IBM InfoSphere Information Server
Version 9 Release 1

Guide to Migrating to IBM InfoSphere Information Server
IBM InfoSphere Information Server
Version 9 Release 1

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Note

Before using this information and the product that it supports, read the information in “Notices and trademarks” on page 97.
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Migrating to IBM InfoSphere Information Server, Version 9.1

Use these procedures to move an existing source installation to InfoSphere® Information Server, Version 9.1.

Important: Before starting a migration:
- Before installing InfoSphere Information Server on the target computer you must review the migration requirements. The migration option that you choose will impact how you install InfoSphere Information Server. For information about the requirements for the migration tool, see “Verifying requirements for the InfoSphere Information Server migration tool.”

Installation directory

These migration instructions rely on a variable to represent the installation directory.

The variable `install_dir` refers to the directory where IBM® InfoSphere Information Server is installed. If you used the default installation directory, `install_dir` refers to the following directory:

- **Linux** or **UNIX** /opt/IBM/InformationServer
- **Windows** C:\IBM\InformationServer

If you did not use the default installation directory, replace `install_dir` with the path to the directory that you specified when you installed InfoSphere Information Server.

In cases where the path is identical on Microsoft Windows, UNIX, and Linux operating systems, this information uses forward slashes. For example, the path is specified as `install_dir/Migration/logs`, using forward slashes. If you use the Microsoft Windows operating system, replace the forward slashes with backslash: `install_dir\Migration\logs`.

Planning for migration

Before you migrate to a new version of IBM InfoSphere Information Server, choose a migration method, design the migration topology, and collect the required information.

Verifying requirements

Before you begin a migration, verify the requirements for the InfoSphere Information Server migration tool, the system, and the disk space.

Verifying requirements for the InfoSphere Information Server migration tool

Before you use the InfoSphere Information Server migration tool, confirm that the source and target installations meet these requirements.

- The target installation must have a new installation of InfoSphere Information Server Version 9.1 on it. After you install Version 9.1, do not use it to do any
work. Do not create any artifacts such as projects, connections from clients, and so on. Do not perform any testing to verify that the installation is working. The only thing that you can run on the new installation is the IBM Support Assistant Lite General Diagnostic Health checker report.

- Both the source and target installations must have the same set of products installed. If you want to add additional products to the Version 9.1 installation, you do so after you complete the entire migration process. If you do not want a product that is on the source installation to be on the target installation, you must install the product on the Version 9.1 system, and then uninstall the product after you complete the entire migration process. For specific information about the InfoSphere QualityStage® modules that are supported by the migration tool, see [http://www.ibm.com/support/docview.wss?uid=swg21610853](http://www.ibm.com/support/docview.wss?uid=swg21610853).

- Both the source and target installations must run the same operating system. You can migrate to an updated version of the operating system and from a 32-bit version to a 64-bit version of the operating system, but you cannot change from one operating system to another operating system. Before you migrate to an updated version of the operating system, check the system requirements to confirm that the updated version is supported.

- Both the source and target installations must use the same database type for the metadata repository. The version of the database can be different, but the type must be the same.

- If you are using a DB2 or Oracle database, the schema names must be the same on the source and target computers.

  **Note:** If you are using an Oracle database, the tablespace and database names can be different. You can have the same tablespace name in a single instance as long as the tablespaces are in different databases.

- Both the source and target installations must use the same database type for the InfoSphere Information Analyzer analysis database. This only applies if you want to migrate the analysis database.

- Both the source and target installations must have the same number of engine tiers. You can move an engine tier to a different computer during the migration process, but you cannot add another engine tier or remove an engine tier.

- If globalization (NLS) is enabled on the source installation, you must enable globalization on the target installation. If globalization is not enabled on the source installation, consider enabling it when you install the new version on the target installation. After you install Version 9.1, you cannot enable or disable globalization.

- If you are using InfoSphere Information Services Director and have applications that use the Java Message Service (JMS) queues on the source installation, you must configure the target installation for the same queues before import.

- If WebSphere® Application Server is configured to use a federated user registry on the source, then you need to configure WebSphere Application Server to have the same federated user registry on the target prior to doing an import or restore.

- Be aware that during the installation of the InfoSphere Information Server migration tool, WebSphere Application Server is stopped and restarted.

- During the export from the source installation to the target installation, InfoSphere DataStage® is stopped.
Verifying system and disk space requirements

The InfoSphere Information Server migration tool verifies that the target systems meet the system requirements for the version to which you are migrating, and it also ensures that the systems have enough disk space for the migration directories and data.

About this task

System requirements, such as the version of the operating system or database, might change between releases of the software. Before you begin the migration process, verify that the target systems meet all of the system requirements for the version of InfoSphere Information Server to which you are migrating.

The InfoSphere Information Server migration tool requires two directories, the work directory and the archive directory. The tool checks to ensure that each source and target system has enough disk space for these directories.

Procedure


2. Verify the following disk space requirements on the source systems:
   - The source work directory for the services tier is the size of the InfoSphere Information Analyzer analysis database, the IBM InfoSphere QualityStage Standardization Rules Designer database, and the metadata repository database plus 15%.
   - The source work directory for the engine tier is the combined size of all project directories and the IBM InfoSphere DataStage and QualityStage Operations Console database (if you are migrating the operations database), plus 15%.
   - The archive directory is 25% of the size of the work directory.

3. Verify the following disk space requirements on the target systems:
   - The target work directory for the services tier is the size of the source work directory plus 10%. In addition, the computers where the analysis database, the operations database, and the IBM InfoSphere QualityStage Standardization Rules Designer database are migrated need to have enough disk space to hold the databases. The metadata repository tier must have enough disk space for the migrated metadata repository database.
   - The target work directory for the engine tier is the size of the source work directory plus 10%. In addition, the target engine tier must have enough disk space for the migrated projects.

Choosing a migration method

If you are migrating from installations that are at Version 8.0.1 or later, you have the option of using the migration tool or performing a manual migration. If you are migrating from installations that are at Version 7.5.3 and earlier, you must perform a manual migration.

The InfoSphere Information Server migration wizard automates the process of configuring migration parameters so you can migrate the IBM InfoSphere Information Server environment from one version to another version. Using the IBM InfoSphere Information Server export wizard, you specify values for all the parameters that are required to migrate the source environment. The migration tool
uses the values that you specify to create a response file that is used to export the source environment to a set of archive files. After you install the new version of IBM InfoSphere Information Server, you use the IBM InfoSphere Information Server import wizard to create a response file that is used to import the archive files to the target environment.

The migration wizards give you the option to automatically migrate the database for the metadata repository and the InfoSphere Information Analyzer analysis database, or to manually migrate these databases. You must manually migrate these databases if they are not co-located on the services tier. If you manually migrate the databases, the migration tool generates a set of scripts and a readme file that describes how to run the scripts to back up the metadata repository on the source environment and then restore it on the target environment.

When the source computer and target computer use different physical host names or project directories, the import wizard detects the differences and helps you map the physical hosts names to the appropriate computers in order to accurately migrate the project directories. For example, you can migrate all projects to a default directory, migrate all projects to a user-specified directory, or migrate some projects to a user-specified directory and migrate one or more to other user-specified directories.

**Important**: You can use the migration tool to migrate only one version of InfoSphere Information Server to a new installation. For example, if the source computer has Versions 7.5.3, 8.5, and 8.7 installed and you are installing one new Version 9.1 system, you must manually migrate Version 7.5.3. You can use the migration tool to migrate either Version 8.5 or Version 8.7 to the new Version 9.1 installation. Then you manually migrate the other version.

The manual migration process for InfoSphere DataStage requires that you manually save settings files, job dependency files, and environment information. Then you export projects to .dsx files. You use the InfoSphere DataStage Designer client or istool command line to export the .dsx files. After you install the new version, you import the projects, manually merge the contents of settings files, and restore job dependency files. Manually migrating data from other products is similar in that it involves using commands to export data from the source environment and to import data into the target environment.

The following are situations when the manual migration approach is appropriate:

- You want to migrate a subset of projects, or you want to migrate a subset of the jobs in a specific project.
- You want to stage the migration of the projects.
- You want to merge multiple installations into one. Only one instance can be migrated with the migration tool. The others must be manually migrated after you have used the tool.
- You want to change the operating system or the database software.
- You want to change the xmeta schema name or must use the same Oracle database instance.
- You want to have a different set of installed products on the target system and you do not want to add or remove products after migrating.
**Note:** You can use the migration tool if you want to have a different set of installed products on the target system. You can use the tool to migrate all of the products that are on the source computer and then add additional products after the migration is complete.

If these situations do not apply to your migration, use the migration tool. The migration tool helps you to perform a more complete migration than a manual migration because the migration tool works at the metadata repository level and migrates the installation, including all data in the metadata repository. The migration tool migrates work that was completed in the following products:

- IBM InfoSphere DataStage and QualityStage
- IBM InfoSphere Information Analyzer
- IBM InfoSphere FastTrack
- IBM InfoSphere Business Glossary
- IBM InfoSphere Information Services Director
- IBM InfoSphere Metadata Workbench
- IBM InfoSphere Metadata Asset Manager

The migration tool performs the following tasks:

- Migrates projects from the source installation and creates the projects in directories that you specify on the target installation
- Migrates and merges the InfoSphere DataStage parameters file, including project environment variables and project settings
- Migrates project user roles, InfoSphere DataStage server engine maps, message handlers, and parameter sets
- Evaluates the stages in the existing jobs to identify referenced files and in the migration.todo.txt file creates entries that specify the referenced files that you need to copy to the target installation
- Migrates the customized overrides and the standardization rule sets from InfoSphere QualityStage

The following table shows the data that is not automatically migrated during the export process.

<table>
<thead>
<tr>
<th>Product</th>
<th>Data that is not automatically migrated</th>
</tr>
</thead>
<tbody>
<tr>
<td>InfoSphere Information Server</td>
<td>• Owner and group read, write, and execute permissions for file systems</td>
</tr>
<tr>
<td></td>
<td>The user ownership, as well as the read, write, and execute permissions, are not migrated. After migration, all project files will be owned by the InfoSphere Information Server engine tier user name as specified in the migration response file. For project files, the umask setting for the dsadm ID will determine the permissions.</td>
</tr>
</tbody>
</table>
Table 1. Data that is not automatically migrated during the export process (continued)

<table>
<thead>
<tr>
<th>Product</th>
<th>Data that is not automatically migrated</th>
</tr>
</thead>
<tbody>
<tr>
<td>InfoSphere DataStage and QualityStage</td>
<td>• Data sets</td>
</tr>
<tr>
<td></td>
<td>• Run-time log files</td>
</tr>
<tr>
<td></td>
<td>• Operational metadata</td>
</tr>
<tr>
<td></td>
<td>• Job schedules or job invocations</td>
</tr>
<tr>
<td></td>
<td>• InfoSphere DataStage hash files that are not saved in a project directory</td>
</tr>
<tr>
<td></td>
<td>• Data files that are accessed by InfoSphere DataStage and QualityStage with the sequential file method</td>
</tr>
<tr>
<td></td>
<td>• Data files used by InfoSphere DataStage that contain user-defined SQL statements for writing data to databases</td>
</tr>
<tr>
<td></td>
<td>• If the versions of the product are different on the source and target computers, then compiled run time files are not automatically migrated. All InfoSphere DataStage jobs need to be recompiled on the new version.</td>
</tr>
<tr>
<td>InfoSphere QualityStage modules</td>
<td>• Postal validation reference files</td>
</tr>
<tr>
<td></td>
<td>• Geocoding reference files</td>
</tr>
<tr>
<td></td>
<td>• Match Designer database</td>
</tr>
<tr>
<td>InfoSphere Information Server Enterprise Packs</td>
<td>• Reference files</td>
</tr>
</tbody>
</table>

**Designing the migration topology**

A critical planning step is to design the migration topology that describes both the source topology and the target topology.

