 16 TRANSFERRATE 0.33 BUFFERPOOL RBF;
CREATE SYSTEM TEMPORARY TABLESPACE TEMP32 PAGESIZE 32K MANAGED BY SYSTEM USING ('C:\DB2\NODE0000\temp32' ) EXTENTSIZE 16 OVERHEAD 10.5 PREFETCHSIZE 16 TRANSFERRATE 0.33 BUFFERPOOL STBF;
GRANT USE OF TABLESPACE REGTS32 TO USER <USERNAME>;
UPDATE DB CFG FOR <DB NAME> USING APP_CTL_HEAP_SZ 16384
UPDATE DB CFG FOR <DB NAME> USING APPLHEAPSZ 16384
UPDATE DBM CFG USING QUERY_HEAP_SZ 8000
UPDATE DBM CFG FOR <DB NAME> USING LOGPRIMARY 100
UPDATE DBM CFG FOR <DB NAME> USING LOGFILSZ 2000
UPDATE DBM CFG FOR <DB NAME> USING LOCKLIST 1000
UPDATE DBM CFG FOR <DB NAME> USING DBHEAP 2400
"FORCE APPLICATIONS ALL"
```

- Set the locking parameters to avoid deadlocks when you load metadata into a Metadata Manager repository on IBM DB2.
The following table lists the locking parameters you can configure:

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Value</th>
<th>IBM DB2 Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCKLIST</td>
<td>8192</td>
<td>Max storage for lock list (4KB)</td>
</tr>
<tr>
<td>MAXLOCKS</td>
<td>10</td>
<td>Percent of lock lists per application</td>
</tr>
<tr>
<td>LOCKTIMEOUT</td>
<td>300</td>
<td>Lock timeout (sec)</td>
</tr>
<tr>
<td>DLCHKTIME</td>
<td>10000</td>
<td>Interval for checking deadlock (ms)</td>
</tr>
</tbody>
</table>

Also, set the DB2_RR_TO_RS parameter to YES to change the read policy from Repeatable Read to Read Stability.

Note: If you use IBM DB2 as a metadata source, the source database has the same configuration requirements.

**Microsoft SQL Server**

If the repository must store metadata in a multibyte language, set the database collation to that multibyte language when you install Microsoft SQL Server. This is a one-time configuration and cannot be changed.
Chapter 13

Informatica Platform Connectivity

This chapter includes the following topics:

- Connectivity Overview, 94
- Domain Connectivity, 95
- PowerCenter Connectivity, 95
- Native Connectivity, 99
- ODBC Connectivity, 99
- JDBC Connectivity, 100

Connectivity Overview

The Informatica platform uses the following types of connectivity to communicate among clients, services, and other components in the domain:

- **TCP/IP network protocol.** Application services and the Service Managers in a domain use TCP/IP network protocol to communicate with other nodes and services. The clients also use TCP/IP to communicate with application services. You can configure the host name and port number for TCP/IP communication on a node when you install the Informatica services. You can configure the port numbers used for services on a node during installation or in Informatica Administrator.

- **Native drivers.** The PowerCenter Integration Service and the PowerCenter Repository Service use native drivers to communicate with databases. Native drivers are packaged with the database server and client software. Install and configure native database client software on the machines where the PowerCenter Integration Service and the PowerCenter Repository Service run.

- **ODBC.** The ODBC drivers are installed with the Informatica services and the Informatica clients. The integration services use ODBC drivers to communicate with databases.

- **JDBC.** The Reporting Service uses JDBC to connect to the Data Analyzer repository and data sources. The Metadata Manager Service uses JDBC to connect to the Metadata Manager repository and metadata source repositories.

  The server installer uses JDBC to connect to the domain configuration repository during installation. The gateway nodes in the Informatica domain use JDBC to connect to the domain configuration repository.
Domain Connectivity

Services on a node in an Informatica domain use TCP/IP to connect to services on other nodes. Because services can run on multiple nodes in the domain, services rely on the Service Manager to route requests. The Service Manager on the master gateway node handles requests for services and responds with the address of the requested service.

Nodes communicate through TCP/IP on the port you select for a node when you install Informatica Services. When you create a node, you select a port number for the node. The Service Manager listens for incoming TCP/IP connections on that port.

PowerCenter Connectivity

PowerCenter uses the TCP/IP network protocol, native database drivers, ODBC, and JDBC for communication between the following PowerCenter components:

- **PowerCenter Repository Service.** The PowerCenter Repository Service uses native database drivers to communicate with the PowerCenter repository. The PowerCenter Repository Service uses TCP/IP to communicate with other PowerCenter components.

- **PowerCenter Integration Service.** The PowerCenter Integration Service uses native database connectivity and ODBC to connect to source and target databases. The PowerCenter Integration Service uses TCP/IP to communicate with other PowerCenter components.

- **Reporting Service and Metadata Manager Service.** Data Analyzer and Metadata Manager use JDBC and ODBC to access data sources and repositories.

- **PowerCenter Client.** PowerCenter Client uses ODBC to connect to source and target databases. PowerCenter Client uses TCP/IP to communicate with the PowerCenter Repository Service and PowerCenter Integration Service.

The following figure shows an overview of PowerCenter components and connectivity:
The following table lists the drivers used by PowerCenter components:

<table>
<thead>
<tr>
<th>Component</th>
<th>Database</th>
<th>Driver</th>
</tr>
</thead>
<tbody>
<tr>
<td>PowerCenter Repository Service</td>
<td>PowerCenter Repository</td>
<td>Native</td>
</tr>
<tr>
<td>PowerCenter Integration Service</td>
<td>Source</td>
<td>Native</td>
</tr>
<tr>
<td></td>
<td>Target</td>
<td>ODBC</td>
</tr>
<tr>
<td></td>
<td>Stored Procedure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lookup</td>
<td></td>
</tr>
<tr>
<td>Reporting Service</td>
<td>Data Analyzer Repository</td>
<td>JDBC</td>
</tr>
<tr>
<td>Reporting Service</td>
<td>Data Source</td>
<td>JDBC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ODBC with JDBC-ODBC bridge</td>
</tr>
<tr>
<td>Metadata Manager Service</td>
<td>Metadata Manager Repository</td>
<td>JDBC</td>
</tr>
<tr>
<td>PowerCenter Client</td>
<td>PowerCenter Repository</td>
<td>Native</td>
</tr>
<tr>
<td>PowerCenter Client</td>
<td>Source</td>
<td>ODBC</td>
</tr>
<tr>
<td></td>
<td>Target</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stored Procedure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lookup</td>
<td></td>
</tr>
<tr>
<td>Custom Metadata Configurator</td>
<td>Metadata Manager Repository</td>
<td>JDBC</td>
</tr>
</tbody>
</table>

**Repository Service Connectivity**

The PowerCenter Repository Service manages the metadata in the PowerCenter repository database. All applications that connect to the repository must connect to the PowerCenter Repository Service. The PowerCenter Repository Service uses native drivers to communicate with the repository database. The following table describes the connectivity required to connect the Repository Service to the repository and source and target databases:

<table>
<thead>
<tr>
<th>Repository Service Connection</th>
<th>Connectivity Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>PowerCenter Client</td>
<td>TCP/IP</td>
</tr>
<tr>
<td>PowerCenter Integration Service</td>
<td>TCP/IP</td>
</tr>
<tr>
<td>PowerCenter Repository database</td>
<td>Native database drivers</td>
</tr>
</tbody>
</table>

The PowerCenter Integration Service connects to the Repository Service to retrieve metadata when it runs workflows.

**Connecting from PowerCenter Client**

To connect to the PowerCenter Repository Service from PowerCenter Client, add a domain and repository in the PowerCenter Client tool. When you connect to the repository from a PowerCenter Client tool, the client tool sends a connection request to the Service Manager on the gateway node. The Service Manager returns the host name and
port number of the node where the PowerCenter Repository Service runs. PowerCenter Client uses TCP/IP to connect to the PowerCenter Repository Service.

**Connecting to Databases**

To set up a connection from the PowerCenter Repository Service to the repository database, configure the database properties in Informatica Administrator. You must install and configure the native database drivers for the repository database on the machine where the PowerCenter Repository Service runs.

**Integration Service Connectivity**

The PowerCenter Integration Service connects to the repository to read repository objects. The PowerCenter Integration Service connects to the repository through the PowerCenter Repository Service. Use Informatica Administrator to configure an associated repository for the Integration Service.

The following table describes the connectivity required to connect the PowerCenter Integration Service to the platform components, source databases, and target databases:

<table>
<thead>
<tr>
<th>PowerCenter Integration Service Connection</th>
<th>Connectivity Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>PowerCenter Client</td>
<td>TCP/IP</td>
</tr>
<tr>
<td>Other PowerCenter Integration Service Processes</td>
<td>TCP/IP</td>
</tr>
<tr>
<td>Repository Service</td>
<td>TCP/IP</td>
</tr>
<tr>
<td>Source and target databases</td>
<td>Native database drivers or ODBC</td>
</tr>
</tbody>
</table>

*Note: The PowerCenter Integration Service on Windows and UNIX can use ODBC drivers to connect to databases. You can use native drivers to improve performance.*

The PowerCenter Integration Service includes ODBC libraries that you can use to connect to other ODBC sources. The Informatica installation includes ODBC drivers.

For flat file, XML, or COBOL sources, you can either access data with network connections, such as NFS, or transfer data to the PowerCenter Integration Service node through FTP software. For information about connectivity software for other ODBC sources, refer to your database documentation.

**Connecting from the PowerCenter Client**

The Workflow Manager communicates with a PowerCenter Integration Service process over a TCP/IP connection. The Workflow Manager communicates with the PowerCenter Integration Service process each time you start a workflow or display workflow details.