Each migration topology consists of three tiers: engine tier, services tier, and metadata repository tier. If you are familiar with earlier versions of IBM InfoSphere Information Server, the services tier was referred to as the domain.

You have the following choices for installing these three tiers:

- Install the tiers on a new computer or if you are distributing the tiers, on multiple new computers.
- Install the tiers on existing computers, after you remove the prior version of InfoSphere Information Server.
- If you are not using the Windows operating system, install Version 9.1 tiers alongside the prior version on the existing computers, so that you can retain the source installation.

There are advantages to retaining the prior version. First, you can continue to use the prior version after the export is complete. Second, the prior version exists as a reference that you can use when you validate the Version 9.1 installation.

If you choose to install two versions side-by-side, keep the following points in mind:

- The system requirements must be met for both Version 9.1 and the prior version.
The target computer must have enough disk space, I/O, processor power, memory, and swap space to run both versions simultaneously.

The second installation will not be able to use the same ports as the first, so it will be assigned non-default ports for the client and internal connections. Therefore, client users must specify non-default ports for services tier and engine tier connections and open the additional ports in the firewall.

To perform system management actions, such as installing a patch, shutting down and restarting services, and so on, the administrator must be careful to set environment variables to the correct version’s installation.

For more information about topologies, see the following topic: Basic installation topologies.

Using multiple engine tiers
The source or target topology can include multiple engine tiers.

Note:
- This topic uses the term “engine tier.” If you currently use InfoSphere DataStage Version 7.5.3 or earlier, the engine tier is referred to as the DataStage server.

There are two configurations for multiple engine tiers:
- Each engine tier can each be on a separate computer, but all engine tiers must be registered to the same IBM InfoSphere Information Server services tier.
- Multiple engine tiers, each of which runs a different version of InfoSphere Information Server, can be on the same UNIX or Linux computer, but each engine must be registered to a different services tier. This configuration is called an ITAG installation.

When you install InfoSphere Information Server Version 9.1, the installation wizard detects existing engine tiers. You must provide a unique ITAG value and port number to use for the Version 9.1 installation.

For more information about multiple engine tiers, see this topic: Basic installation topologies.

Collecting the required information for a migration
Use these tables to plan a migration. The information that you provide helps you decide whether to use the migration tool or perform a manual migration.

The migration tool analyzes the source environment while you are using the export wizard, which asks you to enter various parameters. As part of planning a migration, use the information in these planning topics to prepare the values that the export and import wizards will prompt you to enter.

Perform these tasks to collect the required information for a migration:
- “Collecting information about installed products” on page 8
- “Collecting credential information” on page 10
- “Collecting information about the metadata repository database” on page 11
- “Collecting information about the engine tier and InfoSphere DataStage” on page 13
- “Collecting information about the InfoSphere Information Analyzer analysis database” on page 14
Collecting information about the IBM InfoSphere DataStage and QualityStage Operations Console database on page 15

Collecting information about the IBM InfoSphere QualityStage Standardization Rules Designer database on page 16

Collecting information about the user registry on page 17

Collecting information about files that are not automatically migrated on page 17

Collecting information about InfoSphere DataStage project folder and update options on page 18

Collecting information about installed products

Identify the version of InfoSphere Information Server and the products that are installed in the source installation. For the list of products run the ISALite Basic System Summary report.

**Table 2. Questions about the version and products in the source topology**

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>What version of IBM InfoSphere Information Server are you using? If the source topology includes multiple versions, list all versions.</td>
<td>• If the source is at Version 7.5.3 or earlier, you must use the manual migration process.&lt;br&gt;• If the source is at Version 8.0.1 or later, and you are planning to use the same operating system or database tool, use the migration tool. If you have a small number of projects and jobs or if you do not want to migrate everything at once, you have the option of using the manual migration process.</td>
</tr>
<tr>
<td>Which products are installed on the source?</td>
<td>To use the migration tool, you must ensure that the source installation and target installation have the same products installed. If you perform a manual migration, the source installation and the target installation do not need to have the same set of products installed. The following is a list of supported products:&lt;br&gt;• IBM InfoSphere Business Glossary&lt;br&gt;• IBM InfoSphere DataStage and QualityStage&lt;br&gt;• IBM InfoSphere FastTrack&lt;br&gt;• IBM InfoSphere Information Analyzer&lt;br&gt;• IBM InfoSphere Information Services Director&lt;br&gt;• IBM InfoSphere Metadata Workbench</td>
</tr>
<tr>
<td>If IBM InfoSphere DataStage is installed, are any enterprise packs installed? If yes, which ones?</td>
<td>To use the migration tool, you must ensure that the source installation and target installation have the same enterprise packs installed. If you perform a manual migration, the source installation and the target installation do not need to have the same set of enterprise packs installed.</td>
</tr>
<tr>
<td>If IBM InfoSphere QualityStage is installed, are any product modules installed? If yes, which ones?</td>
<td>To use the migration tool, you must ensure that the source installation and target installation have the same product modules installed. If you perform a manual migration, the source installation and the target installation do not need to have the same set of product modules installed.</td>
</tr>
<tr>
<td>If IBM InfoSphere QualityStage modules are installed, do you want to migrate the reference databases and the Match Designer database?</td>
<td>The migration tool does not migrate the reference databases or the Match Designer database. After the migration is complete, you can reinstall them.</td>
</tr>
<tr>
<td>Is globalization (NLS) enabled?</td>
<td>If globalization (NLS) is enabled on the source, you must enable globalization when you install InfoSphere Information Server on the target. For more information on enabling globalization, see Setting the locale and character encoding for the engine tier target computer.</td>
</tr>
</tbody>
</table>

Verifying installed Enterprise Packs:

If the source installation uses InfoSphere Information Server packs, verify the packs that are installed.
Both the source installation and the target installation must have the same set of packs installed. Therefore, if the source installation includes packs that do not yet support Version 9.1, do not migrate until those packs are available.


The following packs support Version 9.1:
- IBM InfoSphere Information Server Pack for Siebel
- IBM InfoSphere Information Server Pack for SAP Applications
- IBM InfoSphere Information Server Pack for PeopleSoft Enterprise
- IBM InfoSphere Information Server Pack for JD Edwards EnterpriseOne
- IBM InfoSphere Information Server Pack for Oracle Applications
- IBM InfoSphere Information Server Pack for SAP BW
- IBM InfoSphere Information Server Pack for Data Masking
- IBM InfoSphere Information Server Pack for Hyperion Essbase
- IBM InfoSphere Information Server Pack for Salesforce.com

If you are migrating from Version 8.0.1 or later, you can use IBM Support Assistant Lite for InfoSphere Information Server to verify the installation of enterprise packs. If you are migrating from an earlier version, use the following procedure to determine which packs are installed.

**Linux**

To determine which enterprise packs are installed on the source system, look for the following directories:
- `/DSEngine/bin/.dsPSFTPackrel` – PeopleSoft Enterprise
- `/DSEngine/bin/.dsOracleAppPackrel` – Oracle Applications
- `/DSEngine/bin/dsSiebelPackrel` – Siebel
- `/DSEngine/bin/.dsJDEPackrel` – JD Edwards EnterpriseOne
- `/DSEngine/bin/.dsSFPackrel` – Salesforce.com
- `/DSAPbin/.dsSAPPackrel` – SAP R/3 Applications
- `/DSBWbin/.dsSAPBWPackrel` – SAP BW
- `/DSEngine/bin/.dsEssbaserel` – Hyperion Essbase

**Windows**

To determine which enterprise packs are installed, locate the following registry keys:
```
HKEY_LOCAL_MACHINE\SOFTWARE\Ascential Software\pck\CurrentVersion /v Version
```
where `pck` is the name of an enterprise pack.

**Verifying installed InfoSphere QualityStage modules:**

If the source installation uses InfoSphere QualityStage modules, verify which modules are installed.

Both the source installation and the target installation must have the same set of modules and reference files installed.
If you are migrating from Version 8.0.1 or later, use IBM Support Assistant Lite for InfoSphere Information Server tool to generate a Migration Reference report, which contains a list of all installed products, components, packs, and modules.

For the latest migration information about the version 9.1 InfoSphere QualityStage modules that are supported by the migration tool, see http://www.ibm.com/support/docview.wss?uid=swg21610853.

Collecting credential information

Collect these user names and passwords before starting the migration process. The passwords on the source and target installations must be valid and unexpired.

When you use IBM Support Assistant Lite for InfoSphere Information Server to create the Migration Reference report after the migration tool is installed, encrypted versions of all passwords are provided in the report. You must enter the actual password when you use the migration tool. After the migration tool creates a response file, you can edit the response file and use encrypted passwords.

The version 8.5, 8.7 and 9.1 installation programs restrict more characters in passwords than prior versions restricted. Therefore, if you migrate from a prior version, the passwords from the prior version might not be allowed by the new versions of the installation program. In this case, install Versions 8.5, 8.7 or 9.1, and use new passwords that meet the restrictions.

Table 3. User credentials

<table>
<thead>
<tr>
<th>User</th>
<th>Default user name</th>
<th>User name (if you did not use the default)</th>
<th>Password or encrypted password</th>
</tr>
</thead>
<tbody>
<tr>
<td>InfoSphere Information Server administrator</td>
<td>isadmin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBM WebSphere Application Server administrator</td>
<td>wasadmin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>InfoSphere DataStage administrator</td>
<td>dsadm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBM DB2® database instance owner</td>
<td></td>
<td>• Linux</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• UNIX</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• db2inst1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Windows</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• db2admin</td>
<td></td>
</tr>
<tr>
<td>Oracle system administrator</td>
<td>system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microsoft SQL Server administrator</td>
<td>system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metadata repository database owner: IBM DB2® database instance owner</td>
<td></td>
<td>• Linux</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• UNIX</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• db2inst1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Windows</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• db2admin</td>
<td></td>
</tr>
<tr>
<td>Metadata repository database owner: Oracle system administrator</td>
<td>system</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 3. User credentials (continued)

<table>
<thead>
<tr>
<th>User</th>
<th>Default user name</th>
<th>User name (if you did not use the default)</th>
<th>Password or encrypted password</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metadata repository database owner: Microsoft SQL Server administrator</td>
<td>system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>InfoSphere Information Analyzer analysis database owner:</td>
<td>iauser</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBM InfoSphere DataStage and QualityStage Operations Console database owner: IBM DB2 database instance owner</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBM InfoSphere DataStage and QualityStage Operations Console database owner: Oracle system administrator</td>
<td>system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBM InfoSphere DataStage and QualityStage Operations Console database owner: Microsoft SQL Server administrator</td>
<td>system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBM InfoSphere QualityStage Standardization Rules Designer database owner: IBM DB2 database instance owner</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBM InfoSphere QualityStage Standardization Rules Designer database owner: Oracle system administrator</td>
<td>system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBM InfoSphere QualityStage Standardization Rules Designer database owner: Microsoft SQL Server administrator</td>
<td>system</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Collecting information about the metadata repository database**

The export and import wizards offer two ways to export and import the metadata repository. If the metadata repository and the services tier are co-located, you can automatically or manually export and import the metadata repository. If the
metadata repository is on a separate machine from the services tier, then you must export and import the metadata repository manually.

The export and import wizards collect information about the metadata repository. The collected information is used to automatically create a response file. The response file is then used to export or import the metadata repository.

The wizards give you the choice to automatically or manually export or import the metadata repository. If you chose to export or import the metadata repository manually, then scripts are generated, which you later run to manually export or import the metadata repository. The following list describes the options you have to manually or automatically export or import the metadata repository:

- If the source metadata repository tier is co-located with the services tier and will be co-located with the services tier in the target topology, then you can automatically or manually migrate the metadata repository.
- If the source metadata repository tier is co-located with the services tier, but you want to move the metadata repository to a separate computer in the target topology, then you must manually migrate the metadata repository.
- If the source services tier and the source metadata repository tier are on separate computers, then you must manually migrate the metadata repository.
- If your site requires that a database administrator perform the metadata repository migration, manually migrate the metadata repository.

Table 4. Questions about the metadata repository

<table>
<thead>
<tr>
<th>Question</th>
<th>If Yes, perform these tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you want to manually migrate the metadata repository?</td>
<td>Select Manual on the Metadata Repository Database Options screen. Specify the directory where you want to store the generated scripts that you will use to manually migrate the database.</td>
</tr>
<tr>
<td>Is the metadata repository tier co-located with the services tier?</td>
<td>You can manually or automatically migrate the metadata repository database. Select Automatic or Manual on the Metadata Repository Database Options screen.</td>
</tr>
<tr>
<td>Is the metadata repository currently on a separate computer?</td>
<td>You must manually migrate the metadata repository database. If the metadata repository is installed on a separate computer, the scripts to migrate the metadata repository are generated when you run the migration tool on the services tier computer and select Manual on the Metadata Repository Database Options screen. Then you move the scripts directory to the computer that hosts the metadata repository and follow the instructions in the generated readme.txt file to run the scripts that migrate the metadata repository.</td>
</tr>
<tr>
<td>If the metadata repository tier is currently co-located with the services tier, do you want to move the metadata repository tier to a separate computer in the target installation?</td>
<td>You must manually migrate the metadata repository database. Follow the instructions in the generated readme.txt file to run the scripts that migrate the metadata repository.</td>
</tr>
</tbody>
</table>
Table 4. Questions about the metadata repository (continued)

<table>
<thead>
<tr>
<th>Question</th>
<th>If Yes, perform these tasks</th>
</tr>
</thead>
</table>
| Which user name do I enter? | **DB2**  
User name of the DB2 database user who has SYSADM, SYSCTRL, or SYMAINT privileges and who can run back up and restore operations on the metadata repository database. The db2instance user typically has SYSADM authority. On Microsoft Windows, the operating system user used to install DB2 (default db2admin) typically has SYSADM authority. The operating system user must have authority either directly granted to them as a DB2 user or indirectly as part of the operating system administrators group. If the source computer has versions 8.0.1, 8.1 or 8.5 installed, then the xmeta or db2admin users must have DBADM privileges. This is required to create and grant user privileges on the target computer. **Note:** By default, the xmeta and xmetasr users are not assigned the privileges necessary to migrate the DB2 database.  
**Oracle**  
User name of an Oracle user that has system administrator authority (SYSDBA) privileges. The user must be able to connect on the SQL prompt as a system database administrator ("sqlplus user/password@SID as sysdba"). The user must also be able to connect from the SQL*Plus command line interface as SYSDBA. This property is used to access the remote database and gather the information that is required to create the scripts that migrate the metadata repository.  
**SQL Server**  
User name of a user that has Microsoft SQL Server system administrator privileges. |
Table 5. Questions about the engine tier in the source installation (continued)

<table>
<thead>
<tr>
<th>Question</th>
<th>If Yes, perform these tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the source topology runs multiple versions of InfoSphere Information Server, which version do you want to migrate to Version 9.1?</td>
<td>To migrate from Version 7.5.3 or earlier, you must perform a manual migration. To migrate from Version 8.0.1 or later, you have the option of using the migration tool or performing a manual migration. Important: You can use the migration tool to migrate only one version of InfoSphere Information Server to a new installation. For example, if the source computer has Versions 7.5.3, 8.5, and 8.7 installed and you are installing one new Version 9.1 system, you must manually migrate Version 7.5.3. You can use the migration tool to migrate either Version 8.5 or Version 8.7 to the new Version 9.1 installation. Then you manually migrate the other version.</td>
</tr>
<tr>
<td>All projects are migrated to install_dir/Server/Projects by default. Do you want to migrate one or more projects to a different directory on the target computer?</td>
<td>Select Specify a new default project directory on the InfoSphere DataStage Project Directories screen, and browse to the default directory that you want to use on the target system.</td>
</tr>
<tr>
<td>Do you want to update projects as part of the migration, or do you want to manually update them after the export process?</td>
<td>Select Update all projects on the InfoSphere DataStage Project Updates screen. If you do not upgrade the projects during migration, the projects are created but the project files are not upgraded to Version 9.1. Upgrading projects can take significant time, but if you do not upgrade them they will be locked until they are upgraded. After the migration is complete, you can individually upgrade the projects using the InfoSphere DataStage Administration client. To update individual projects, deselect Update all projects and select the individual projects that you want to update.</td>
</tr>
<tr>
<td>Is the physical host name on the target computer different from the physical host name on the source computer?</td>
<td>Map the physical host name on the source computer to the physical host name that it maps to on the target computer on the Physical Host Name Configuration screen. Drag physical host names in the target computer column so they correspond to the appropriate physical host names in the source computer column. Note: This is only required if the installation that is being migrated has multiple engines. If the installation only has one engine, the host name mapping is automatically migrated.</td>
</tr>
<tr>
<td>Do you want to migrate a non-globalized (non-NLS) source InfoSphere Information Server engine to a globalized (NLS) target InfoSphere Information Server engine?</td>
<td>Migrating a globalized (NLS) source InfoSphere Information Server engine to a non-globalized InfoSphere Information Server engine target is not supported.</td>
</tr>
</tbody>
</table>

Collecting information about the InfoSphere Information Analyzer analysis database

The export and import wizards offer two ways to migrate the InfoSphere Information Analyzer analysis database. Which approach you use depends on where the analysis database is located. You also have the options of migrating or not migrating the analysis database.

Table 6. Questions about the InfoSphere Information Analyzer analysis database

<table>
<thead>
<tr>
<th>Question</th>
<th>If yes, perform these tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the analysis database is local to the services tier, do you want to migrate the analysis database? Note: The InfoSphere Information Analyzer project assets, summaries, and rules will be migrated. You can optionally choose to migrate the analysis database which contains the details from column analysis.</td>
<td>Select Migrate the InfoSphere Information Analyzer analysis database on the InfoSphere Information Analyzer Analysis Database Options screen in the export wizard. You can manually or automatically migrate the analysis database. Select Automatic or Manual on the InfoSphere Information Analyzer Database Options screen.</td>
</tr>
<tr>
<td>If the analysis database is NOT local to the services tier, do you want to migrate the analysis database?</td>
<td>Deselect Migrate the InfoSphere Information Analyzer analysis database on the InfoSphere Information Analyzer Analysis Database Options screen in the export wizard.</td>
</tr>
<tr>
<td>If the analysis database is local to the services tier and you do not want to migrate the analysis database, do you want to reuse the existing source analysis database settings on the target installation?</td>
<td>Deselect Migrate the InfoSphere Information Analyzer analysis database on the InfoSphere Information Analyzer Analysis Database Options screen in the export wizard. If you want InfoSphere Information Server on the target computer to use the original analysis database that was used by InfoSphere Information Server on the source computer, then you do not migrate that database. When you are importing using the import wizard, select Use an existing instance of the analysis database on the InfoSphere Information Analyzer Analysis Database Options screen and specify the analysis database that exists on the source computer. Note: The analysis database can only be used by one instance of InfoSphere Information Server, so if you want the instance of InfoSphere Information Server on the source computer to use the analysis database that exists on the target, then that analysis database can no longer be used by InfoSphere Information Server on the target computer.</td>
</tr>
</tbody>
</table>
### Table 6. Questions about the InfoSphere Information Analyzer analysis database (continued)

<table>
<thead>
<tr>
<th>Question</th>
<th>If yes, perform these tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the analysis database on a separate computer? Do you want to migrate the analysis database?</td>
<td>Select Migrate the InfoSphere Information Analyzer analysis database on the InfoSphere Information Analyzer Analysis Database Options screen in the export wizard. You must manually migrate the analysis database and specify the directory where you want to store the generated script. <strong>Note:</strong> After the export, follow the instructions in the readme.txt file that was created during the export process. The scripts can be found in the directory that you specified in the wizard. Copy the scripts from the services tier computer to the computer that hosts the analysis database. Then you run the scripts to manually export the database. When you are ready to import, you copy the database scripts to the computer that hosts the target analysis database. After you complete the import process, you copy the scripts that were generated during import to the computer that hosts the target analysis database and import the database.</td>
</tr>
</tbody>
</table>

### Collecting information about the IBM InfoSphere DataStage and QualityStage Operations Console database

The export and import wizards offer two ways to migrate the operations database. Which approach you use depends on where the operations database is located. You also have the options of migrating or not migrating the operations database.

### Table 7. Questions about the IBM InfoSphere DataStage and QualityStage Operations Console database

<table>
<thead>
<tr>
<th>Question</th>
<th>If yes, perform these tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you want to migrate the operations database?</td>
<td>Select Migrate the operations database on the InfoSphere DataStage and QualityStage Operations Console Database Options screen in the export wizard. You can manually or automatically migrate the operations database. Select Automatic or Manual on the InfoSphere DataStage and QualityStage Operations Console Database Options screen.</td>
</tr>
<tr>
<td>Do you NOT want to migrate the operations database?</td>
<td>Deselect Migrate the operations database on the InfoSphere DataStage and QualityStage Operations Console Database Options screen in the export or import wizard.</td>
</tr>
<tr>
<td>Do you NOT want to migrate the operations database because you want to reuse the existing source operations database settings on the target installation?</td>
<td>Deselect Migrate the operations database on the InfoSphere DataStage and QualityStage Operations Console Database Options screen in the export wizard. If you want InfoSphere DataStage and QualityStage on the target computer to use the original operations database that was used by InfoSphere DataStage and QualityStage on the source computer, then you do not migrate that database. When you are importing using the import wizard, select Use an existing instance of the operations database on the InfoSphere DataStage and QualityStage Operations Console Database Options screen and specify the operations database that exists on the source computer. <strong>Note:</strong> The operations database can only be used by one instance of InfoSphere DataStage and QualityStage, so if you want the instance of InfoSphere DataStage and QualityStage on the source computer to use the operations database that exists on the target, then that operations database can no longer be used by InfoSphere DataStage and QualityStage on the target computer. The operations database can be used by two engines on the same InfoSphere DataStage and QualityStage installation, but it cannot be used by two engines from separate versions or on separate installations.</td>
</tr>
<tr>
<td>Is the operations database on a separate computer? Do you want to migrate the operations database?</td>
<td>Select Migrate the operations database on the InfoSphere DataStage and QualityStage Operations Console Database Options screen in the export or import wizard. You must manually migrate the operations database and specify the directory where you want to store the generated script. <strong>Note:</strong> After the export, follow the instructions in the readme.txt file that was created during the export process. The scripts can be found in the directory that you specified in the wizard. Copy the scripts from the services tier computer to the computer that hosts the operations database. Then you run the scripts to manually export the database. When you are ready to import, you copy the database scripts to the computer that hosts the target operations database. After you complete the import process, you copy the scripts that were generated during import to the computer that hosts the target operations database and import the database.</td>
</tr>
</tbody>
</table>
Collecting information about the IBM InfoSphere QualityStage Standardization Rules Designer database

The export and import wizards offer two ways to migrate the Standardization Rules Designer database. Which approach you use depends on where the Standardization Rules Designer database is located. You also have the options of migrating or not migrating the Standardization Rules Designer database.