**Connecting to the PowerCenter Repository Service**

When you create a PowerCenter Integration Service, you specify the PowerCenter Repository Service to associate with the PowerCenter Integration Service. When the PowerCenter Integration Service runs a workflow, it uses TCP/IP to connect to the associated PowerCenter Repository Service and retrieve metadata.
Connecting to Databases

Use the Workflow Manager to create connections to databases. You can create connections using native database drivers or ODBC. If you use native drivers, specify the database user name, password, and native connection string for each connection. The PowerCenter Integration Service uses this information to connect to the database when it runs the session.

**Note:** PowerCenter supports ODBC drivers, such as ISG Navigator, that do not need user names and passwords to connect. To avoid using empty strings or nulls, use the reserved words PmNullUser and PmNullPasswd for the user name and password when you configure a database connection. The PowerCenter Integration Service treats PmNullUser and PmNullPasswd as no user and no password.

PowerCenter Client Connectivity

The PowerCenter Client uses ODBC drivers and native database client connectivity software to communicate with databases. It uses TCP/IP to communicate with the Integration Service and with the repository.

The following table describes the connectivity types required to connect the PowerCenter Client to the Integration Service, repository, and source and target databases:

<table>
<thead>
<tr>
<th>PowerCenter Client Connection</th>
<th>Connectivity Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration Service</td>
<td>TCP/IP</td>
</tr>
<tr>
<td>Repository Service</td>
<td>TCP/IP</td>
</tr>
<tr>
<td>Databases</td>
<td>ODBC connection for each database</td>
</tr>
</tbody>
</table>

Connecting to the Repository

You can connect to the repository using the PowerCenter Client tools. All PowerCenter Client tools use TCP/IP to connect to the repository through the Repository Service each time you access the repository to perform tasks such as connecting to the repository, creating repository objects, and running object queries.

Connecting to Databases

To connect to databases from the Designer, use the Windows ODBC Data Source Administrator to create a data source for each database you want to access. Select the data source names in the Designer when you perform the following tasks:

- **Import a table or a stored procedure definition from a database.** Use the Source Analyzer or Target Designer to import the table from a database. Use the Transformation Developer, Mapplet Designer, or Mapping Designer to import a stored procedure or a table for a Lookup transformation. To connect to the database, you must also provide your database user name, password, and table or stored procedure owner name.

- **Preview data.** You can select the data source name when you preview data in the Source Analyzer or Target Designer. You must also provide your database user name, password, and table owner name.

Connecting to the Integration Service

The Workflow Manager and Workflow Monitor communicate directly with the Integration Service over TCP/IP each time you perform session and workflow-related tasks, such as running a workflow. When you log in to a repository through the Workflow Manager or Workflow Monitor, the client application lists the Integration Services that are configured for that repository in Informatica Administrator.
Reporting Service and Metadata Manager Service Connectivity

To connect to a Data Analyzer repository, the Reporting Service requires a Java Database Connectivity (JDBC) driver. To connect to the data source, the Reporting Service can use a JDBC driver or a JDBC-ODBC bridge with an ODBC driver.

To connect to a Metadata Manager repository, the Metadata Manager Service requires a JDBC driver. The Custom Metadata Configurator uses a JDBC driver to connect to the Metadata Manager repository.

JDBC drivers are installed with the Informatica services and the Informatica clients. You can use the installed JDBC drivers to connect to the Data Analyzer or Metadata Manager repository, data source, or to a PowerCenter repository.

The Informatica installers do not install ODBC drivers or the JDBC-ODBC bridge for the Reporting Service or Metadata Manager Service.

Native Connectivity

To establish native connectivity between an application service and a database, you must install the database client software on the machine where the service runs.

The PowerCenter Integration Service and PowerCenter Repository Service use native drivers to communicate with source and target databases and repository databases.

The following table describes the syntax for the native connection string for each supported database system:

<table>
<thead>
<tr>
<th>Database</th>
<th>Connect String Syntax</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM DB2</td>
<td>dbname</td>
<td>mydatabase</td>
</tr>
<tr>
<td>Informix</td>
<td>dbname@servername</td>
<td>mydatabase@informix</td>
</tr>
<tr>
<td>Microsoft SQL Server</td>
<td>servername@dbname</td>
<td>sqlserver@mydatabase</td>
</tr>
<tr>
<td>Oracle</td>
<td>dbname.world (same as TNSNAMES entry)</td>
<td>oracle.world</td>
</tr>
<tr>
<td>Sybase ASE</td>
<td>servername@dbname</td>
<td>sambrown@mydatabase</td>
</tr>
</tbody>
</table>

**Note:** Sybase ASE servername is the name of the Adaptive Server from the interfaces file.

| Teradata       | ODBC_data_source_name or ODBC_data_source_name@db_name or ODBC_data_source_name@db_user_name | TeradataODBC TeradataODBC@mydatabase TeradataODBC@sambrown |

**Note:** Use Teradata ODBC drivers to connect to source and target databases.

ODBC Connectivity

Open Database Connectivity (ODBC) provides a common way to communicate with different database systems.
PowerCenter Client uses ODBC drivers to connect to source, target, and lookup databases and call the stored procedures in databases. The PowerCenter Integration Service can also use ODBC drivers to connect to databases.

To use ODBC connectivity, you must install the following components on the machine hosting the Informatica service or client tool:

- **Database client software.** Install the client software for the database system. This installs the client libraries needed to connect to the database.
  
  **Note:** Some ODBC drivers contain wire protocols and do not require the database client software.

- **ODBC drivers.** The DataDirect closed 32-bit or 64-bit ODBC drivers are installed when you install the Informatica services. The DataDirect closed 32-bit ODBC drivers are installed when you install the Informatica clients. The database server can also include an ODBC driver.

After you install the necessary components you must configure an ODBC data source for each database that you want to connect to. A data source contains information that you need to locate and access the database, such as database name, user name, and database password. On Windows, you use the ODBC Data Source Administrator to create a data source name. On UNIX, you add data source entries to the odbc.ini file found in the system $ODBCHOME directory.

When you create an ODBC data source, you must also specify the driver that the ODBC driver manager sends database calls to.

The following table shows the recommended ODBC drivers to use with each database:

<table>
<thead>
<tr>
<th>Database</th>
<th>ODBC Driver</th>
<th>Requires Database Client Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informix</td>
<td>DataDirect Informix Wire Protocol</td>
<td>No</td>
</tr>
<tr>
<td>Microsoft Access</td>
<td>Microsoft Access driver</td>
<td>No</td>
</tr>
<tr>
<td>Microsoft Excel</td>
<td>Microsoft Excel driver</td>
<td>No</td>
</tr>
<tr>
<td>Microsoft SQL Server</td>
<td>DataDirect SQL Server Wire Protocol</td>
<td>No</td>
</tr>
<tr>
<td>Netezza</td>
<td>Netezza SQL</td>
<td>Yes</td>
</tr>
<tr>
<td>Teradata</td>
<td>Teradata ODBC driver</td>
<td>Yes</td>
</tr>
<tr>
<td>SAP HANA</td>
<td>SAP HANA ODBC driver</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### JDBC Connectivity

JDBC (Java Database Connectivity) is a Java API that provides connectivity to relational databases. Java-based applications can use JDBC drivers to connect to databases.

The following services and clients use JDBC to connect to databases:

- **Metadata Manager Service**
- **Reporting Service**
- **Custom Metadata Configurator**

JDBC drivers are installed with the Informatica services and the Informatica clients.
CHAPTER 14

Informatica Utilities Installation

This chapter includes the following topics:

- Informatica Utilities Installation Overview, 101
- Command Line Programs and Utilities, 102
- Configuring the PowerCenter Utilities, 102
- Configuring the Metadata Manager Utilities, 103

Informatica Utilities Installation Overview

The Informatica installation includes customer support tools and command line programs and utilities for the following products:

- Data Explorer
- Data Quality
- Data Services
- Metadata Manager
- PowerCenter
- PowerExchange

When you install the Informatica services or the Informatica clients, the command line programs and utilities are installed by default.

You can also install and run the programs and utilities on any machine without installing the Informatica products. Informatica provides a separate ZIP file to install the command line programs and utilities on a machine that does not have Informatica products installed.

The Informatica utilities are included in a ZIP file. Download the following file for your operating system:

Informatica_<Version>_cmd_utilities_<OperatingSystem>.zip

To install the utilities, extract the utilities from the file on the machine where you want to run them.

Configure the path and environment variables as required by the command line utilities. Grant execute permission on the utility files to user accounts that run the commands.
Command Line Programs and Utilities

You can use the Informatica utilities to manage the Informatica domain, application services, and objects from the command line on any machine that can access the Informatica domain.