Table 8. Questions about the IBM InfoSphere QualityStage Standardization Rules Designer database

<table>
<thead>
<tr>
<th>Question</th>
<th>If yes, perform these tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you NOT want to migrate the Standardization Rules Designer database?</td>
<td>Deselect Migrate the Standardization Rules Designer database on the InfoSphere QualityStage Standardization Rules Designer Database Options screen in the export wizard.</td>
</tr>
<tr>
<td>Do you NOT want to migrate the Standardization Rules Designer database because you want to reuse the existing source Standardization Rules Designer database settings on the target installation?</td>
<td>Deselect Migrate the Standardization Rules Designer database on the InfoSphere QualityStage Standardization Rules Designer Database Options screen in the export wizard. If you want InfoSphere QualityStage on the target computer to use the original Standardization Rules Designer database that was used by InfoSphere QualityStage on the source computer, then you do not migrate that database. When you are importing using the import wizard, select Use an existing instance of the operations database on the InfoSphere DataStage and QualityStage Operations Console Database Options screen and specify the Standardization Rules Designer database that exists on the source computer. <strong>Note:</strong> The Standardization Rules Designer database can only be used by one instance of InfoSphere QualityStage, so if you want the instance of InfoSphere QualityStage on the source computer to use the Standardization Rules Designer database that exists on the target, then that Standardization Rules Designer database can no longer be used by InfoSphere QualityStage on the target computer. The Standardization Rules Designer database can be used by two engines on the same InfoSphere QualityStage installation, but it cannot be used by two engines from separate versions or on separate installations.</td>
</tr>
<tr>
<td>Is the Standardization Rules Designer database on a separate computer? Do you want to migrate the Standardization Rules Designer database?</td>
<td>Select Migrate the Standardization Rules Designer database on the InfoSphere QualityStage Standardization Rules Designer Database Options screen in the export wizard. You must manually migrate the Standardization Rules Designer database and specify the directory where you want to store the generated script. <strong>Note:</strong> After the export, follow the instructions in the readme.txt file that was created during the export process. The scripts can be found in the directory that you specified in the wizard. Copy the scripts from the services tier computer to the computer that hosts the Standardization Rules Designer database. Then you run the scripts to manually export the database. When you are ready to import, you copy the database scripts to the computer that hosts the target Standardization Rules Designer database. After you complete the import process, you copy the scripts that were generated during import to the computer that hosts the target Standardization Rules Designer database and import the database.</td>
</tr>
</tbody>
</table>
Table 8. Questions about the IBM InfoSphere QualityStage Standardization Rules Designer database (continued)

<table>
<thead>
<tr>
<th>Question</th>
<th>If yes, perform these tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which user name do I enter?</td>
<td>DB2 User name of the DB2 database user who has SYSADM, SYSCTRL, or SYSMAINT privileges. For example, srduser.</td>
</tr>
<tr>
<td></td>
<td>Oracle User name of an Oracle user that has system administrator authority (SYSDBA) privileges. The user must be able to connect on the SQL prompt as a system database administrator (&quot;sqlplus user/password@SID as sysdba&quot;). The user must also be able to connect from the SQL*Plus command line interface as SYSDBA. This property is used to access the remote database and gather the information that is required to create the scripts that migrate the metadata repository.</td>
</tr>
<tr>
<td></td>
<td>SQL Server User name of a user that has Microsoft SQL Server system administrator privileges.</td>
</tr>
</tbody>
</table>

Collecting information about the user registry

Identify the type of user registry that the source installation uses.

The migration tool automatically migrates the configuration of the local operating system or LDAP user registry from the source to the target. If credential mapping is used, the migration tool creates credential mappings on the target.

Table 9. Questions about the user registry

<table>
<thead>
<tr>
<th>Question</th>
<th>More information</th>
</tr>
</thead>
<tbody>
<tr>
<td>What type of user registry (internal, local operating system, or LDAP) is IBM InfoSphere Information Server configured for?</td>
<td>If the source uses credential mapping, you must ensure that the local operating system IDs that are used for credential mapping are created on the engine tier computer that you are migrating. For example, if the user name myuser on the computer that was exported is mapped to local operating system user dsuser and the target computer that you are importing to does not have a local operating system user named dsuser, when user myuser tries to use the target computer, the follow message displays: “User name and/or password incorrect. If credential mapping is used, check that the credential mapped user name and password are correctly configured.” The migration tool backs up the source user role mapping unless the registry is a federated user registry, or an LDAP user registry that is using an SSL configuration. If the registry is a federated or LDAP user registry, then the migration tool does not export or import the system configuration. Internal, local operating system, and LDAP (non-SSL), will be exported and imported. For more information about credential mapping, see the following topic: Mapping user credentials.</td>
</tr>
</tbody>
</table>
| Do you want to change the type of user registry?                         | Configure the new user registry before you use the migration tool. You can change the user registry on the source computer, and the new configuration is copied to the target computer, unless the registry is a federated or LDAP/SSL user registry.  

For systems that use federated or LDAP/SSL user registries, when you export the source, the migration tool detects that the user registry is not the internal registry and does not migrate the source system configuration.  

**Important:** If the new registry uses a different InfoSphere Information Server administrator ID and password, when you use the migration tool to start the import, you must specify the new administrator ID and password on the Engine Tier Credentials screen. |

Collecting information about files that are not automatically migrated

Collect the names and file paths to additional files that are not automatically migrated by the migration tool. The export wizard allows you to specify additional files to export in a text file.

To migrate additional files, create a text file that contains a list of the files that you want to migrate. You must specify each file name, along with a full path, on a single line. Do not specify a delimiter after each file name.

The following table shows the data that is not automatically migrated by the export wizard.
Table 10. Data that is not automatically exported by the export wizard

<table>
<thead>
<tr>
<th>Product</th>
<th>Data that is not automatically migrated</th>
</tr>
</thead>
<tbody>
<tr>
<td>InfoSphere Information Server</td>
<td>• Owner and group read, write, and execute permissions for file systems</td>
</tr>
<tr>
<td></td>
<td>The user ownership, as well as the read, write, and execute permissions, are not migrated. After migration, all project files will be owned by the InfoSphere Information Server engine tier user name as specified in the migration response file. For project files, the umask setting for the dsadm ID will determine the permissions.</td>
</tr>
<tr>
<td>InfoSphere DataStage and QualityStage</td>
<td>• Data sets</td>
</tr>
<tr>
<td></td>
<td>• Run-time log files</td>
</tr>
<tr>
<td></td>
<td>• Operational metadata</td>
</tr>
<tr>
<td></td>
<td>• Job schedules or job invocations</td>
</tr>
<tr>
<td></td>
<td>• InfoSphere DataStage hash files that are not saved in a project directory</td>
</tr>
<tr>
<td></td>
<td>• Data files used by InfoSphere DataStage jobs.</td>
</tr>
<tr>
<td></td>
<td>• If the versions of the product are different on the source and target computers, then compiled run time files are not automatically migrated. All InfoSphere DataStage jobs need to be recompiled on the new version.</td>
</tr>
<tr>
<td></td>
<td>For information on migrating data sets, see <a href="http://www.ibm.com/support/docview.wss?uid=swg21392477">http://www.ibm.com/support/docview.wss?uid=swg21392477</a></td>
</tr>
<tr>
<td>InfoSphere QualityStage modules</td>
<td>• Postal validation reference files</td>
</tr>
<tr>
<td></td>
<td>• Geocoding reference files</td>
</tr>
<tr>
<td></td>
<td>• Match Designer database</td>
</tr>
<tr>
<td>InfoSphere Information Server Enterprise Packs</td>
<td>• Reference files</td>
</tr>
</tbody>
</table>

Collecting information about InfoSphere DataStage project folder and update options

The migration tool helps you configure InfoSphere DataStage project locations and updates in order to migrate the projects from the target computer to the source computer.

InfoSphere DataStage project folder options

Using the import wizard, you specify the project directory into which projects are migrated. On the InfoSphere DataStage project options screen, you have three options for specifying the project directory:

- You can automatically migrate all projects to the default directory that the migration tool provides:
  - IBM/InformationServer/Server/Projects
  - IBM\InformationServer\Server\Projects
To migrate projects to this default project directory, select **Use the default project directory on the target system**.

- You can migrate all projects to a user-specified default project directory. To migrate all projects to a user-specified default project directory, select **Use a user-specified default project directory** in the import wizard, and specify the directory. This user-specified directory overrides the default directory setting.

- You can migrate some projects to a user-specified default project directory and migrate one or more other projects to other user-specified directories. You select **Use a user-specified default project directory** and specify the user-specified default project directory. Then you specify the directory for each project that you want to migrate in the **Location** field in the **InfoSphere DataStage Projects** section of the screen.

For example, if the **InfoSphere DataStage project options** screen contains the following entry in the **Use the default project directory on the target system** field:

/dastage/team1_projects

and the **InfoSphere DataStage Projects** area specifies that project ProjectA has the following location:

/dastage/team2_projects

all projects will be migrated to /dastage/team1_projects, except for ProjectA, which will be migrated to /dastage/team2_projects/. You will have a directory structure that looks like this:

datastage
  team1_projects
    project1
    project2
  team2_projects
    projectA

**InfoSphere DataStage project updates**

Before you can use a migrated InfoSphere DataStage project, it must be updated to the current version. You have the option to update them as part of the import process or defer the update until later. If you know a particular project might take a long time to update, then you might want to defer updating it until after import. You update a project after import by using the InfoSphere DataStage Administrator client.

On the **InfoSphere DataStage project options** screen in the export and import wizards, there is a **InfoSphere DataStage Projects** section where you can specify which projects you want to update. Click **Select or Deselect All** to select or deselect all projects. To update an individual project, select **Update Project**.

**Using the migration tool**

When you use the InfoSphere Information Server migration tool, you perform three processes to migrate an installation. You use the migration tool to export the source installation data to archive files. Next, you install the new version of InfoSphere Information Server on the target computer. Finally, you use the migration tool to import the archive files to the target installation.

1. **“Verifying requirements” on page 1**
2. **“Exporting the source installation” on page 20**
3. **“Completing post-export tasks” on page 30**
4. “Installing the new version of InfoSphere Information Server” on page 32
5. “Importing the source installation into the target installation” on page 36
6. “Completing post-migration tasks” on page 47

**Exporting the source installation**

To export the source installation data, use the InfoSphere Information Server export wizard to create a response file. The export wizard guides collects information about your existing installation of InfoSphere Information Server on your source computer and then automatically creates a response file, which defines the migration environment. The migration tool uses the response file to export the source installation and to create archive files.

**Procedure**

1. “Backing up the installation”
2. “Accessing the InfoSphere Information Server migration tool for version 9.1” on page 21
3. “Installing IBM Support Assistant Lite for InfoSphere Information Server” on page 23
4. “Generating the Diagnostic Health Checker reports” on page 24
5. “Generating the Migration Reference Report” on page 26
6. “Creating a response file by using the IBM InfoSphere Information Server export wizard” on page 26
7. “Validating and exporting the source” on page 28
8. “Completing post-export tasks” on page 30

**Backing up the installation**

Before you begin the export or after you complete the import process, it is a best practice to back up the installation.

**About this task**

Backing up the installation before you begin the export process is optional. It is mandatory only if you are uninstalling InfoSphere Information Server and replacing it with a new installation on the same machine. In the case of side-by-side migration, backing up the installation is highly recommended. It is also recommended when the target system is on separate hardware.

Backing up the target system after you complete the import process is optional, but highly recommended.