The following table describes the Informatica command line programs:

<table>
<thead>
<tr>
<th>Command Line Program</th>
<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>infacmd</td>
<td>Data Explorer</td>
<td>Administer the Informatica domain and application services and processes,</td>
</tr>
<tr>
<td></td>
<td>Data Quality</td>
<td>including the repository and integration services. You can also use</td>
</tr>
<tr>
<td></td>
<td>Data Services</td>
<td>infacmd to access and administer licenses and log events and export and</td>
</tr>
<tr>
<td></td>
<td>PowerCenter</td>
<td>import objects and user accounts.</td>
</tr>
<tr>
<td></td>
<td>PowerExchange</td>
<td></td>
</tr>
<tr>
<td>pmcmd</td>
<td>PowerCenter</td>
<td>Manage workflows. Use pmcmd to start, stop, schedule, and monitor workflows.</td>
</tr>
<tr>
<td>pmpasswd</td>
<td>PowerCenter</td>
<td>Encrypt passwords to use with pmcmd and pmrep environment variables.</td>
</tr>
<tr>
<td>pmrep</td>
<td>PowerCenter</td>
<td>Performs repository administration tasks. Use pmrep to list repository</td>
</tr>
<tr>
<td></td>
<td></td>
<td>objects, create and edit groups, and restore and delete repositories.</td>
</tr>
<tr>
<td>mmcmd</td>
<td>Metadata</td>
<td>Load and manage resources, import and export models, custom resources, and</td>
</tr>
<tr>
<td></td>
<td>Manager</td>
<td>business glossaries. Create and delete Metadata Manager repository content,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and restore PowerCenter repository content.</td>
</tr>
<tr>
<td>backupCmdLine</td>
<td>Metadata</td>
<td>Back up and restore the Metadata Manager repository.</td>
</tr>
<tr>
<td></td>
<td>Manager</td>
<td></td>
</tr>
</tbody>
</table>

Configuring the PowerCenter Utilities

The PowerCenter utilities are installed in the following directory:

<UtilitiesInstallationDir>/PowerCenter/server/bin

In addition, the infacmd command line program is installed in the following directory:

<UtilitiesInstallationDir>/PowerCenter/isp/bin

Before you run the PowerCenter utilities, use the following guidelines to configure the program files and variables:

- infacmd requires the Java directory.
- To run pmrep, pmcmd, and pmpasswd, you must copy the domains.infa file for the Informatica domain to the utilities directory. To run pmrep, pmcmd, and pmpasswd on UNIX, you must also set INFA_HOME, the PATH environment variable, and the library path environment variable to the location of the utilities.
Configuring the Metadata Manager Utilities

The Metadata Manager utilities require access to the Informatica domain and services. Modify the utility programs and configure the environment variables with the location of the JVM and Informatica libraries.

**Note:** You cannot use the mmcmd utility installed with Informatica utilities or with PowerCenter Client to create, update, or delete Metadata Manager repository content or to restore PowerCenter repository content. You must use the mmcmd utility installed with the Informatica services.

1. Go to the directory where you extracted the utility files.
   - The Metadata Manager utilities are in the following directory:
     ```<UtilitiesInstallationDir>\MetadataManager\utilities```

2. With a text editor, open the mmcmd.bat file on Windows or the mmcmd.sh file on UNIX.

3. Set the JAVA_HOME environment variable to the PowerCenter java directory in the command line utilities installation.
   - For example:
     ```set JAVA_HOME=<UtilitiesInstallationDir>\PowerCenter\java```

4. Set the INFA_HOME environment variable to the PowerCenter directory in the command line utilities installation.
   - For example:
     ```set INFA_HOME=<UtilitiesInstallationDir>\PowerCenter```

5. On Solaris, verify that the LD_LIBRARY_PATH environment variable contains the following directories:
   - Solaris x86 64 bit
     ```%JAVA_HOME%/jre/lib/amd64/server:%JAVA_HOME%/jre/lib/amd64/jli```
   - Solaris Sparc 64 bit
     ```%JAVA_HOME%/jre/lib/sparcv9/server:%JAVA_HOME%/jre/lib/sparcv9/jli```
   - Solaris Sparc
     ```%JAVA_HOME%/jre/lib/sparc/server```

6. Save the mmcmd.bat or mmcmd.sh file.

7. Use a text editor to open the backupCmdLine.bat file on Windows or the backupCmdLine.sh file on UNIX.

8. Repeat steps Installing Metadata Manager Utilities through Installing Metadata Manager Utilities for the backupCmdLine.bat or backupCmdLine.sh file.
Chapter 15

Informatica Documentation Installation

This chapter includes the following topics:

- Documentation Installation Overview, 104
- Installing the Informatica Documentation, 104
- Viewing the Informatica Product Documentation, 105
- Troubleshooting, 105

Documentation Installation Overview

Use the Informatica Documentation DVD to install the Informatica product documentation in PDF format on Windows.

The Informatica Documentation DVD includes the following components:

- Informatica documentation in PDF format.
- A browser-based application to select and view Informatica documents.

You can use the application to select and view the PDF files. To view a PDF document, you will need a PDF viewer, such as Acrobat Reader.

Installing the Informatica Documentation

1. On the Informatica Documentation DVD or the location where you downloaded the documentation, locate and run the documentation installation file from the root directory:
   
   install.bat
   
2. Select the language to use for installation.
   
   The Welcome window introduces the Informatica documentation installation.
   
3. Click Next.
   
   The Installation Directory window appears.
   
4. Enter the full path of the folder where you want to install the Informatica documentation.
Click Choose to select the folder.

5. Click Next.
   The Pre-Installation Summary window displays the directory where the PDF files will be installed and the disk space required.

6. Click Install.
   When the documentation installation completes, the Post-Installation Summary window indicates whether the installation completed successfully.

7. Click Done.
   The Informatica documentation installer creates a documentation shortcut in the Informatica program group.

Viewing the Informatica Product Documentation

You can navigate through the menu pages of the Informatica documentation viewer to find the documentation you need. The documentation files are grouped by product and version.

1. To start the Informatica documentation application, choose Start > Programs > Informatica [Version] > Documentation > Start Documentation [Language].
   The Informatica Documentation start page opens in a web browser.

   To search for product documentation, enter keywords in the search field and click Search.

3. Click the name of the document to view the document.

Troubleshooting

When I try to view a PDF, I get the following error:

Install Adobe Reader to view the document.

Verify that Adobe Reader is installed on your machine. If installed, open Adobe Reader and click Help > Check for Updates. If a later version of Adobe Reader is available, install it.
Uninstallation Overview

Uninstall Informatica to remove the Informatica server or clients from a machine.

The Informatica uninstallation process deletes all Informatica files and clears all Informatica configurations from a machine. The uninstallation process does not delete files that are not installed with Informatica. For example, the installation process creates temporary directories. The uninstaller does not keep a record of these directories and therefore cannot delete them. You must manually delete these directories for a clean uninstallation.

When you install the Informatica server or Informatica clients, the installer creates an uninstaller. The uninstaller is stored in the uninstallation directory.

The following table lists the uninstallation directory for each type of installation:

<table>
<thead>
<tr>
<th>Installation</th>
<th>Uninstallation Directory Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informatica Server</td>
<td>&lt;InformaticaInstallationDir&gt;/Uninstaller_Server</td>
</tr>
<tr>
<td>Informatica Clients</td>
<td>&lt;InformaticaInstallationDir&gt;/Uninstaller_Client</td>
</tr>
</tbody>
</table>

To uninstall Informatica, use the uninstaller created during the installation. On UNIX, uninstall Informatica from the command line. On Windows, uninstall Informatica from the Windows Start menu or Control Panel.

Rules and Guidelines for Uninstallation

Use the following rules and guidelines when you uninstall Informatica components:

- The Informatica server uninstallation mode depends on the mode you use to install Informatica server. For example, you install Informatica server in console mode. When you run the uninstaller, it runs in console mode.
- The Informatica clients uninstallation mode does not depend on the mode you use to install Informatica clients. For example, you install Informatica clients in silent mode. When you run the uninstaller, it can run in graphical or silent mode.
Uninstalling Informatica does not affect the Informatica repositories. The uninstaller removes the Informatica files. It does not remove repositories from the database. If you need to move the repositories, you can back them up and restore them to another database.

Uninstalling Informatica does not remove the metadata tables from the domain configuration database. If you install Informatica again using the same domain configuration database and user account, you must manually remove the tables or choose to overwrite the tables. You can use the infasetup BackupDomain command to back up the domain configuration database before you overwrite the metadata tables. To remove the metadata tables manually, use the infasetup DeleteDomain command before you run the uninstaller.

Uninstalling Informatica removes all installation files and subdirectories from the installation directory. Before you uninstall Informatica, stop all Informatica services and processes and verify that all of the files in the installation directory are closed. At the end of the uninstallation process, the uninstaller displays the names of the files and directories that could not be removed.

The Informatica server installation creates the following folder for the files and libraries required by third party adapters built using the Informatica Development Platform APIs:

```
<InformaticaInstallationDir>/services/shared/extensions
```

Uninstalling the Informatica server deletes this folder and any subfolders created under it. If you have adapter files stored in the /extensions folder, back up the folder before you start uninstallation.

## Informatica Server Uninstallation

You can uninstall the Informatica server in graphical mode and silent mode on UNIX or Windows, and in console mode on UNIX.

### Uninstalling the Informatica Server in Graphical Mode

If you installed the Informatica server in graphical mode, uninstall the Informatica server in graphical mode.

#### Uninstalling the Informatica Server in Graphical Mode on UNIX

Before you run the uninstaller, stop all Informatica services and processes and verify that all files in the installation directory are closed. The uninstallation process cannot remove files that are open or are being used by a service or process that is running.

1. Go to the following directory:
   ```
   <InformaticaInstallationDir>/Uninstaller_Server
   ```
2. Type the following command to run the uninstaller:
   ```
   ./uninstaller
   ```
   If you installed the Informatica server in graphical mode, the uninstaller launches in graphical mode.

#### Uninstalling the Informatica Server in Graphical Mode on Windows

Before you run the uninstaller, stop all Informatica services and processes and verify that all files in the installation directory are closed. The uninstallation process cannot remove files that are open or are being used by a service or process that is running.

1. Click **Start > Program Files > Informatica [Version] > Server > Uninstaller.**
   
   The **Uninstallation** page appears.
2. Click **Uninstall** to begin the uninstallation.
   After the installer deletes all of the Informatica files from the directory, the **Post-Uninstallation Summary** page appears.

3. Click **Done** to close the uninstaller.

   After you uninstall the Informatica server, delete any remaining folders and files from the <InformaticaInstallDir> directory. For example:
   - DT_<Version>_Backup folder
   - Informatica_<Version>_Client_InstallLog.log file
   - Informatica_<Version>_Client.log file

   If you uninstalled the Informatica server from a Windows 64-bit machine, and clear the Informatica-specific CLASSPATH and PATH environment variables.

### Uninstalling the Informatica Server in Console Mode

If you installed the Informatica server in console mode, uninstall the Informatica server in console mode.

### Uninstalling the Informatica Server in Console Mode on UNIX

Before you run the uninstaller, stop all Informatica services and processes and verify that all files in the installation directory are closed. The uninstallation process cannot remove files that are open or are being used by a service or process that is running.

1. Go to the following directory:
   <InformaticaInstallDir>/Uninstaller_Server

2. Type the following command to run the uninstaller:
   ./uninstaller

   If you installed the Informatica server in console mode, the uninstaller launches in console mode.

### Uninstalling the Informatica Server in Silent Mode

If you installed the Informatica server in silent mode, uninstall the Informatica server in silent mode.

### Uninstalling the Informatica Server in Silent Mode on UNIX

Before you run the uninstaller, stop all Informatica services and processes and verify that all files in the installation directory are closed. The uninstallation process cannot remove files that are open or are being used by a service or process that is running.

1. Go to the following directory:
   <InformaticaInstallDir>/Uninstaller_Server

2. Type the following command to run the silent uninstaller:
   ./uninstaller

   If you installed the Informatica server in silent mode, the uninstaller launches in silent mode. The silent uninstaller runs in the background. The process can take a while. The silent uninstallation fails if the installation directory is not accessible.

   After you uninstall the Informatica server, delete any remaining folders and files from the <InformaticaInstallDir> directory. For example:
   - DT_<Version>_Backup folder
Informatica _<Version>_Client_InstallLog.log file
Informatica_<Version>_Client.log file

Uninstalling the Informatica Server in Silent Mode on Windows

Before you run the uninstaller, stop all Informatica services and processes and verify that all files in the installation directory are closed. The uninstallation process cannot remove files that are open or are being used by a service or process that is running.

1. Open a command window.
2. Go to the following directory:
   `<InformaticaInstallationDir>/Uninstaller_Server`
3. Double-click the following file to run the silent uninstallation:
   `SilentUninstall.bat`
   The silent uninstaller runs in the background. The process can take a while. The silent uninstallation fails if the installation directory is not accessible.

After you uninstall the Informatica server, delete any remaining folders and files from the `<InformaticaInstallationDir>` directory. For example:

- DT_<Version>_Backup folder
- Informatica_<Version>_Client_InstallLog.log file
- Informatica_<Version>_Client.log file

If you uninstalled the Informatica server from a Windows 64-bit machine, log out of the machine, log back in, and clear the Informatica-specific CLASSPATH and PATH environment variables.

Informatica Clients Uninstallation

You can uninstall the Informatica clients in graphical mode and silent mode on Windows.

Uninstalling Informatica Clients in Graphical Mode

If you installed the Informatica clients in graphical mode, uninstall the Informatica clients in graphical mode.

Uninstalling Informatica Clients in Graphical Mode

   The Uninstallation page appears.
2. Click Next.
   The Application Client Uninstall Selection page appears.
3. Select the client applications you want to uninstall and click Uninstall.
4. Click Done to close the uninstaller.
   After the uninstallation is complete, the Post-Uninstallation Summary page appears, displaying the results of the uninstallation.
After you uninstall the Informatica clients, delete any remaining folders and files from the <InformaticaInstallationDir> directory. For example:

- DT_<Version>_Backup folder
- Informatica_<Version>_Client_InstallLog.log file
- Informatica_<Version>_Client.log file

If you uninstalled the Informatica clients from a Windows 64-bit machine, log out of the machine, log back in, and clear the Informatica-specific CLASSPATH and PATH environment variables.

Uninstalling Informatica Clients in Silent Mode

If you installed the Informatica clients in silent mode, uninstall the Informatica clients in silent mode.

Configuring the Properties File

Informatica provides a sample properties file that includes the properties required by the installer.

Customize the sample properties file to create a properties file and specify the options for your uninstallation. Then run the silent uninstallation.

1. Go to <InformaticaInstallationDir>/Client/Uninstaller_Client.
2. Locate the sample SilentInput.properties file.
3. Create a backup copy of the SilentInput.properties file.
4. Use a text editor to open and modify the values of the properties file.

The following table describes the properties that you can modify:

<table>
<thead>
<tr>
<th>Property Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DXT_COMP</td>
<td>Indicates whether to uninstall Informatica Developer. If the value is 1, the Developer tool will be uninstalled. If the value is 0, the Developer tool will not be uninstalled. Default is 1.</td>
</tr>
<tr>
<td>CLIENT_COMP</td>
<td>Indicates whether to uninstall PowerCenter Client. If the value is 1, PowerCenter Client will be uninstalled. If the value is 0, PowerCenter Client will not be uninstalled. Default is 1.</td>
</tr>
<tr>
<td>DT_COMP</td>
<td>Indicates whether to uninstall Data Transformation Studio. If the value is 1, Data Transformation Studio will be uninstalled. If the value is 0, Data Transformation Studio will not be uninstalled. Default is 1.</td>
</tr>
</tbody>
</table>

5. Save the SilentInput.properties file.
Running the Silent Uninstaller

After you configure the properties file, open a command window to start the silent uninstallation.

1. Open a command window.
2. Go to `<InformaticaInstallationDir>/Uninstaller_Client`.
3. To run the silent installation, double-click the file `SilentUninstall.bat`.
   
   The silent uninstaller runs in the background. The process can take a while. The silent uninstallation fails if you incorrectly configure the properties file or if the installation directory is not accessible.

After you uninstall the Informatica clients, delete any remaining folders and files from the `<InformaticaInstallationDir>` directory. For example:

- DT_<Version>_Backup folder
- Informatica_<Version>_Client_InstallLog.log file
- Informatica_<Version>_Client.log file

If you uninstalled the Informatica clients from a Windows 64-bit machine, log out of the machine, log back in, and clear the Informatica-specific CLASSPATH and PATH environment variables.
Connecting to Databases from Windows

This appendix includes the following topics:

- Connecting to Databases from Windows Overview, 112
- Connecting to an IBM DB2 Universal Database from Windows, 113
- Connecting to an Informix Database from Windows, 113
- Connecting to Microsoft Access and Microsoft Excel from Windows, 115
- Connecting to a Microsoft SQL Server Database from Windows, 115
- Connecting to a Netezza Database from Windows, 116
- Connecting to an Oracle Database from Windows, 116
- Connecting to a Sybase ASE Database from Windows, 118
- Connecting to a Teradata Database from Windows, 118

Connecting to Databases from Windows Overview

Configure connectivity to enable communication between clients, services, and other components in the domain.

To use native connectivity, you must install and configure the database client software for the database that you want to access. 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. To increase performance, use native connectivity.

The Informatica installation includes DataDirect ODBC drivers. If you have existing ODBC data sources created with an earlier version of the drivers, you must create new ODBC data sources using the new drivers. Configure ODBC connections using the DataDirect ODBC drivers provided by Informatica or third party ODBC drivers that are Level 2 compliant or higher.
Connecting to an IBM DB2 Universal Database from Windows

For native connectivity, install the version of IBM DB2 Client Application Enabler (CAE) appropriate for the IBM DB2 database server version. To ensure compatibility between Informatica and databases, use the appropriate database client libraries.

Configuring Native Connectivity

You can configure native connectivity to an IBM DB2 database to increase performance.

The following steps provide a guideline for configuring native connectivity. For specific instructions, see the database documentation.

1. Verify that the following environment variable settings have been established by IBM DB2 Client Application Enabler (CAE):
   ```
   DB2HOME=C:\IBM\SQLLIB
   DBINSTANCE=DB2
   DB2CODEPAGE=1208 (Sometimes required. Use only if you encounter problems. Depends on the locale, you may use other values.)
   ```
2. Verify that the PATH environment variable includes the IBM DB2 bin directory. For example:
   ```
   PATH=C:\WINNT\SYSTEM32;C:\SQLLIB\BIN;...
   ```
3. Configure the IBM DB2 client to connect to the database that you want to access. To configure the IBM DB2 client:
   a. Launch the IBM DB2 Configuration Assistant.
   b. Add the database connection.
   c. Bind the connection.
4. Run the following command in the IBM DB2 Command Line Processor to verify that you can connect to the IBM DB2 database:
   ```
   CONNECT TO <dbalias> USER <username> USING <password>
   ```
5. If the connection is successful, run the TERMINATE command to disconnect from the database. If the connection fails, see the database documentation.

Connecting to an Informix Database from Windows

For native connectivity, install Informix Client SDK. Also, install the compatible version of Informix Connect (IConnect). For ODBC connectivity, use the DataDirect ODBC drivers installed with Informatica. To ensure compatibility between Informatica and databases, use the appropriate database client libraries.

Note: If you use the DataDirect ODBC driver provided by Informatica, you do not need the database client. The ODBC wire protocols do not require the database client software to connect to the database.
Configuring Native Connectivity

You can configure native connectivity to an Informix database to increase performance.

The following steps provide a guideline for configuring native connectivity. For specific connectivity instructions, see the database documentation.

1. Configure the Informix Setnet32 utility to set the server and host information.
2. Set the INFORMIXDIR, INFORMIXSERVER, DBMONEY, DB_LOCALE and PATH environment variables.
   - **INFORMIXDIR**: Set the variable to the directory where the database client is installed. For example, `C:\databases\informix`
   - **INFORMIXSERVER**: Set the variable to the name of the server. For example, `INFORMIXSERVER=ids115`
   - **DBMONEY**: Set the variable so Informix does not prefix the data with the dollar sign ($) for money datatypes. For example, `DBMONEY=`.
   - **DB_LOCALE**: Set the variable to the locale of the database server. For example, `DB_LOCALE=en_US.819`
   - **CLIENT_loCALE**: Set the variable to the locale of the client installation. Verify that this is compatible with the server locale. For example, `CLIENT_LoCALE=en_US.819`
3. Add the Informix client installation directory to the PATH system variable. For example, `PATH=C:\databases\Informix\bin;...`
4. If you plan to call Informix stored procedures in mappings, set all of the date parameters to the Informix data type `datetime year to fraction(5)`.
5. Verify that you can connect to the Informix database by running the Informix ILogin program that is distributed with the Informix client installer.
   - If you fail to connect to the database, verify that you have correctly entered all the information.

Configuring ODBC Connectivity

You can configure ODBC connectivity to an Informix database.

The following steps provide a guideline for configuring ODBC connectivity. For specific instructions, see the database documentation.

1. Create an ODBC data source using the DataDirect ODBC Wire Protocol driver for Informix provided by Informatica.
2. Verify that you can connect to the Informix database using the ODBC data source.
Connecting to Microsoft Access and Microsoft Excel from Windows

Configure connectivity to the Informatica components on Windows.

**PowerCenter Integration Service**

- Install Microsoft Access or Excel on the machine where the PowerCenter Integration Service processes run.
- Create an ODBC data source for the Microsoft Access or Excel data you want to access.

**PowerCenter Client**

- Install Microsoft Access or Excel on the machine hosting the PowerCenter Client. Create an ODBC data source for the Microsoft Access or Excel data you want to access.

**Configuring ODBC Connectivity**

You can configure ODBC connectivity to a Microsoft Access or Excel database.