**Procedure**

To back up the installation, use one of these procedures based on the version of the source installation:

<table>
<thead>
<tr>
<th>Version</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version 8.0.1</td>
<td>Use the 8.1 instructions below to back up version 8.0.1.</td>
</tr>
</tbody>
</table>
Accessing the InfoSphere Information Server migration tool for version 9.1


About this task

The InfoSphere Information Server, Version 9.1 migration tool supports InfoSphere Information Server, versions 8.0.1, 8.1, 8.5, 8.7 and 9.1 on source computers and versions 8.5, 8.7 and 9.1 on target computers. If your source or target computers are not using InfoSphere Information Server, Version 9.1, then you can still use the Version 9.1 migration tool, but you must download it from this page: [http://www.ibm.com/support/docview.wss?uid=swg24033500](http://www.ibm.com/support/docview.wss?uid=swg24033500) If your source or target computers are using InfoSphere Information Server, Version 9.1, then follow the instructions below to access the tool.

The version of the migration tool used on the source computer must match the version on the target computer. If the version of the migration tool is a previous version than the version installed with InfoSphere Information Server, Version 9.1, you must also install the new version on your target 9.1 computer. To determine the current version of the migration tool, issue the following command on the command-line:

- `ismigration.bat -version`
- `ismigration.sh -version`

Procedure

1. Navigate to the directory where you installed InfoSphere Information Server, and then open the migration folder. The default path is:
   - `C:\IBM\InformationServer\Migration\bin`
   - `/opt/IBM/InformationServer/Migration/bin`
2. Run the following script to start using the migration tool.

<table>
<thead>
<tr>
<th>Operating system</th>
<th>Script</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIX®, HP-UX, and Solaris</td>
<td><code>ismigration.sh</code></td>
</tr>
<tr>
<td>Linux</td>
<td><code>ismigration.sh</code></td>
</tr>
<tr>
<td>Windows</td>
<td><code>ismigration.bat</code></td>
</tr>
<tr>
<td>z/OS</td>
<td><code>ismigration.sh</code></td>
</tr>
</tbody>
</table>
Follow the instructions in the command window to start the InfoSphere Information Server import or export wizard by using a web browser.

**Installing the InfoSphere Information Server migration tool for versions 8.7 and earlier:**

Use the version 9.1 migration tool to migrate InfoSphere Information Server versions 8.0.1, 8.1, 8.1.1, 8.1.2, 8.5, and 8.7. You must use the Update Installer to install the version 9.1 migration tool if you are migrating any version of InfoSphere Information Server other than 9.1.

**Before you begin**

The version of the InfoSphere Information Server migration tool that you use for the export process must be the same version that you use for the import process. You install the InfoSphere Information Server migration tool on each computer that hosts the engine tier or services tier in the source and target installations.

**Procedure**

1. Log on to the server.

<table>
<thead>
<tr>
<th>Operating system</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIX, HP-UX, and Solaris</td>
<td>Log on as the root user.</td>
</tr>
<tr>
<td>Linux</td>
<td>Log on as the root user.</td>
</tr>
<tr>
<td>Windows</td>
<td>Log on as a local Windows administrator, preferably using the same user name that performed the original installation.</td>
</tr>
<tr>
<td>z/OS</td>
<td>Log on as the root user.</td>
</tr>
</tbody>
</table>

2. Download the latest version of the Update Installer. After you download the required files, extract the files to your computer.

<table>
<thead>
<tr>
<th>Version</th>
<th>Link</th>
</tr>
</thead>
</table>

3. Navigate to the directory where you extracted the contents of the latest version of the Update Installer.

4. Run the following script to update the Update Installer to the latest version.

<table>
<thead>
<tr>
<th>Operating system</th>
<th>Script</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIX, HP-UX, and Solaris</td>
<td>updateImage.sh</td>
</tr>
<tr>
<td>Linux</td>
<td>updateImage.sh</td>
</tr>
<tr>
<td>Windows</td>
<td>updateImage.bat</td>
</tr>
</tbody>
</table>
5. When prompted, enter the path name of the directory where you installed the Update Installer.

<table>
<thead>
<tr>
<th>Operating system</th>
<th>Script</th>
</tr>
</thead>
<tbody>
<tr>
<td>z/OS</td>
<td>updateImage.sh</td>
</tr>
</tbody>
</table>


7. Extract the files to a temporary directory on your computer. Ensure that all other users are logged off of the computer so that their work is not interrupted.

8. To install the migration tool:

<table>
<thead>
<tr>
<th>Version</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.0.1</td>
<td>Run the Update Installer Launcher, which is Updater.exe on Windows computers and Updater on Linux and UNIX computers. In the Update Installer Launcher, specify the unzipped .ispkg migration file.</td>
</tr>
</tbody>
</table>
| 8.1         | Run the InstallUpdates.sh or InstallUpdates.bat script, which can be found in the following default directory:  
  • /opt/IBM/InformationServer/Updates/bin  
  • C:\IBM\InformationServer\Updates\bin |
| 8.5, 8.7, and 9.1 | Run InstallUpdates in the following directory:  
  • install_dir/Updates/bin  
  • install_dir\Updates\bin |

9. After the installation program runs, the migration tool is installed in the following directory.

<table>
<thead>
<tr>
<th>Operating system</th>
<th>Script</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIX, HP-UX, and Solaris</td>
<td>install_dir/Information Server/Migration</td>
</tr>
<tr>
<td>Linux</td>
<td>install_dir/Information Server/Migration</td>
</tr>
<tr>
<td>Windows</td>
<td>install_dir/Information Server/Migration</td>
</tr>
<tr>
<td>z/OS</td>
<td>install_dir/Information Server/Migration</td>
</tr>
</tbody>
</table>

**Installing IBM Support Assistant Lite for InfoSphere Information Server**

Use IBM Support Assistant Lite for InfoSphere Information Server (ISA Lite for InfoSphere Information Server) to generate reports that confirm the stability of the installation environment and that contain the information that the migration tool needs to configure the response file.
About this task

Because ISALite for InfoSphere Information Server is updated frequently, it is important to use the latest version of the tool.

Procedure

2. Verify that the latest version of ISALite for InfoSphere Information Server is installed on your computer. To verify the version that you have installed, see the IBM Support Assistant Lite for Information Server User’s Guide, which include the version and release number. The latest version these guides are located in the following directory:

<table>
<thead>
<tr>
<th>Operating system</th>
<th>Script</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIX, HP-UX, or Solaris</td>
<td>install_dir/ISALite</td>
</tr>
<tr>
<td>Linux</td>
<td>install_dir/ISALite</td>
</tr>
<tr>
<td>Linux on System z®</td>
<td>install_dir/ISALite</td>
</tr>
<tr>
<td>Windows</td>
<td>install_dir\ISALite</td>
</tr>
<tr>
<td>z/OS®</td>
<td>install_dir/ISALite</td>
</tr>
</tbody>
</table>

Generating the Diagnostic Health Checker reports

Use IBM Support Assistant Lite for InfoSphere Information Server (ISALite for InfoSphere Information Server) to check the health of the system and to generate a system topology map.

Procedure

1. Log in as root or sudo root.
2. Log in as an Administrator.
3. Start ISALite for InfoSphere Information Server.
4. In the Problem Type pane, select General Diagnostic Health Checker.
5. Enter a file name for the .zip file that will contain the reports. Include the .zip extension in the file name.
6. Select Collect Data, and respond to any additional prompts that ask for more information. The health checker tool produces two reports.
   - The SuiteHealthChecker.html report contains all results from all tests and also a topology map that lists the details of the communication channels between InfoSphere Information Server components. The report also contains two cluster topology maps for IBM WebSphere Application Server.
   - The SuiteHealthChecker-Failures.html report contains only the failed diagnostic tests.
7. Review the reports and resolve all failures before continuing. The following warning might appear in the report for the source system:

   `Large number of log entries in the repository
   [WARNING] The number of events in the log is greater than 10000. This will not interfere with the migration.`

   For information about what causes the log to fill with entries, see these support documents:
To minimize the number of log entries in the repository, you can turn off logging, enable auto-purging, or increase the frequency of auto-purging. For more information about auto-purging, see this topic: Purging log file entries.

If you receive the error message about a large number of log entries, you might want to clean the logs out before migrating. If you do not clear them out, the logs will be migrated. However, this is optional.

The following messages might appear in the log on the target system:

- **CDIHC5027W:**
  The DB2 database configuration parameters are not required to be set to the values that are recommended for running Information Server. The database administrator should verify that the value being used is the right value for your installation.

- **CDIHC5013W ++ [WARNING] No DataStage credentials were found for user "isadmin" on DataStage server "abcdl4". ++
  A user needs DataStage credentials in order to work DataStage projects using one ++
  of the DataStage clients. ++

- **CDIHC4004I Validate IADB Connection**
  Driver = com.ibm.db2.jcc.DB2Driver
  DatabaseUrl = jdbc:db2://hostname:50000/iadb
  User = iauser

- **CDIHC4013E ++ [ERROR] SQL Exception**
  Connection authorization failure occurred.
  Reason: User ID or Password invalid. ERRORCODE=-4214, SQLSTATE=28000 ++

- **CDIHC4013E ++ Note: This error is reported when Information Analyzer has not yet been configured, which is the case immediately after installation. If you have not yet configured Information Analyzer you can ignore this error.**

- **CDIHC4002I Validate DataStage Connection**
  DS Project = ANALYZERPROJECT
  Host = MYHOSTNAME
  Port = 31538
  User =

- **CDIHC4013E ++ [ERROR] DataStage Exception**
  The user name provided is incorrect
  Note: This error is reported when Information Analyzer has not yet been configured, which is the case immediately after installation. If you have not yet configured Information Analyzer you can ignore this error.

- **CDIHC4006I Validate EngineJobExecution**
  DS Project = ANALYZERPROJECT
  Host = MYHOSTNAME
  Port = 31538
  DSUser =

What to do next

If you are uninstalling the source InfoSphere Information Server system before installing the target, then you should use IBM Support Assistant Lite to run the following program: All Diagnostic Tools > Metadata Repository (XMeta) Diagnostic Test. To get IBM Support Assistant Lite test summary information and
additional metadata repository diagnostics for 8.1 or 8.0.1 computers, you must install the following patches to the InfoSphere Information Server installation:

- For InfoSphere Information Server 8.1, install 8.1 fix pack 2 or the patch `patch_JR38173_xmeta_all_8100`
- For InfoSphere Information Server 8.0.1, install the patch `patch_JR38197_xmeta_all_8010`

This diagnostic check confirms that there are no issues with the repository. This check can take several hours to run if you have a large repository. If you are retaining the source system, then you have the option of repairing the repository and exporting it again if there is a repository issue during the import, so it is less critical to do the Metadata Repository (XMeta) Diagnostic test in advance. Verify that no other users are logged into InfoSphere Information Server before you start the Metadata Repository (XMeta) Diagnostic test.

### Generating the Migration Reference Report

Use IBM Support Assistant Lite for InfoSphere Information Server to generate the Migration Reference Report, which provides encrypted passwords and configuration information that you need during the migration process.

**About this task**

To obtain encrypted passwords in the Migration Reference Report, you must install the migration tool before you generate the report.

**Procedure**

1. Log in as root or sudo root.
2. Log in as an Administrator.
3. Start the IBM Support Assistant Lite for InfoSphere Information Server tool.
4. Select Additional Collectors > Migration reference report to generate the reports.
5. Enter a file name for the .zip file that will contain the reports. Include the .zip extension in the file name.
6. Select Collect Data, and respond to any additional prompts that ask for more information. The .zip file contains two files:
   - The file `MigrationReference.html` contains migration-related information and lists the products, components, modules that are installed, and encrypted passwords.
   - The file `SYSTEM-SUMMARY.html` contains system and hardware information and environment, registry, and network information.

### Creating a response file by using the IBM InfoSphere Information Server export wizard

To export IBM InfoSphere Information Server components, you use the export wizard to create a response file. The response file is then used by the migration tool for the export operation. Some components must be exported manually.

**Before you begin**

You must meet these requirements before running the export wizard to create the response file:

- The migration tool exports data and metadata, not the product installation.