The following steps provide a guideline for configuring ODBC connectivity. For specific instructions, see the database documentation.

1. Create an ODBC data source using the driver provided by Microsoft.
2. To avoid using empty string or nulls, use the reserved words PmNullUser for the user name and PmNullPasswd for the password when you create a database connection.

Connecting to a Microsoft SQL Server Database from Windows

For native connectivity, Informatica uses Microsoft OLE DB Provider for Microsoft SQL Server to interface to SQL Server databases. Install and use Microsoft SQL Server Management Studio Express to verify connectivity to the SQL Server database.

**Configuring Native Connectivity**

You can configure native connectivity to an a Microsoft SQL Server database to increase performance.

The OLE DB providers are installed with Microsoft SQL Server. If you cannot to connect to the database, verify that you correctly entered all of the connectivity information. For specific connectivity instructions, see the database documentation.
Connecting to a Netezza Database from Windows

Install and configure ODBC on the machines where the PowerCenter Integration Service process runs and where you install PowerCenter Client. You must configure connectivity to the following Informatica components on Windows:

- **PowerCenter Integration Service.** Install the Netezza ODBC driver on the machine where the PowerCenter Integration Service process runs. Use the Microsoft ODBC Data Source Administrator to configure ODBC connectivity.

- **PowerCenter Client.** Install the Netezza ODBC driver on each PowerCenter Client machine that accesses the Netezza database. Use the Microsoft ODBC Data Source Administrator to configure ODBC connectivity. Use the Workflow Manager to create a database connection object for the Netezza database.

Configuring ODBC Connectivity

You can configure ODBC connectivity to a Netezza database.

The following steps provide a guideline for configuring ODBC connectivity. For specific instructions, see the database documentation.

1. Create an ODBC data source for each Netezza database that you want to access.
   
   To create the ODBC data source, use the driver provided by Netezza.
   
   Create a System DSN if you start the Informatica service with a Local System account logon. Create a User DSN if you select the This account log in option to start the Informatica service.
   
   After you create the data source, configure the properties of the data source.

2. Enter a name for the new ODBC data source.

3. Enter the IP address/host name and port number for the Netezza server.

4. Enter the name of the Netezza schema where you plan to create database objects.

5. Configure the path and file name for the ODBC log file.

6. Verify that you can connect to the Netezza database.
   
   You can use the Microsoft ODBC Data Source Administrator to test the connection to the database. To test the connection, select the Netezza data source and click Configure. On the Testing tab, click Test Connection and enter the connection information for the Netezza schema.

Connecting to an Oracle Database from Windows

For native connectivity, install the version of Oracle client appropriate for the Oracle database server version. To ensure compatibility between Informatica and databases, use the appropriate database client libraries.

You must 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.
Configuring Native Connectivity

You can configure native connectivity to an Oracle database to increase performance.

The following steps provide a guideline for configuring native connectivity using Oracle Net Services or Net8. For specific connectivity instructions, see the database documentation.

1. Verify that the Oracle home directory is set.
   
   For example:
   
   ```
   ORACLE_HOME=C:\Oracle
   ```

2. Verify that the PATH environment variable includes the Oracle bin directory.

   For example, if you install Net8, the path might include the following entry:
   
   ```
   PATH=C:\ORANT\BIN;
   ```

3. Configure the Oracle client to connect to the database that you want to access.

   Launch SQL*Net Easy Configuration Utility or edit an existing tnsnames.ora file to the home directory and modify it.

   **Note:** By default, the tnsnames.ora file is stored in the following directory: `<OracleInstallationDir>\network\admin`.

   Enter the correct syntax for the Oracle connect string, typically `databasename.world`. Make sure the SID entered here matches the database server instance ID defined on the Oracle server.

   Here is a sample tnsnames.ora file. Enter the information for the database.
   
   ```
   mydatabase.world =
   (DESCRIPTION
   (ADDRESS_LIST =
   (ADDRESS =
   (COMMUNITY = mycompany.world
   (PROTOCOL = TCP)
   (Host = mymachine)
   (Port = 1521)
   )
   )
   (CONNECT_DATA =
   (SID = MYORA7)
   (GLOBAL_NAMES = mydatabase.world)
   )
   ```

4. Set the NLS_LANG environment variable to the locale, including language, territory, and character set, you want the database client and server to use with the login.

   The value of this variable depends on the configuration. For example, if the value is `american.amERICA.UTF8`, you must set the variable as follows:
   
   ```
   NLS_LANG=american.amERICA.UTF8;
   ```

   To determine the value of this variable, contact the database administrator.

5. If the tnsnames.ora file is not in the same location as the Oracle client installation location, set the TNS_ADMIN environment variable to the directory where the tnsnames.ora file resides.

   For example, if the tnsnames.ora file is in the C:\oracle\files directory, set the variable as follows:
   
   ```
   TNS_ADMIN= C:\oracle\files
   ```

6. Verify that you can connect to the Oracle database.

   To connect to the database, launch SQL*Plus and enter the connectivity information. If you fail to connect to the database, verify that you correctly entered all of the connectivity information.

   Use the connect string as defined in the tnsnames.ora file.
Connecting to a Sybase ASE Database from Windows

For native connectivity, install the version of Open Client appropriate for your database version. To ensure compatibility between Informatica and databases, use the appropriate database client libraries.

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.

If you want to create, restore, or upgrade a Sybase ASE repository, set allow nulls by default to TRUE at the database level. Setting this option changes the default null type of the column to null in compliance with the SQL standard.

Configuring Native Connectivity

You can configure native connectivity to a Sybase ASE database to increase performance.

The following steps provide a guideline for configuring native connectivity. For specific instructions, see the database documentation.

1. Verify that the SYBASE environment variable refers to the Sybase ASE directory.
   For example:
   ```
   SYBASE=C:\SYBASE
   ```

2. Verify that the PATH environment variable includes the Sybase OCS directory.
   For example:
   ```
   PATH=C:\SYBASE\OCS-15_0\BIN;C:\SYBASE\OCS-15_0\DLL
   ```

3. Configure Sybase Open Client to connect to the database that you want to access.
   Use SQLEDIT to configure the Sybase client, or copy an existing SQL.INI file (located in the %SYBASE%\INI directory) and make any necessary changes.
   Select NLWSCK as the Net-Library driver and include the Sybase ASE server name.
   Enter the host name and port number for the Sybase ASE server. If you do not know the host name and port number, check with the system administrator.

4. Verify that you can connect to the Sybase ASE database.
   To connect to the database, launch ISQL and enter the connectivity information. If you fail to connect to the database, verify that you correctly entered all of the connectivity information.
   User names and database names are case sensitive.

Connecting to a Teradata Database from Windows

Install and configure native client software on the machines where the PowerCenter Integration Service process runs and where you install PowerCenter Client. To ensure compatibility between Informatica and databases, use the appropriate database client libraries. You must configure connectivity to the following Informatica components on Windows:

- **PowerCenter Integration Service.** Install the Teradata client, the Teradata ODBC driver, and any other Teradata client software that you might need on the machine where the PowerCenter Integration Service process runs. You must also configure ODBC connectivity.
PowerCenter Client. Install the Teradata client, the Teradata ODBC driver, and any other Teradata client software that you might need on each PowerCenter Client machine that accesses Teradata. Use the Workflow Manager to create a database connection object for the Teradata database.

Note: Based on a recommendation from Teradata, Informatica uses ODBC to connect to Teradata. ODBC is a native interface for Teradata.

Configuring ODBC Connectivity

You can configure ODBC connectivity to a Teradata database.

The following steps provide a guideline for configuring ODBC connectivity. For specific instructions, see the database documentation.

1. Create an ODBC data source for each Teradata database that you want to access.
   To create the ODBC data source, use the driver provided by Teradata.
   Create a System DSN if you start the Informatica service with a Local System account logon. Create a User DSN if you select the This account log in option to start the Informatica service.

2. Enter the name for the new ODBC data source and the name of the Teradata server or its IP address.
   To configure a connection to a single Teradata database, enter the DefaultDatabase name. To create a single connection to the default database, enter the user name and password. To connect to multiple databases, using the same ODBC data source, leave the DefaultDatabase field and the user name and password fields empty.

3. Configure Date Options in the Options dialog box.
   In the Teradata Options dialog box, specify AAA for DateTime Format.

4. Configure Session Mode in the Options dialog box.
   When you create a target data source, choose ANSI session mode. If you choose ANSI session mode, Teradata does not roll back the transaction when it encounters a row error. If you choose Teradata session mode, Teradata rolls back the transaction when it encounters a row error. In Teradata mode, the Integration Service cannot detect the rollback and does not report this in the session log.

5. Verify that you can connect to the Teradata database.
   To test the connection, use a Teradata client program, such as WinDDI, BTEQ, Teradata Administrator, or Teradata SQL Assistant.
Connecting to Databases from UNIX Overview

To use native connectivity, you must install and configure the database client software for the database that you want to access. 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. To increase performance, use native connectivity.

The Informatica installation includes DataDirect ODBC drivers. If you have existing ODBC data sources created with an earlier version of the drivers, you must create new ODBC data sources using the new drivers. Configure ODBC connections using the DataDirect ODBC drivers provided by Informatica or third party ODBC drivers that are Level 2 compliant or higher.

Use the following guidelines when you connect to databases from Linux or UNIX:

- Use native drivers to connect to IBM DB2, Oracle, or Sybase ASE databases.
- You can use ODBC to connect to other sources and targets.
Connecting to an IBM DB2 Universal Database from UNIX

For native connectivity, install the version of IBM DB2 Client Application Enabler (CAE) appropriate for the IBM DB2 database server version. To ensure compatibility between Informatica and databases, use the appropriate database client libraries.

Configuring Native Connectivity

You can configure native connectivity to an IBM DB2 database to increase performance.

The following steps provide a guideline for configuring native connectivity. For specific instructions, see the database documentation.

1. To configure connectivity on the machine where the PowerCenter Integration Service or Repository Service process runs, log in to the machine as a user who can start a service process.

2. Set the DB2INSTANCE, INSTHOME, DB2DIR, and PATH environment variables.

   The UNIX IBM DB2 software always has an associated user login, often db2admin, which serves as a holder for database configurations. This user holds the instance for DB2.

   **DB2INSTANCE.** The name of the instance holder.

   Using a Bourne shell:
   ```bash
   $ DB2INSTANCE=db2admin; export DB2INSTANCE
   ```

   Using a C shell:
   ```bash
   $ setenv DB2INSTANCE db2admin
   ```

   **INSTHOME.** This is db2admin home directory path.

   Using a Bourne shell:
   ```bash
   $ INSTHOME=~db2admin
   ```

   Using a C shell:
   ```bash
   $ setenv INSTHOME ~db2admin>
   ```

   **DB2DIR.** Set the variable to point to the IBM DB2 CAE installation directory. For example, if the client is installed in the /opt/IBM/db2/V9.7 directory:

   Using a Bourne shell:
   ```bash
   $ DB2DIR=/opt/IBM/db2/V9.7; export DB2DIR
   ```

   Using a C shell:
   ```bash
   $ setenv DB2DIR /opt/IBM/db2/V9.7
   ```

   **PATH.** To run the IBM DB2 command line programs, set the variable to include the DB2 bin directory.

   Using a Bourne shell:
   ```bash
   $ PATH=$PATH:$DB2DIR/bin; export PATH
   ```

   Using a C shell:
   ```bash
   $ setenv PATH $PATH:$DB2DIR/bin
   ```

3. Set the shared library variable to include the DB2 lib directory.

   The IBM DB2 client software contains a number of shared library components that the PowerCenter Integration Service and Repository Service processes load dynamically. To locate the shared libraries during run time, set the shared library environment variable.

   The shared library path must also include the Informatica installation directory `server_dir`.
Set the shared library environment variable based on the operating system.

The following table describes the shared library variables for each operating system:

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solaris</td>
<td>LD_LIBRARY_PATH</td>
</tr>
<tr>
<td>Linux</td>
<td>LD_LIBRARY_PATH</td>
</tr>
<tr>
<td>AIX</td>
<td>LIBPATH</td>
</tr>
<tr>
<td>HP-UX</td>
<td>SHLIB_PATH</td>
</tr>
</tbody>
</table>

For example, use the following syntax for Solaris and Linux:

- Using a Bourne shell:
  
  ```bash
  $ LD_LIBRARY_PATH=${LD_LIBRARY_PATH}:$HOME/server_dir:$DB2_DIR/lib; export LD_LIBRARY_PATH
  ```

- Using a C shell:
  
  ```bash
  $ setenv LD_LIBRARY_PATH $(LD_LIBRARY_PATH):$HOME/server_dir:$DB2_DIR/lib
  ```

For HP-UX:

- Using a Bourne shell:
  
  ```bash
  $ SHLIB_PATH=${SHLIB_PATH}:$HOME/server_dir:$DB2_DIR/lib; export SHLIB_PATH
  ```

- Using a C shell:
  
  ```bash
  $ setenv SHLIB_PATH $(SHLIB_PATH):$HOME/server_dir:$DB2_DIR/lib
  ```

For AIX:

- Using a Bourne shell:
  
  ```bash
  $ LIBPATH=${LIBPATH}:$HOME/server_dir:$DB2_DIR/lib; export LIBPATH
  ```

- Using a C shell:
  
  ```bash
  $ setenv LIBPATH ${LIBPATH}:$HOME/server_dir:$DB2_DIR/lib
  ```

4. Edit the `.cshrc` or `.profile` to include the complete set of shell commands. Save the file and either log out and log in again or run the source command.

Using a Bourne shell:

```bash
$ source .profile
```

Using a C shell:

```bash
$ source .cshrc
```

5. If the DB2 database resides on the same machine on which PowerCenter Integration Service or Repository Service processes run, configure the DB2 instance as a remote instance.

Run the following command to verify if there is a remote entry for the database:

```
DB2 LIST DATABASE DIRECTORY
```

The command lists all the databases that the DB2 client can access and their configuration properties. If this command lists an entry for "Directory entry type" of "Remote," skip to step 6.

If the database is not configured as remote, run the following command to verify whether a TCP/IP node is cataloged for the host:

```
DB2 LIST NODE DIRECTORY
```
Connecting to an Informix Database from UNIX

Use ODBC to connect to an Informix database on UNIX.

Configuring ODBC Connectivity

You can configure ODBC connectivity to an Informix database.

The following steps provide a guideline for configuring ODBC connectivity. For specific instructions, see the database documentation.

1. Set the ODBCHOME environment variable to the ODBC installation directory. For example:
   Using a Bourne shell:
   
   $ ODBCHOME=<Informatica server home>/ODBC7.0; export ODBCHOME
   
   Using a C shell:
   
   $ setenv ODBCHOME <Informatica server home>/ODBC7.0

2. Set the ODBCINI environment variable to the location of the odbc.ini file. For example, if the odbc.ini file is in the $ODBCHOME directory:
   
   Using a Bourne shell:
   
   ODBCINI=$ODBCHOME/odbc.ini; export ODBCINI
   
   Using a C shell:
   
   $ setenv ODBCINI $ODBCHOME/odbc.ini

3. Edit the existing odbc.ini file in the $ODBCHOME directory or copy this odbc.ini file to the UNIX home directory and edit it.
   
   $ cp $ODBCHOME/odbc.ini $HOME/.odbc.ini

4. Add an entry for the Informix data source under the section [ODBC Data Sources] and configure the data source. For example:

   [Informix Wire Protocol]
   Driver=/export/home/build_root/ODBC_7.0/install/lib/DWifcl26.so
   Description=DataDirect 7.0 Informix Wire Protocol
   AlternateServers=
   ApplicationUsingThreads=1
   CancelDetectInterval=0
   ConnectionRetryCount=0
   ConnectionRetryDelay=3
   Database=<database_name>

If the node name is empty, you can create one when you set up a remote database. Use the following command to set up a remote database and, if needed, create a node:

   db2 CATALOG TCPIP NODE <nodename> REMOTE <hostname_or_address> SERVER <port number>

Run the following command to catalog the database:

   db2 CATALOG DATABASE <dbname> as <dbalias> at NODE <nodename>

For more information about these commands, see the database documentation.

6. Verify that you can connect to the DB2 database. Run the DB2 Command Line Processor and run the command:

   CONNECT TO <dbalias> USER <username> USING <password>

   If the connection is successful, clean up with the CONNECT RESET or TERMINATE command.
Configuring ODBC Connectivity

You can configure ODBC connectivity to a Microsoft SQL Server database.

The following steps provide a guideline for configuring ODBC connectivity. For specific instructions, see the database documentation.

1. Set the ODBCHOME environment variable to the ODBC installation directory. For example:
   Using a Bourne shell:
   $ ODBCHOME=\{Informatica server home\}/ODBC7.0; export ODBCHOME
   Using a C shell:
   $ setenv ODBCHOME \{Informatica server home\}/ODBC7.0

2. Set the ODBCINI environment variable to the location of the odbc.ini file. For example, if the odbc.ini file is in the $ODBCHOME directory:
   Using a Bourne shell:
   ODBCINI=\$ODBCHOME/odbc.ini; export ODBCINI
   Using a C shell:
   $ setenv ODBCINI $ODBCHOME/odbc.ini

3. Edit the existing odbc.ini file in the $ODBCHOME directory or copy this odbc.ini file to the UNIX home directory and edit it.
   $ cp $ODBCHOME/odbc.ini $HOME/.odbc.ini

4. Add an entry for the DataDirect New SQL Server Wire Protocol driver DWSqlsxx.so provided by Informatica under the section [ODBC Data Sources] and configure the data source. For example:

   [SQL Server Wire Protocol]
   Driver=\{export/home/build_root/ODBC_7.0/\install/lib/DWSqls26.so
   Description=DataDirect SQL Server Wire Protocol
   Database=<database_name>

Connecting to Microsoft SQL Server from UNIX

Use ODBC to connect to a Microsoft SQL Server database from a UNIX machine.
To ensure consistent data in Microsoft SQL Server repositories, go to the Create a New Data Source to SQL Server dialog box and clear the Create temporary stored procedures for prepared SQL statements check box.

5. Set the PATH and shared library environment variables by executing the script odbc.sh or odbc.csh in the $ODBCHOME directory.

Using a Bourne shell:
```
sh odbc.sh
```

Using a C shell:
```
source odbc.csh
```

6. Verify that you can connect to the SQL Server database using the ODBC data source. If the connection fails, see the database documentation.

**Configuring SSL Authentication through ODBC**

You can configure SSL authentication for Microsoft SQL Server through ODBC using the DataDirect New SQL Server Wire Protocol driver.

1. Open the odbc.ini file and add an entry for the ODBC data source and DataDirect New SQL Server Wire Protocol driver under the section [ODBC Data Sources].

2. Add the attributes in the odbc.ini file for configuring SSL.

The following table lists the attributes that you must add to the odbc.ini file when you configure SSL authentication:

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EncryptionMethod</td>
<td>The method that the driver uses to encrypt the data sent between the driver and the database server. Set the value to 1 to encrypt data using SSL.</td>
</tr>
<tr>
<td>ValidateServerCertificate</td>
<td>Determines whether the driver validates the certificate sent by the database server when SSL encryption is enabled. Set the value to 1 for the driver to validate the server certificate.</td>
</tr>
<tr>
<td>TrustStore</td>
<td>The location and name of the trust store file. The trust store file contains a list of Certificate Authorities (CAs) that the driver uses for SSL server authentication.</td>
</tr>
</tbody>
</table>
### Connecting to a Netezza Database from UNIX

Install and configure Netezza ODBC driver on the machine where the PowerCenter Integration Service process runs. Use the DataDirect Driver Manager in the DataDirect driver package shipped with the Informatica product to configure the Netezza data source details in the odbc.ini file.

#### Configuring ODBC Connectivity

You can configure ODBC connectivity to a Netezza database. The following steps provide a guideline for configuring ODBC connectivity. For specific instructions, see the database documentation.

1. To configure connectivity for the integration service process, log in to the machine as a user who can start a service process.
2. Set the ODBCHOME, NZ_ODBC_INI_PATH, and PATH environment variables.
   - **ODBCHOME.** Set the variable to the ODBC installation directory. For example:
     - Using a Bourne shell:
       ```bash
       $ ODBCHOME=<Informatica server home>/ODBC7.0; export ODBCHOME
       ```
     - Using a C shell:
       ```bash
       $ setenv ODBCHOME =<Informatica server home>/ODBC7.0
       ```
   - **PATH.** Set the variable to the ODBC/home/bin directory. For example:
     - Using a Bourne shell:
       ```bash
       PATH="${PATH}:$ODBCHOME/bin"
       ```
     - Using a C shell:
       ```bash
       $ setenv PATH ${PATH}:$ODBCHOME/bin
       ```
   - **NZ_ODBC_INI_PATH.** Set the variable to point to the directory that contains the odbc.ini file. For example, if the odbc.ini file is in the $ODBCHOME directory:
     - Using a Bourne shell:
       ```bash
       NZ_ODBC_INI_PATH=$ODBCHOME; export NZ_ODBC_INI_PATH
       ```
     - Using a C shell:
       ```bash
       $ setenv NZ_ODBC_INI_PATH $ODBCHOME
       ```
3. Set the shared library environment variable.
   The shared library path must contain the ODBC libraries. It must also include the Informatica services installation directory (server_dir).
Set the shared library environment variable based on the operating system. For 32-bit UNIX platforms, set the Netezza library folder to `<NetezzaInstallationDir>/lib`. For 64-bit UNIX platforms, set the Netezza library folder to `<NetezzaInstallationDir>/lib64`.

The following table describes the shared library variables for each operating system:

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<tr>
<th>Operating System</th>
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<tr>
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</tr>
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<td>AIX</td>
<td>LIBPATH</td>
</tr>
<tr>
<td>HP-UX</td>
<td>SHLIB_PATH</td>
</tr>
</tbody>
</table>

For example, use the following syntax for Solaris:

- **Using a Bourne shell:**
  
  ```bash
  $ LD_LIBRARY_PATH="$LD_LIBRARY_PATH:$HOME/server_dir:$ODBCHOME/lib:<NetezzaInstallationDir>/lib64"
  export LD_LIBRARY_PATH
  
  $ setenv LD_LIBRARY_PATH "$LD_LIBRARY_PATH:$HOME/server_dir:$ODBCHOME/lib:<NetezzaInstallationDir>/lib64"
  export LD_LIBRARY_PATH
  
  Using a C shell:
  ```

For HP-UX:

- **Using a Bourne shell:**
  
  ```bash
  $ SHLIB_PATH=$SHLIB_PATH:$HOME/server_dir:$ODBCHOME/lib:<NetezzaInstallationDir>/lib64; export SHLIB_PATH
  
  $ setenv SHLIB_PATH "$SHLIB_PATH:$HOME/server_dir:$ODBCHOME/lib:<NetezzaInstallationDir>/lib64";
  export SHLIB_PATH
  
  Using a C shell:
  ```

For AIX:

- **Using a Bourne shell:**
  
  ```bash
  $ LIBPATH=$LIBPATH:$HOME/server_dir:$ODBCHOME/lib:<NetezzaInstallationDir>/lib64; export LIBPATH
  
  $ setenv LIBPATH "$LIBPATH:$HOME/server_dir:$ODBCHOME/lib:<NetezzaInstallationDir>/lib64"
  export LIBPATH
  
  Using a C shell:
  ```

4. **Edit the existing odbc.ini file or copy the odbc.ini file to the home directory and edit it.**

This file exists in `$ODBCHOME` directory.

```bash
$ cp $ODBCHOME/odbc.ini $HOME/.odbc.ini
```

Add an entry for the Netezza data source under the section [ODBC Data Sources] and configure the data source.

For example:

```ini
[Netezza]
Driver = /export/home/appsqa/thirdparty/netezza/lib64/libnzodbc.so
Description = NetezzaSQL ODBC
Servername = netezza1.informatica.com
Port = 5480
Database = infa
Username = admin
Password = password
```
Debuglogging = true
StripCRLF = false
PreFetch = 256
Protocol = 7.0
ReadOnly = false
ShowSystemTables = false
Socket = 16384
DateFormat = 1
TranslationDLL =
TranslationName =
TranslationOption =
NumericAsChar = false

For more information about Netezza connectivity, see the Netezza ODBC driver documentation.

5. Verify that the last entry in the odbc.ini file is InstallDir and set it to the ODBC installation directory.
   For example:
   
   InstallDir=/usr/odbc

6. Edit the .cshrc or .profile file to include the complete set of shell commands.

7. Save the file and either log out and log in again, or run the source command.
   Using a Bourne shell:
   
   $ source .profile
   
   Using a C shell:
   
   $ source .cshrc

Connecting to an Oracle Database from UNIX

For native connectivity, install the version of Oracle client appropriate for the Oracle database server version. To ensure compatibility between Informatica and databases, use the appropriate database client libraries.

You must 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.

Configuring Native Connectivity

You can configure native connectivity to an Oracle database to increase performance.

The following steps provide a guideline for configuring native connectivity through Oracle Net Services or Net8. For specific instructions, see the database documentation.

1. To configure connectivity for the PowerCenter Integration Service or Repository Service process, log in to the machine as a user who can start the server process.

2. Set the ORACLE_HOME, NLS_LANG, TNS_ADMIN, and PATH environment variables.
   ORACLE_HOME. Set the variable to the Oracle client installation directory. For example, if the client is installed in the /HOME2/oracle directory, set the variable as follows:
   
   Using a Bourne shell:
   
   $ ORACLE_HOME=/HOME2/oracle; export ORACLE_HOME
   
   Using a C shell:
   
   $ setenv ORACLE_HOME /HOME2/oracle
NLS_LANG. Set the variable to the locale (language, territory, and character set) you want the database client and server to use with the login. The value of this variable depends on the configuration. For example, if the value is `american_americ.UTF8`, set the variable as follows:

Using a Bourne shell:
```
$ NLS_LANG=american_americ.UTF8; export NLS_LANG
```
Using a C shell:
```
$ NLS_LANG american_americ.UTF8
```
To determine the value of this variable, contact the Administrator.

TNS_ADMIN. If the tnsnames.ora file is not in the same location as the Oracle client installation location, set the TNS_ADMIN environment variable to the directory where the tnsnames.ora file resides. For example, if the file is in the `/HOME2/oracle/files` directory, set the variable as follows:

Using a Bourne shell:
```
$ TNS_ADMIN=$HOME2/oracle/files; export TNS_ADMIN
```
Using a C shell:
```
$ setenv TNS_ADMIN=$HOME2/oracle/files
```
Note: By default, the tnsnames.ora file is stored in the following directory: `$ORACLE_HOME/network/admin`.

PATH. To run the Oracle command line programs, set the variable to include the Oracle bin directory.

Using a Bourne shell:
```
$ PATH=$(PATH):$ORACLE_HOME/bin; export PATH
```
Using a C shell:
```
$ setenv PATH $(PATH):ORACLE_HOME/bin
```
3. Set the shared library environment variable.

The Oracle client software contains a number of shared library components that the PowerCenter Integration Service and Repository Service processes load dynamically. To locate the shared libraries during run time, set the shared library environment variable.

The shared library path must also include the Informatica installation directory (server_dir).

Set the shared library environment variable to `LD_LIBRARY_PATH`.

For example, use the following syntax:

- Using a Bourne shell:
  ```bash
  $ LD_LIBRARY_PATH=$(LD_LIBRARY_PATH):$HOME/server_dir:$ORACLE_HOME/lib; export LD_LIBRARY_PATH
  ```
- Using a C shell:
  ```bash
  $ setenv LD_LIBRARY_PATH $(LD_LIBRARY_PATH):$HOME/server_dir:$ORACLE_HOME/lib
  ```
4. Edit the `.cshrc` or `.profile` to include the complete set of shell commands. Save the file and either log out and log in again, or run the source command.

Using a Bourne shell:
```
$ source .profile
```
Using a C shell:
```
$ source .cshrc
```
5. Verify that the Oracle client is configured to access the database.

Use the SQL*Net Easy Configuration Utility or copy an existing `tnsnames.ora` file to the home directory and modify it.

The `tnsnames.ora` file is stored in the following directory: `$ORACLE_HOME/network/admin`.
Enter the correct syntax for the Oracle connect string, typically `database_name.world`.

Here is a sample `tnsnames.ora` file. Enter the information for the database.