Before you start the import, InfoSphere Information Server must be installed at
the exact version, with the same products as the exported system. For example, if you have installed InfoSphere DataStage, InfoSphere Information Analyzer, and not IBM InfoSphere FastTrack on the source computer, then the target computer must also contain InfoSphere DataStage, InfoSphere Information Analyzer, and not InfoSphere FastTrack. Also, the installation on the target computer must have the same number of engines installed and the same operating systems as the source computer. For example, you cannot export two engines on Microsoft Windows computers and import them to a single Linux computer. To determine the version and patch level of the software installed on the computer to be exported, you can run the IBM Support Assistant Lite for InfoSphere Information Server tool and generate the Migration reference report. To generate the report, select All Collectors > Migration reference report. The System Summary report, included with the Migration reference report, contains additional information about the installation.

- The services tier, engine tier, and metadata repository tier must all be exported for a successful migration. If all tier archives from an export session are not available when you complete the import portion of the migration process, the migration might not be successful. The target system might not be consistent with the source.

**Procedure**

Complete the following steps on each source computer where the services tier, engine tier, or metadata repository tier is installed.

1. Navigate to the directory where you installed InfoSphere Information Server and open the migration folder.
   - `install_dir/Migration/bin`
   - `install_dir\Migration\bin`
2. At the command line, log in as an administrator.
3. Enter this command:
   - `install_dir/Migration/bin/ismigration.sh`
   - `install_dir\Migration\bin\ismigration.bat`
   Several messages are displayed. The program then displays a message about how to access the InfoSphere Information Server migration wizard. For example:
   
   =====> Use a browser to connect to the web server at
   https://localhost:8443/ibm/iis/mbr/console

4. Open a web browser on the source computer, and navigate to the address that is listed in the messages issued in the command line interface. A message might appear in the browser that reads “The publisher cannot be verified...” You can safely ignore the message and continue. This message does not indicate a security risk when it appears during InfoSphere Information Server export.
5. Click Get Started under the Export section.
6. Continue to follow the prompts in the InfoSphere Information Server Export Wizard.
7. Click Print to print out the next steps that you need to do to complete the export.
8. Click Finish after the wizard has finished creating the response file that it will use to complete the export operation.
What to do next

- Complete the export interview by using the export wizard on each of the remote systems that you want to migrate, and then complete the export operation by running the `ismigration.sh` or `ismigration.bat` file on the command line.
- Complete the export process by using the migration tool to start the export operation. For more information, see Validating and exporting the migrated environment.

Validating and exporting the source

The InfoSphere Information Server migration tool validates that the source computer meets the requirements for the export, and then exports the source.

Before you begin

Before you export InfoSphere Information Server components on the source computer, you must use the InfoSphere Information Server export wizard to create a response file.

Place InfoSphere Information Server into maintenance mode and disconnect all user sessions. For more information, see Maintenance mode.

About this task

The InfoSphere Information Server migration tool verifies that the values in the response file are appropriate.

Procedure

1. Log on to the server:
   - Log on as the root user.
   - Log on as a local Microsoft Windows administrator, preferably using the same user name that performed the original installation. On Microsoft Windows 2008, if User Account Control (UAC) is enabled, open an administrator command prompt by right-clicking the Command Prompt icon and selecting Run as administrator.
2. Enter this command to validate and export the installation:
   - `ismigration.sh -resp <opt/ResponseFilePath/ResponseFileName.xml>`
   - `ismigration.bat -resp C:\ResponseFilePath\ResponseFileName.xml`
   
   **Note:** The archive directory must contain only the archive files. If the directory contains any other files, errors occur during the import process. Each archive file is named `hostname_TIER_timestamp.tar`. The default response file directory is:
   - `/opt/IBM/InformationServer/Migration`
   - `C:\IBM\InformationServer\Migration`

   The default name for the response file name is `migration_export.xml`. The -resp command generates the following files:
   - One or more archive files in the archive directory that you specified during the export wizard.
• The migration.todo.txt file, which describes the required tasks that you must perform before you continue with the migration. The file is located in the `install_dir\Migration` directory.

• A script that you use to manually migrate the metadata repository and a README.txt file are generated in the directory that you specified in the Directory for generated scripts field in the export wizard. The default directory is:
  - `/opt/IBM/InformationServer/Migration/DatabaseSupport/Metadata`
  - `C:\IBM\InformationServer\Migration\DatabaseSupport\Metadata`

• A script that you use to manually migrate the InfoSphere Information Analyzer analysis database and a README.txt file are generated in the directory that you specified in the Directory for generated scripts field in the export wizard. The default directory is:
  - `/opt/IBM/InformationServer/Migration/DatabaseSupport/ia`
  - `C:\IBM\InformationServer\Migration\DatabaseSupport\ia`

• A script that you use to manually migrate the IBM InfoSphere DataStage and QualityStage Operations Console database is generated in the directory that you specified in the export wizard.

• A script that you use to manually migrate the IBM InfoSphere QualityStage Standardization Rules Designer database is generated in the directory that you specified in the export wizard.

3. Optional: If the validation is unsuccessful, review the migration log file for severe error messages. The migration log file is in the `install_dir\Migration\logs` directory. Modify the migration environment as necessary, and then use the `-restart` command to automatically restart the export process from the last saved checkpoint:

   - `install_dir\Migration\bin\ismigration.sh -export -restart`
   - `install_dir\migration\bin\ismigration.bat -export -restart`

The validation might be unsuccessful if:

• You are using a response file that was created for a different migration environment.

• You have entered invalid credentials.

• You have entered invalid directory names.

4. Manually export any components that you chose to manually export during the interview you completed while using the wizard. You manually export the components by using scripts that were generated by the migration tool. The scripts are stored in the folder that you specified in the Directory for generated scripts field in the wizard. The default directory is:

   - `/opt/IBM/InformationServer/Migration/DatabaseSupport`
   - `C:\IBM\InformationServer\Migration\DatabaseSupport`

Scripts to manually export each database are stored in folders such as `/opt/IBM/InformationServer/Migration/DatabaseSupport/ia` or `C:\IBM\InformationServer\Migration\DatabaseSupport\ia` for the InfoSphere Information Analyzer analysis database.

5. Repeat the export procedure on each engine tier that is not on the same host as the services tier.

6. After all tiers are backed up, complete the following steps.
a. Restart the InfoSphere Information Server services and WebSphere Application Server services. For more information, see [Administering IBM InfoSphere Information Server and IBM WebSphere Application Server services](#).
b. Disable maintenance mode if it is enabled. For more information, see [Maintenance mode](#).

### Completing post-export tasks

After you export the installation, you must complete the tasks in the `migration.todo.txt` file. If you chose to manually migrate the metadata repository or the InfoSphere Information Server analysis database, you must run scripts to back up the databases.

### Procedure

1. To complete the tasks in the `migration.todo.txt` file, perform these steps:
   a. Open the `migration.todo.txt` file. The file is located in the following directory:
      - `install_dir\Migration`
      - `install_dir\Migration`
   b. Complete the tasks that are listed in the file.

2. To run the scripts that back up the metadata repository, perform these steps:
   a. You must run the script on the computer that hosts the metadata repository. If the metadata repository is not on the services tier computer, you must first move the `readme.txt` file and the scripts to the computer that hosts the metadata repository. These files are in the directory that you specified on the Metadata Repository Database Options screen in the Directory for generated scripts field. You must copy and retain the entire directory and subdirectory structure. The default directory is `C:\IBM\InformationServer\Migration\DatabaseSupport\xmeta`.
   b. Open the `readme.txt` file.
   c. Complete the task that is titled "Backup source database."

3. To run the scripts that back up the InfoSphere Information Analyzer analysis database, perform these steps:
   a. Move the scripts from the services tier computer to the computer where the analysis database is in the source installation. You must copy and retain the entire directory and subdirectory structure.
   b. To run the scripts, follow the instructions in the `readme.txt` file. The file is in the directory that you specified on the InfoSphere Information Analyzer Database Options screen in the Directory for generated scripts field. The default directory is `C:\IBM\InformationServer\Migration\DatabaseSupport\ia`.

### Completing post-export tasks from the `migration.todo.txt` file:

The `migration.todo.txt` file lists the required tasks that you must perform.

### About this task

The `migration.todo.txt` file identifies the required files that you must manually move to the target installation. For example, if you chose to manually migrate the metadata repository, you must move scripts to the target computer that hosts the metadata repository and then run the scripts to back up the database. If you chose to generate a script for the configuration of IBM WebSphere Application Server, the
WebSphere Application Server Administrator should review the script, which describes the changes that will be made to the application server during migration.

**Procedure**

1. Open the `migration.todo.txt` file. The file is located in the `install_dir/Migration` directory.
2. Complete the tasks that are listed in the file.

**Running a script to back up the metadata repository database:**

If you chose to manually migrate the metadata repository, you must run a script to back it up.

**About this task**

You must have the following roles to run the script that imports the metadata repository database:

**DB2 databases**

- You must have SYSADM, SYSCTRL, or SYSMAINT privileges and the ability to run back and restore operations on the metadata repository database.

**Oracle databases**

- You must have system administrator authority (SYSDBA) privileges.

**Microsoft SQL Server databases**

- You must have Microsoft SQL Server system administrator privileges.

**Procedure**

1. You must run the script on the computer that hosts the metadata repository. If the metadata repository is not on the services tier computer, you must first move the `readme.txt` file and the script to the computer that hosts the metadata repository. These files are in the directory that you specified in the **Directory for generated scripts** field in the export wizard.
2. Open the `readme.txt` file.
3. Complete the task that is titled "Backup source database."

**What to do next**

After the script runs, you receive a message that says the script completed successfully. The logs that are generated during the export process are stored in the following location:

- `install_dir/IBM/InformationServer/Migration/DatabaseSupport/Metadata/logs`
- `install_dir\IBM\InformationServer\Migration\DatabaseSupport\Metadata\logs`

**Running a script to back up the InfoSphere Information Analyzer analysis database:**

If you chose to manually migrate the InfoSphere Information Analyzer analysis database, you must run a script to back up the analysis database on the source computer.
About this task

You must have the following roles to run the script that imports the analysis database:

**DB2 databases**
You must have SYSADM, SYSCTRL, or SYSMAINT privileges.

**Oracle databases**
You must have system administrator authority (SYSDBA) privileges.

**Microsoft SQL Server databases**
You must have Microsoft SQL Server system administrator privileges.

Procedure

1. Move the `database_backup.bat` or `database_backup.sh` script from the services tier computer to the computer where the InfoSphere Information Analyzer analysis database is in the source installation. The default directory is:
   - `/opt/IBM/InformationServer/Migration/DatabaseSupport/ia/bin`
   - `C:\IBM\InformationServer\Migration\DatabaseSupport\ia\bin`

2. To run the script, follow the instructions in the `readme.txt` file. The file is in the directory that you specified in the **Directory for generated scripts** field in the export wizard.

What to do next

After the script runs, you receive a message that says the script completed successfully. The logs that are generated during the export process are stored in the following location:

- `install_dir/IBM/InformationServer/Migration/DatabaseSupport/IA/logs`
- `install_dir\IBM\InformationServer\Migration\DatabaseSupport\IA\logs`

**Installing the new version of InfoSphere Information Server**

You install the engine tier and services tier before you perform the import process. You can install the client tier at this time, or you can wait and install it after you complete the import process.

**Installing a new version of InfoSphere Information Server on the target computer**

Before you can import your migration archive files, you must install a new version of InfoSphere Information Server. If you do not have a new system that you are using as the target computer, you can perform a side-by-side migration, as long as you are not using a Windows computer. Before you replace an existing version of InfoSphere Information Server with a new version, you might want to uninstall the existing version and then install the new version.