```plaintext
mydatabase.world =
  (DESCRIPTION
   (ADDRESS_LIST =
    (ADDRESS =
      (COMMUNITY = mycompany.world
       (PROTOCOl = TCP)
      (Host = mymachine)
      (Port = 1521)
    )
    )
   )
(CONNECT_DATA =
  (SID = MYORA7)
  (GLOBAL_NAMES = mydatabase.world)
```

6. Verify that you can connect to the Oracle database.

To connect to the Oracle database, launch SQL*Plus and enter the connectivity information. If you fail to connect to the database, verify that you correctly entered all of the connectivity information.

Enter the user name and connect string as defined in the `tnsnames.ora` file.

---

**Connecting to a Sybase ASE Database from UNIX**

For native connectivity, install the version of Open Client appropriate for your database version. To ensure compatibility between Informatica and databases, use the appropriate database client libraries.

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.

If you want to create, restore, or upgrade a Sybase ASE repository, set `allow nulls by default` to `TRUE` at the database level. Setting this option changes the default null type of the column to `null` in compliance with the SQL standard.

**Configuring Native Connectivity**

You can configure native connectivity to a Sybase ASE database to increase performance.

The following steps provide a guideline for configuring native connectivity. For specific instructions, see the database documentation.

1. To configure connectivity to the PowerCenter Integration Service or Repository Service process, log in to the machine as a user who can start the server process.

2. Set the `SYBASE` and `PATH` environment variables.

   **SYBASE.** Set the variable to the Sybase Open Client installation directory. For example if the client is installed in the `/usr/sybase` directory:

   Using a Bourne shell:

   ```bash
   $ SYBASE=/usr/sybase; export SYBASE
   ```

   Using a C shell:

   ```bash
   $ setenv SYBASE /usr/sybase
   ```

   **PATH.** To run the Sybase command line programs, set the variable to include the Sybase OCS bin directory.
3. Set the shared library environment variable.

The Sybase Open Client software contains a number of shared library components that the PowerCenter Integration Service and Repository Service processes load dynamically. To locate the shared libraries during run time, set the shared library environment variable.

The shared library path must also include the installation directory of the Informatica services (server_dir).

Set the shared library environment variable based on the operating system.

The following table describes the shared library variables for each operating system.

<table>
<thead>
<tr>
<th>Operating System</th>
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<tbody>
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<td>LIBPATH</td>
</tr>
<tr>
<td>HP-UX</td>
<td>SHLIB_PATH</td>
</tr>
</tbody>
</table>

For example, use the following syntax for Solaris and Linux:

- Using a Bourne shell:
  
  ```bash
  $ PATH=$PATH:/usr/sybase/OCS-15_0/bin; export PATH
  ```

- Using a C shell:
  
  ```bash
  $ setenv PATH $(PATH):/usr/sybase/OCS-15_0/bin
  ```

For HP-UX

- Using a Bourne shell:
  
  ```bash
  ```

- Using a C shell:
  
  ```bash
  ```

For AIX

- Using a Bourne shell:
  
  ```bash
  ```

- Using a C shell:
  
  ```bash
  ```

4. Edit the .cshrc or .profile to include the complete set of shell commands. Save the file and either log out and log in again, or run the source command.

Using a Bourne shell:

```bash
$ source .profile
```
Using a C shell:

$ source .cshrc

5. Verify the Sybase ASE server name in the Sybase interfaces file stored in the $SYBASE directory.

6. Verify that you can connect to the Sybase ASE database.

To connect to the Sybase ASE database, launch ISQL and enter the connectivity information. If you fail to connect to the database, verify that you correctly entered all of the connectivity information.

User names and database names are case sensitive.

Connecting to a Teradata Database from UNIX

Install and configure native client software on the machines where the PowerCenter Integration Service process runs and where you install PowerCenter Client. To ensure compatibility between Informatica and databases, use the appropriate database client libraries. You must configure connectivity to the following Informatica components:

- PowerCenter Integration Service. Install the Teradata client, the Teradata ODBC driver, and any other Teradata client software that you might need on the machine where the PowerCenter Integration Service process runs. You must also configure ODBC connectivity.

Note: Based on a recommendation from Teradata, Informatica uses ODBC to connect to Teradata. ODBC is a native interface for Teradata.

Configuring ODBC Connectivity

You can configure ODBC connectivity to a Teradata database.

The following steps provide a guideline for configuring ODBC connectivity. For specific instructions, see the database documentation.

1. To configure connectivity for the integration service process, log in to the machine as a user who can start a service process.

2. Set the TERADATA_HOME, ODBCHOME, and PATH environment variables.

   TERADATA_HOME. Set the variable to the Teradata driver installation directory. The defaults are as follows:

   Using a Bourne shell:

   $ TERADATA_HOME=/teradata/usr; export TERADATA_HOME

   Using a C shell:

   $ setenv TERADATA_HOME /teradata/usr

   ODBCHOME. Set the variable to the ODBC installation directory. For example:

   Using a Bourne shell:

   $ ODBCHOME=/usr/odbc; export ODBCHOME

   Using a C shell:

   $ setenv ODBCHOME /usr/odbc

   PATH. To run the ddtstlib utility, to verify that the DataDirect ODBC driver manager can load the driver files, set the variable as follows:

   Using a Bourne shell:

   PATH="$PATH:$ODBCHOME/bin:$TERADATA_HOME/bin"
Using a C shell:

```bash
$ setenv PATH $(PATH):$ODBCHOME/bin:$TERADATA_HOME/bin
```

3. Set the shared library environment variable.

The Teradata software contains a number of shared library components that the integration service process loads dynamically. To locate the shared libraries during run time, set the shared library environment variable.

The shared library path must also include installation directory of the Informatica service (server_dir).

Set the shared library environment variable based on the operating system.

The following table describes the shared library variables for each operating system:

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</tr>
<tr>
<td>AIX</td>
<td>LIBPATH</td>
</tr>
<tr>
<td>HP-UX</td>
<td>SHLIB_PATH</td>
</tr>
</tbody>
</table>

For example, use the following syntax for Solaris:

- Using a Bourne shell:
  ```bash
  $ LD_LIBRARY_PATH="$(LD_LIBRARY_PATH):$HOME/server_dir:$ODBCHOME/lib:
  $TERADATA_HOME/lib:$TERADATA_HOME/odbc/lib";
  export LD_LIBRARY_PATH
  
  - Using a C shell:
    ```bash
    $ setenv LD_LIBRARY_PATH "$(LD_LIBRARY_PATH):$HOME/server_dir:$ODBCHOME/lib:
    $TERADATA_HOME/lib:
    $TERADATA_HOME/odbc/lib"
    
    For HP-UX
    - Using a Bourne shell:
      ```bash
      $ SHLIB_PATH="$(SHLIB_PATH):$HOME/server_dir:$ODBCHOME/lib; export SHLIB_PATH
      
      - Using a C shell:
        ```bash
        $ setenv SHLIB_PATH $(SHLIB_PATH):$HOME/server_dir:$ODBCHOME/lib
        
      For AIX
      - Using a Bourne shell:
        ```bash
        $ LIBPATH="$LIBPATH":$HOME/server_dir:$ODBCHOME/lib; export LIBPATH
        
      - Using a C shell:
        ```bash
        $ setenv LIBPATH "$LIBPATH":$HOME/server_dir:$ODBCHOME/lib
        
4. Edit the existing odbc.ini file or copy the odbc.ini file to the home directory and edit it.

This file exists in $ODBCHOME directory.

```bash
$ cp $ODBCHOME/odbc.ini $HOME/.odbc.ini
```

Add an entry for the Teradata data source under the section [ODBC Data Sources] and configure the data source.
For example:

```
MY_TERADATA_SOURCE=Teradata Driver
[MY_TERADATA_SOURCE]  
Driver=/u01/app/teradata/td-tuf611/odbc/drivers/tdata.so
Description=NCR 3600 running Teradata V1R5.2
DBCName=208.199.59.208
DateTimeFormat=AAA
SessionMode=ANSI
DefaultDatabase=  
Username=  
Password=  
```

5. Set the DateTimeFormat to AAA in the Teradata data ODBC configuration.

6. Optionally, set the SessionMode to ANSI. When you use ANSI session mode, Teradata does not roll back the transaction when it encounters a row error.

   If you choose Teradata session mode, Teradata rolls back the transaction when it encounters a row error. In Teradata mode, the integration service process cannot detect the rollback, and does not report this in the session log.

7. To configure connection to a single Teradata database, enter the DefaultDatabase name. To create a single connection to the default database, enter the user name and password. To connect to multiple databases, using the same ODBC DSN, leave the DefaultDatabase field empty.

   For more information about Teradata connectivity, see the Teradata ODBC driver documentation.

8. Verify that the last entry in the odbc.ini is InstallDir and set it to the odbc installation directory.

   For example:

   ```
   InstallDir=/export/build/Informatica/9.5.1/ODBC7.0
   ```

9. Edit the .cshrc or .profile to include the complete set of shell commands.

10. Save the file and either log out and log in again, or run the source command.

   Using a Bourne shell:

   ```
   $ source .profile
   ```

   Using a C shell:

   ```
   $ source .cshrc
   ```

11. For each data source you use, make a note of the file name under the Driver=<parameter> in the data source entry in odbc.ini. Use the ddtestlib utility to verify that the DataDirect ODBC driver manager can load the driver file.

    For example, if you have the driver entry:

    ```
    Driver=/u01/app/teradata/td-tuf611/odbc/drivers/tdata.so
    ```

    run the following command:

    ```
    ddtestlib /u01/app/teradata/td-tuf611/odbc/drivers/tdata.so
    ```

12. Test the connection using BTEQ or another Teradata client tool.

### Connecting to an ODBC Data Source

Install and configure native client software on the machine where the PowerCenter Integration Service and PowerCenter Repository Service run. Also install and configure any underlying client access software required by the ODBC driver. To ensure compatibility between Informatica and the databases, use the appropriate database client libraries. To access sources on Windows, such as Microsoft Excel or Access, you must install PowerChannel.
The Informatica installation includes DataDirect ODBC drivers. If the odbc.ini file contains connections that use earlier versions of the ODBC driver, update the connection information to use the new drivers. Use the System DSN to specify an ODBC data source on Windows.