**Before you begin**

Review the requirements for the InfoSphere Information Server migration tool. For more information, see “Verifying requirements for the InfoSphere Information Server migration tool” on page 1.

**Procedure**

1. Optional: Uninstall the existing version. For complete information about uninstalling the existing version, see this topic:


Note: If you are migrating to a Windows computer, and you plan on installing InfoSphere Information Server on the same host, then this step is mandatory. You must uninstall InfoSphere Information Server and reboot the computer after you are finished uninstalling InfoSphere Information Server.

2. Install the new version. For complete information about installing the new version, see this topic:


What to do next

Important: After you install the new version, do not use it to do any work. Do not create any artifacts such as projects, connections from clients, and so on. Do not perform any testing to verify that the installation is working besides the ISALite General Diagnostic Health Check to verify that the installation is working.

If you installed InfoSphere Information Server version 9.1 on the target computer, then the migration tool is included in the installation image. If you installed InfoSphere Information Server versions 8.5 or 8.7, then after you install the new version, you must install the migration tool by downloading the tool from http://www.ibm.com/support/docview.wss?uid=swg24033500

The version of the migration tool used on the source computer must match the version on the target computer. If the version of the migration tool is a previous version than the version installed with InfoSphere Information Server, Version 9.1,
you must also install the new version on your target 9.1 computer. To determine the current version of the migration tool, issue the following command on the command-line:

- `ismigration.bat -version`
- `ismigration.sh -version`

If you are migrating to versions 8.5 or 8.7, use the InfoSphere Information Server Update Installer to install the version 9.1 migration tool.

**Installing side-by-side versions of InfoSphere Information Server**

If you are not installing on a Windows computer, and you do not want to uninstall the previous version of InfoSphere Information Server, you can have both the source and target installations, side-by-side, on the same computer or computers. Side-by-side installations are not supported on Windows computers.

**Before you begin**

To make the target installation successful, you must consider issues such as disk space constraints potential port conflicts for IBM DB2, IBM WebSphere Application Server, and InfoSphere Information Server, and system requirements. These conflicts will be identified during the prerequisite checks that are performed during installation. It is recommended that you leave your source system running during the installation so the suite installer can accurately detect all ports that are in use. You must open the new ports in your firewall as required. For more information see Configuring your network.

Below is prerequisite information for each tier related to side-by-side installation.

**Repository Tier**

If you are migrating with the migration tool, and you are using DB2 repositories, you must not use the same DB2 instance that was used on the source computer.

If you are migrating with the migration tool, and you are using Oracle repositories, the Oracle tablespace name must be the same as the installation on the source computer. The SID can be different.

If you are installing a second copy of DB2 using the InfoSphere Information Server suite installer, you can ignore the following prerequisite error messages:

- **WARNING:** There should be no active DB2-processes that might disturb the installation.
- **WARNING:** Delete the file global.reg in use by the current installation.
- **FAIL** - Ensure directory /var/db2 is empty or does not exist.

**Services Tier**

If you are installing IBM WebSphere Application Server as part of the InfoSphere Information Server suite installation, verify that **Customize WebSphere Application Server profile ports** is checked and the selected ports do not reuse ports from your existing installation. You can ignore this prerequisite error message:

- **FAIL** - The IBM WebSphere Application Server installation directory /opt/IBM/WebSphere/AppServer must not be present in the WebSphere Application Server registry files.

If you plan to use a pre-installed IBM WebSphere Application Server Network Deployment, we recommend that you do not use the same installation as your source version even if that version is supported by
InfoSphere Information Server version 9.1. If you install a new copy of IBM WebSphere Application Server to a different path, it will be easier to distinguish which processes map to each version of InfoSphere Information Server. This approach uses a bit more disk space, but that space is returned when you uninstall the source computer after the validation is complete.

Engine Tier
Before you install InfoSphere Information Server version 9.1, remove the ~/.dshome file. This file defines the default location for the InfoSphere Information Server engine on the current system. When you have multiple engines installed on the same system, its existence can cause administrative tasks to be run against the wrong engine. Also the ~/.dshome file has to be removed again after installing InfoSphere Information Server version 9.1. An ITAG value needs to be specified for the InfoSphere Information Server engine. This is a three character hexadecimal value. Do not select fff, ace, or dcd. You should also remove the automatic setting of the DSHOME environment variable and the sourcing of the previous version of the dsenv file if you added that to the dsadm profile. You should not add any InfoSphere version specific settings to the dsadm profile. You can create a version 9.1 script, as well as a script for the previous version of InfoSphere Information Server, and source the appropriate version based on the current task. You must source the correct dsenv file prior to any administrative tasks. The InfoSphere Information Server suite installer automatically checks for ports that are in use, as well as ports that are registered in the services file. The job monitor is not registered in the services file and if it is not running, the port conflict will not be identified.

To avoid conflicts for the parallel job monitor select unique ports on the installation panel that are above 13401. You can ignore this prerequisite error message:

WARNING: No processes of the IBM InfoSphere Information Server-Engine can run on the target computer

Procedure

See the following topic for complete information about installing Version 9.1:

[Installing InfoSphere Information Server by using the wizard (graphical mode)]

Note: When you invoke the installer for a side-by-side installation, add the -force option to the command line. This allows you to ignore prerequisite check failures that are acceptable for a side-by-side installation. WARNING or FAIL messages that can be ignored are documented in the tiers to which they apply. You can ignore the following prerequisite message:

WARNING: No processes of the IBM InfoSphere Information Server-Engine can run on the target computer.

What to do next

After you install the new version, do not use it to do any work. Do not create any artifacts such as projects, connections from clients, and so on. Do not perform any testing to verify that the installation is working. You can run the ISALite General Diagnostic Health Checker.

Note: This step only applies if you are migrating with the migration tool.
Installing the new version of InfoSphere Information Server on the client computer
You do not migrate the client; instead, you install the new version of the client programs on the client tier.

About this task

Note: If you are planning on migrating by using the migration tool, after you install Version 9.1, do not use it to do any work until the migration is complete. Do not create any artifacts such as projects, connections from clients, and so on. Do not perform any testing to verify that the installation is working.

Procedure
2. If your topology includes multiple versions of IBM InfoSphere Information Server, you can install the Version 9.1 client tier on a separate Microsoft Windows computer or install it on the same computer with the prior versions of the client. For InfoSphere DataStage, use the Multi-client Manager to switch between versions. If you choose to install the Version 9.1 client tier along with prior clients, use the Microsoft Windows Add or Remove Programs utility to remove the existing MKS Toolkit before you install the Version 9.1 client tier. After you install Version 9.1, both the prior versions and Version 9.1 will use the latest MKS Toolkit, which is installed along with the client tier.

Note: If you want to install the Version 9.1 client tier along with a Version 9.1 engine or services tier on the same Microsoft Windows computer, you cannot have any additional client installations on the computer. You can install only one Version 9.1 client on the computer. In addition, you must install the client tier and the engine tier in the same installation directory.
Complete these steps to install the Version 9.1 client on the same Microsoft Windows computer where the client for the prior version is located.
   a. Log on to the Windows computer as an administrator.
   b. Turn off any firewall software that is installed on the computer.
   c. Optional: Turn off antivirus software.
   d. Go to the root directory on the InfoSphere Information Server Version 9.1 installation media or downloaded installation image.
   e. Double-click setup.exe and run the file as an administrator.
   f. When asked for an installation directory, select New Installation and specify a directory that does not contain an existing InfoSphere Information Server client.
   g. Select the product modules and components as required.

Importing the source installation into the target installation
To import the source installation data to the target computer, use the InfoSphere Information Server import wizard to create a response file. The import wizard collects information about InfoSphere Information Server and then automatically creates a response file, which defines the migration environment. The migration tool uses the response file to import the source installation to the target computer.
Procedure
1. “Accessing the InfoSphere Information Server migration tool for version 9.1” on page 21
2. “Installing IBM Support Assistant Lite for InfoSphere Information Server” on page 23
3. “Generating the Diagnostic Health Checker reports” on page 24
4. “Moving the archive files” on page 42
5. “Creating a response file by using the IBM InfoSphere Information Server import wizard” on page 42
6. “Validating and importing the migrated environment” on page 43
7. “Completing post-migration tasks” on page 47
8. “Backing up the installation” on page 20

Accessing the InfoSphere Information Server migration tool for version 9.1
Use the InfoSphere Information Server, Version 9.1 migration tool to migrate
InfoSphere Information Server, Versions 8.5, 8.7, and 9.1. The Version 9.1 migration
tool is automatically installed when you install InfoSphere Information Server,
Version 9.1. The tool includes the InfoSphere Information Server migration
wizards.

About this task
The InfoSphere Information Server, Version 9.1 migration tool supports InfoSphere
Information Server, versions 8.0.1, 8.1, 8.5, 8.7 and 9.1 on source computers and
versions 8.5, 8.7 and 9.1 on target computers. If your source or target computers
are not using InfoSphere Information Server, Version 9.1, then you can still use the
Version 9.1 migration tool, but you must download it from this page:
http://www.ibm.com/support/docview.wss?uid=swg24033500. If your source or
target computers are using InfoSphere Information Server, Version 9.1, then follow
the instructions below to access the tool.

The version of the migration tool used on the source computer must match the
version on the target computer. If the version of the migration tool is a previous
version than the version installed with InfoSphere Information Server, Version 9.1,
you must also install the new version on your target 9.1 computer. To determine
the current version of the migration tool, issue the following command on the
command-line:
• ismigration.bat -version
• ismigration.sh -version

Procedure
1. Navigate to the directory where you installed InfoSphere Information Server,
and then open the migration folder. The default path is:
• C:\IBM\InformationServer\Migration\bin
• /opt/IBM/InformationServer/Migration/bin
2. Run the following script to start using the migration tool.

<table>
<thead>
<tr>
<th>Operating system</th>
<th>Script</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIX, HP-UX, and Solaris</td>
<td>ismigration.sh</td>
</tr>
<tr>
<td>Linux</td>
<td>ismigration.sh</td>
</tr>
</tbody>
</table>
Operating system | Script
---|---
Windows | ismigration.bat
z/OS | ismigration.sh

Follow the instructions in the command window to start the InfoSphere Information Server import or export wizard by using a web browser.

**Installing IBM Support Assistant Lite for InfoSphere Information Server**

Use IBM Support Assistant Lite for InfoSphere Information Server (ISA Lite for InfoSphere Information Server) to generate reports that confirm the stability of the installation environment and that contain the information that the migration tool needs to configure the response file.

**About this task**

Because ISALite for InfoSphere Information Server is updated frequently, it is important to use the latest version of the tool.

**Procedure**

1. Download and install the latest version of ISALite for InfoSphere Information Server. See this page for details on downloading and installing the tool: [http://www.ibm.com/support/docview.wss?uid=swg24022700](http://www.ibm.com/support/docview.wss?uid=swg24022700)

2. Verify that the latest version of ISALite for InfoSphere Information Server is installed on your computer. To verify the version that you have installed, see the *IBM Support Assistant Lite for Information Server User’s Guide*, which include the version and release number. The latest version these guides are located in the following directory:

<table>
<thead>
<tr>
<th>Operating system</th>
<th>Script</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIX, HP-UX, or Solaris</td>
<td>install_dir/ISALite</td>
</tr>
<tr>
<td>Linux</td>
<td>install_dir/ISALite</td>
</tr>
<tr>
<td>Linux on System z</td>
<td>install_dir/ISALite</td>
</tr>
<tr>
<td>Windows</td>
<td>install_dir\ISALite</td>
</tr>
<tr>
<td>z/OS</td>
<td>install_dir/ISALite</td>
</tr>
</tbody>
</table>

**Generating the Diagnostic Health Checker reports**

Use IBM Support Assistant Lite for InfoSphere Information Server (ISALite for InfoSphere Information Server) to check the health of the system and to generate a system topology map.