1. On the machine where the PowerCenter Integration Service runs, log in as a user who can start a service process.
2. Set the ODBCHOME and PATH environment variables.
   **ODBCHOME.** Set to the DataDirect ODBC installation directory. For example, if the install directory is /opt/ODBC7.0.
   Using a Bourne shell:
   `$ ODBCHOME=/opt/ODBC7.0; export ODBCHOME`
   Using a C shell:
   `$ setenv ODBCHOME /opt/ODBC7.0`
   **PATH.** To run the ODBC command line programs, like `ddtestlib`, set the variable to include the odbc bin directory.
   Using a Bourne shell:
   `$ PATH=${PATH}:$ODBCHOME/bin; export PATH`
   Using a C shell:
   `$ setenv PATH ${PATH}:$ODBCHOME/bin`
   Run the `ddtestlib` utility to verify that the DataDirect ODBC driver manager can load the driver files.
3. Set the shared library environment variable.
   The ODBC software contains a number of shared library components that the service processes load dynamically. To locate the shared libraries during run time, set the shared library environment variable.
   The shared library path must also include the Informatica installation directory `{server_dir}`.
   Set the shared library environment variable based on the operating system.
   The following table describes the shared library variables for each operating system:

<table>
<thead>
<tr>
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</tr>
<tr>
<td>HP-UX</td>
<td>SHLIB_PATH</td>
</tr>
</tbody>
</table>

For example, use the following syntax for Solaris and Linux:

- Using a Bourne shell:
  `$ LD_LIBRARY_PATH=${LD_LIBRARY_PATH}:${HOME}/server_dir:$ODBCHOME/lib; export LD_LIBRARY_PATH`
- Using a C shell:
  `$ setenv LD_LIBRARY_PATH ${HOME}/server_dir:$ODBCHOME:${LD_LIBRARY_PATH}`

For HP-UX

- Using a Bourne shell:
  `$ SHLIB_PATH=${SHLIB_PATH}:${HOME}/server_dir:$ODBCHOME/lib; export SHLIB_PATH`
Using a C shell:

$ setenv SHLIB_PATH $(SHLIB_PATH):$HOME/server_dir:$ODBCHOME/lib

For AIX

Using a Bourne shell:

$ LIBPATH=$(LIBPATH):$HOME/server_dir:$ODBCHOME/lib; export LIBPATH

Using a C shell:

$ setenv LIBPATH $(LIBPATH):$HOME/server_dir:$ODBCHOME/lib

4. Edit the existing odbc.ini file or copy the odbc.ini file to the home directory and edit it.

This file exists in $ODBCHOME directory.

$ cp $ODBCHOME/odbc.ini $HOME/.odbc.ini

Add an entry for the ODBC data source under the section [ODBC Data Sources] and configure the data source.

For example:

```
MY_MSSQLSERVER_ODBC_SOURCE=<Driver name or data source description>
[MY_MSSQLSERVER_ODBC_SOURCE]
Driver=<path to ODBC drivers>
Description=DataDirect 7.0 SQL Server Wire Protocol
Database=<SQLServer_database_name>
LogonID=<username>
Password=<password>
Address=<TCP/IP address>,<port number>
QuoteId=No
AnsiINPW=No
ApplicationsUsingThreads=1
```

This file might already exist if you have configured one or more ODBC data sources.

5. Verify that the last entry in the odbc.ini is InstallDir and set it to the odbc installation directory.

For example:

```
InstallDir=/export/build/Informatica/9.5.1/ODBC7.0
```

6. If you use the odbc.ini file in the home directory, set the ODBCINI environment variable.

Using a Bourne shell:

$ ODBCINI=$HOME/.odbc.ini; export ODBCINI

Using a C shell:

$ setenv ODBCINI $HOME/.odbc.ini

7. Edit the .cshrc or .profile to include the complete set of shell commands. Save the file and either log out and log in again, or run the source command.

Using a Bourne shell:

$ source .profile

Using a C shell:

$ source .cshrc

8. Use the dtestlib utility to verify that the DataDirect ODBC driver manager can load the driver file you specified for the data source in the odbc.ini file.

For example, if you have the driver entry:

```
Driver = /opt/odbc/lib/DWxxxx.so
```

run the following command:

```
dtestlib /opt/odbc/lib/DWxxxx.so
```
9. Install and configure any underlying client access software needed by the ODBC driver.

Note: While some ODBC drivers are self-contained and have all information inside the .odbc.ini file, most are not. For example, if you want to use an ODBC driver to access Sybase IQ, you must install the Sybase IQ network client software and set the appropriate environment variables.

If you are using the ODBC drivers provided by Informatica (DWxxxx26.so), instead of manually setting the PATH and shared library path environment variables, you can also execute the script odbc.sh or odbc.csh present under $ODBCHOME folder. This script will set the required PATH and shared library path environment variables for the ODBC drivers provided by Informatica.

---

**Sample odbc.ini File**

```
[ODBC Data Sources]
Informix Wire Protocol=DataDirect 7.0 Informix Wire Protocol
SQL Server Wire Protocol=DataDirect 7.0 SQL Server Wire Protocol

[ODBC]
IANAAppCodePage=4
InstallDir=/InformaticaInstallationDir>/ODBC7.0
Trace=0
TraceFile=odbctrace.out
TraceDir=/InformaticaInstallationDir>/ODBC7.0/lib/DWtrc26.so

[Informix Wire Protocol]
Driver=/InformaticaInstallationDir>/ODBC7.0/lib/DWifc126.so
Description=DataDirect 7.0 Informix Wire Protocol
AlternateServers=
ApplicationUsingThreads=1
CancelDetectInterval=0
ConnectionRetryCount=0
ConnectionRetryDelay=3
Database=<database_name>
HostName=<Informix_host>
LoadBalancing=0
LogonID=
Password=
PortNumber=<Informix_server_port>
ServerName=<Informix_server>
TrimBlankFromIndexName=1
UseDelimitedIdentifiers=0

[SQL Server Wire Protocol]
Driver=/InformaticaInstallationDir>/ODBC7.0/lib/DWsqls26.so
Description=DataDirect 7.0 New SQL Server Wire Protocol
AlternateServers=
AlwaysReportTriggerResults=0
ANSINPW=1
ApplicationName=
ApplicationUsingThreads=1
AuthenticationMethod=1
BulkBinaryThreshold=32
BulkCharacterThreshold=1
BulkLoadBatchSize=1024
BulkLoadOptions=2
ConnectionReset=0
ConnectionRetryCount=0
ConnectionRetryDelay=3
Database=<database_name>
EnableBulkLoad=0
EnableQuotedIdentifiers=0
EncryptionMethod=0
FailoverGranularity=0
FailoverMode=0
```
FailoverPreconnect=0
FetchTSWTZasTimestamp=0
FetchTWFSasTime=1
GSSClient=native
HostName=<SQL_Server_host>
HostNameInCertificate=
InitializationString=
Language=
LoadBalanceTimeout=0
LoadBalancing=0
LoginTimeout=15
LogonID=
MaxPoolSize=100
MinPoolSize=0
PacketSize=-1
Password=
Pooling=0
PortNumber=<SQL_Server_server_port>
QueryTimeout=0
ReportCodePageConversionErrors=0
SnapshotSerializable=0
TrustStore=
TrustStorePassword=
ValidateServerCertificate=1
WorkStationID=
XML Describe Type=-10

[SAP HANA source]
Driver=/usr/sap/hdbclient/libodbcHDB.so
DriverUnicodeType=1
ServerNode=<server_node>:<port>
Appendix C

Updating the DynamicSections Parameter of a DB2 Database

This appendix includes the following topics:

- DynamicSections Parameter Overview, 139
- Updating the DynamicSections Parameter, 139

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 connectjdbc.jar file and run the installer.

1. Go to the DataDirect download site: http://www.datadirect.com/download/index.ssp
2. Click the JDBC link and register to download the DataDirect Connect for JDBC Utility.
3. Download the utility to a machine that has access to the DB2 database server.
4. Extract the contents of the connectjdbc.jar file to a temporary directory.

5. In the directory where you extracted the connectjdbc.jar file, run the installer.

   On Windows, run installer.bat. On UNIX, run installer.sh. You can use eval as a license key.

   When the installation completes, the installation program creates a folder named testforjdbc in the directory where you extracted the connectjdbc.jar file.

**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.
Installation and Configuration Checklist

This appendix includes the following topics:
- Installation Checklist Overview, 141
- Before You Install, 141
- Informatica Services Installation, 142
- Informatica Client Installation, 142
- After You Install, 143

Installation Checklist Overview

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

Before You Install

Before you install the Informatica services or clients, prepare the machines where you plan to install Informatica services and clients. If you install multiple products, complete the pre-installation tasks only once.

Complete the following pre-installation tasks:

1. Verify the system requirements for Informatica services and clients.
   Run the Informatica Pre-Installation (i9Pi) System Check tool to verify that the machines where you install the Informatica services and clients meet the system and disk space requirements. If required, modify the machine settings before you start the installation.

2. Verify the license key.
   Before you install the software, verify that you have the license key for the product you plan to install. Contact Informatica Global Customer Support if you do not have a license key or if you have an incremental license key and you want to create a domain.

3. Uninstall the previous version of Data Transformation, if applicable.
   Back up essential files before you uninstall Data Transformation.
4. For AIX, HP-UX and zLinux, install Java Development Kit.

5. Configure the environment variables.
   Configure the environment variables to work with the Informatica installation.

6. Determine the ports available for Informatica.
   The installer sets up the ports for components in the Informatica domain. It also designates the ports to use for
   application service processes that run on the node where you install Informatica.
   ♦ Domain port. Default is 6005.
   ♦ Service Manager port. Default is 6006.
   ♦ Service Manager shutdown port. Default is 6007.
   ♦ Informatica Administrator port. Default is 6008.
   ♦ Informatica Administrator shutdown port. Default is 6009.
   ♦ Range of ports for application services. Default range is 6013 to 6113.

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

8. Optionally, set up a keystore file for a secure connection.
   To use a secure connection between the Administrator tool and the Service Manager, set up a keystore for use
   with Informatica.

9. For UNIX and Linux, verify the file descriptor settings.
   Verify that the operating system meets the file descriptor requirement.

10. For UNIX, set up the X Window server for graphical mode installation.
    The Informatica installer requires a graphics display server to run in graphical mode.

11. For AIX, verify that POSIX Asynchronous I/O is available for the PowerCenter Integration Service.

12. Set up the database and user account for the domain configuration repository.
    Verify the database requirements before you set up the database. The requirements differ based on the type of
    database you use for the domain configuration repository.

13. Verify the minimum system requirements for PowerCenter Client.

Informatica Services Installation

Use the Informatica server installer to install the Informatica services on a Windows or UNIX machine. You can install
the Informatica services on multiple machines to create multiple nodes.

Informatica Client Installation

Use the Informatica client installer to install the Informatica clients on Windows.
You can install the following Informatica client applications:
♦ Informatica Developer
♦ PowerCenter Client
♦ Data Transformation Studio
If you install multiple products, you can install the following client applications on the same machine or separate machines:

- Informatica Developer for use with Data Explorer, Data Services, and Data Quality.
- PowerCenter Client for use with PowerCenter.
- Data Transformation Studio for use with Data Transformation

After You Install

After you install the Informatica product, complete the configuration tasks to ensure that the Informatica services and clients run properly. If you install multiple products, complete the post-installation tasks only once.

Complete the following post-installation tasks:

1. Configure the environment variables.
   Configure the environment variables that Informatica uses when it runs the application services and connects to the clients.

2. For gateway nodes that run on UNIX, verify that a graphics display server is available.

3. Configure the web browser.
   You can use Microsoft Internet Explorer or Mozilla Firefox to launch the web client applications in the Informatica platform. Configure to the browser to work with the Informatica web clients.

4. Install languages for the Informatica client tools.
   To view languages other than the system locale when you work with repositories that use a UTF-8 code page, install additional languages on Windows for use with the Informatica clients.

5. Verify the setup for 32-bit and 64-bit platforms.
   You can run Informatica on 32-bit or 64-bit platforms. When you run Informatica on both 32-bit and 64-bit platforms, configure Informatica to use the correct libraries, database clients, and session cache sizes.

6. Install the database client software on each machine where the PowerCenter Integration Service and PowerCenter Repository Service run.

7. Verify third-party software requirements.
   Informatica requires third-party software and libraries to perform certain operations. Verify that the machine where you install Informatica has the required software or library.

8. Verify code page compatibility.
   Informatica requires the code pages for application services to be compatible with code pages in the domain. The locale settings on machines that access the Informatica client tools or the Administrator tool must also be compatible with the code pages of in the domain.


10. Optionally, install the Informatica product documentation.
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