**Procedure**

1. Log in as root or sudo root.
2. Log in as an Administrator.
3. Start ISALite for InfoSphere Information Server.
4. In the **Problem Type** pane, select **General Diagnostic Health Checker**.
5. Enter a file name for the .zip file that will contain the reports. Include the .zip extension in the file name.
6. Select **Collect Data**, and respond to any additional prompts that ask for more information. The health checker tool produces two reports.
• The SuiteHealthChecker.html report contains all results from all tests and also a topology map that lists the details of the communication channels between InfoSphere Information Server components.

The report also contains two cluster topology maps for IBM WebSphere Application Server.

• The SuiteHealthChecker-Failures.html report contains only the failed diagnostic tests.

7. Review the reports and resolve all failures before continuing. The following warning might appear in the report for the source system:

Large number of log entries in the repository
[WARNING] The number of events in the log is greater than 10000.
This will not interfere with the migration.

For information about what causes the log to fill with entries, see these support documents:

• https://www.ibm.com/support/docview.wss?uid=swg21370048
• https://www.ibm.com/support/docview.wss?uid=swg21407491

To minimize the number of log entries in the repository, you can turn off logging, enable auto-purging, or increase the frequency of auto-purging. For more information about auto-purging, see this topic: Purging log file entries.

If you receive the error message about a large number of log entries, you might want to clean the logs out before migrating. If you do not clear them out, the logs will be migrated. However, this is optional.

The following messages might appear in the log on the target system:

CDIHC5027W:
The DB2 database configuration parameters are not required to be set to the values that are recommended for running Information Server. The database administrator should verify that the value being used is the right value for your installation.

CDIHC5013W ++ [WARNING] No DataStage credentials were found for user "isadmin" on DataStage server "abcdl4". ++
CDIHC5013W ++ A user needs DataStage credentials in order to work DataStage projects using one ++
CDIHC5013W ++ of the DataStage clients. ++
CDIHC5013W +++++++++++++++++++++++++++++++++++++++++++++++++++++++
CDIHC5004I Validate IADB Connection
Driver = com.ibm.db2.jcc.DB2Driver
DatabaseUrl = jdbc:db2://hostname:50000/iadb
User = iauser
CDIHC4013E ++ [ERROR] SQL Exception
CDIHC4013E ++ [jcc][t4][2013][11249][3.58.135] Connection authorization failure occurred.
Reason: User ID or Password invalid. ERRORCODE=-4214, SQLSTATE=28000 ++
CDIHC4013E ++ Note: This error is reported when Information Analyzer has not yet been configured, which is the case immediately after installation. If you have not yet configured Information Analyzer you can ignore this error.
CDIHC4002I Validate DataStage Connection
DS Project = ANALYZERPROJECT
Host = MYHOSTNAME
Port = 31538
User = iauser
CDIHC4013E ++ [ERROR] DataStage Exception
CDIHC4013E ++ The user name provided is incorrect
CDIHC4013E ++ Note: This error is reported when Information Analyzer has not yet been configured, which is the case immediately after installation. If you have not yet configured Information Analyzer you can ignore this error.
What to do next

If you are uninstalling the source InfoSphere Information Server system before installing the target, then you should use IBM Support Assistant Lite to run the following program: All Diagnostic Tools > Metadata Repository (XMeta) Diagnostic Test. To get IBM Support Assistant Lite test summary information and additional metadata repository diagnostics for 8.1 or 8.0.1 computers, you must install the following patches to the InfoSphere Information Server installation:

- For InfoSphere Information Server 8.1, install 8.1 fix pack 2 or the patch `patch_JR38173_xmeta_all_8100`.
- For InfoSphere Information Server 8.0.1, install the patch `patch_JR38197_xmeta_all_8010`.

This diagnostic check confirms that there are no issues with the repository. This check can take several hours to run if you have a large repository. If you are retaining the source system, then you have the option of repairing the repository and exporting it again if there is a repository issue during the import, so it is less critical to do the Metadata Repository (XMeta) Diagnostic test in advance. Verify that no other users are logged into InfoSphere Information Server before you start the Metadata Repository (XMeta) Diagnostic test.

Generating the Migration Reference Report

Use IBM Support Assistant Lite for InfoSphere Information Server to generate the Migration Reference Report, which provides encrypted passwords and configuration information that you need during the migration process.

About this task

To obtain encrypted passwords in the Migration Reference Report, you must install the migration tool before you generate the report.

Procedure

1. Log in as root or sudo root.
2. Log in as an Administrator.
3. Start the IBM Support Assistant Lite for InfoSphere Information Server tool.
4. Select Additional Collectors > Migration reference report to generate the reports.
5. Enter a file name for the .zip file that will contain the reports. Include the .zip extension in the file name.
6. Select Collect Data, and respond to any additional prompts that ask for more information. The .zip file contains two files.
The file MigrationReference.html contains migration-related information and lists the products, components, modules that are installed, and encrypted passwords.

The file SYSTEM-SUMMARY.html contains system and hardware information and environment, registry, and network information.

Verifying character encoding for Oracle databases before importing them onto the target computer

You must verify that the NLS character encoding for Oracle databases on the source computer match the character encoding for Oracle databases on the target computer before importing data from the source computer to the target computer.

Before you begin

Before you import to the target computer, ensure that the source database encoding matches the target database encoding. If the character encoding on your database on the source computer does not match the encoding on your database on the target computer, then you must follow the steps below to update the encoding.

About this task

The InfoSphere Information Server installation programs for versions 8.1 and earlier did not enforce NLS character encoding restrictions that the installation programs for versions 8.5 and later enforce. The InfoSphere Information Server installation programs for versions 8.5 and later enforce specific character encoding for Oracle databases.

Procedure

Use one of the following methods to update the NLS encoding:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
</table>
| Sync the NLS character encoding on the database on the source computer | Upgrade the encoding of the character set on the source computer before you start the export, so that it matches the database encoding on the target computer. The database needs to have the following character encoding  
  • AL32UTF8 for NLS_CHARACTERSET  
  • AL16UTF16 for NLS_NCHAR_CHARACTERSET  
  Refer to Oracle documentation for specific information about changing the character encoding for the database version that you are using. |
| Sync the NLS character encoding on the database on the target computer | 1. Install InfoSphere Information Server, Version 8.5 or later, which will enforce the character encodings for the target computer.  
  2. After the installation, change the database's character encoding on the target computer to match the database's character encoding on the source. |
Moving the archive files
Move the archive files and any other required files from the source computer to the target computer.

About this task
The migration tool ismigration.sh -resp </opt/ResponseFilePath/ResponseFileName.xml> or ismigration.bat -resp <C:\ResponseFilePath\ResponseFileName.xml> command exports the source installation and generates an archive file named hostname_SERVICES_timestamp iar for a services tier export and an archive file named hostname_ENGINE_timestamp iar for an engine tier export. The migration tool also creates an archive file named hostname_USERFILES_timestamp iar if you chose to migrate any additional files. If the tiers are co-located on the same computer, both archive files are generated on the same source computer.

Procedure
1. On the source computer, locate the archive files, which are located in the directory that you specified in the Archive Directory field on the Archive and Work Directories field in the export wizard. The default directory is
   • /opt/IBM/InformationServer/MBR/Archive
   • C:\IBM\InformationServer\MBR\Archive
2. Copy or move the archive files to the target computer. Put the migration archive files in a directory that does not already contain archive files.

Creating a response file by using the IBM InfoSphere Information Server import wizard
To import IBM InfoSphere Information Server components, you use the InfoSphere Information Server migration import wizard to automatically create a response file. The response file is then used by the migration tool for the import operation. Some components must be imported manually.

Before you begin
You must meet these requirements before running the import wizard to create the response file:
• You must move the archive files from the source computer to the target computer.
• The migration tool imports data and metadata, not the product installation. If you are importing InfoSphere Information Server to different computers, the components must first be installed at the exact version, with the same product selection as the source system that you exported. For example, if you have installed IBM InfoSphere DataStage, IBM InfoSphere Information Analyzer, and not IBM InfoSphere FastTrack, then the target computer that you are importing to must also contain InfoSphere DataStage, InfoSphere Information Analyzer, and not InfoSphere FastTrack. Also, the installation topology and operating systems must be the same as the original. For example, you cannot export two engines on Microsoft Windows computers and import them to a single Linux computer.
• The services, engine, and metadata repository tiers must have all been exported for a successful import. If all tier archives from an export session are not available during an import session, the import operation would result in a system in an inconsistent state.
• It is possible to import to computers with different host names. The import wizard guides you the configuration process.

**Procedure**

Complete the following steps on each computer where the services tier, engine tier, or metadata repository tier are installed to perform the import operation.

1. Navigate to the directory where you installed InfoSphere Information Server and open the migration folder:
   - `install_dir/Migration/bin`
   - `install_dir\Migration\bin`
2. At the command line, log in as an administrator.
3. Enter this command:
   - `install_dir/Migration/bin/ismigration.sh`
   - `install_dir\Migration\bin\ismigration.bat`
   Several messages are displayed. The program then displays a message about how to access the InfoSphere Information Server migration wizard. For example:
     ```
     ===> Use a browser to connect to the web server at
     https://localhost:8443/ibm/iis/mbr/console
     ```
4. Open a web browser on the target computer, and navigate to the address that is listed in the messages issued in the command line interface. A message might appear in the browser that reads “The publisher cannot be verified...” You can safely ignore the message and continue. This message does not indicate a security risk when it appears during InfoSphere Information Server import operation.
5. Click **Get Started** under the **Import** section.
6. Continue to follow the prompts in the InfoSphere Information Server import wizard.
7. Click **Print** to print out the next steps that you need to do to complete the import operation.
8. Click **Finish** after the wizard has finished creating the response file that it will use to complete the import.

**What to do next**

• Use the import wizard on each of the remote systems that you want to import, and then complete the import operation by running the `ismigration.sh` or `ismigration.bat` file on the command line.

• Complete the import process by using the migration tool to start the import operation. For more information, see "Validating and importing the migrated environment".

**Validating and importing the migrated environment**

The InfoSphere Information Server migration tool validates that the target computer meets the requirements for the import, and then imports the source.

**Before you begin**

Before you import InfoSphere Information Server components on the target computer, you must use the InfoSphere Information Server import wizard to create a response file.
About this task

The InfoSphere Information Server migration tool verifies that the values in the response file are appropriate.

After you import the migrated environment, the user name and password for the IBM InfoSphere Information Server suite administrator on the target installation are replaced with the user name and password from the source installation, unless you configured the system to use a different user registry before the import.

Procedure

1. Log on to the target server:
   - Log on as the root user.
   - Log on as a local Windows administrator, preferably the same user name that performed the original installation. On Microsoft Windows 2008, if User Account Control (UAC) is enabled, open an administrator command prompt by right-clicking the Command Prompt icon and selecting Run as administrator.

2. Enter this command to verify and import the installation:
   - `ismigration.sh -resp /opt/ResponseFilePath/ReponseFileName.xml`
   - `ismigration.bat -resp C:\ResponseFilePath\ReponseFileName.xml`

   `ResponseFilePath` is the path to the response file and `ResponseFileName` is the name of the response file. For example:
   - `ismigration.bat -resp C:\IBM\InformationServer\Migration\migration_import.xml`
   - `ismigration.sh -resp /opt/IBM/InformationServer/Migration\migration_import.xml`

   The default response file directory is:
   - `/opt/IBM/InformationServer/Migration`
   - `C:\IBM\InformationServer\Migration`

   The default name for the response file name is `migration_import.xml`

   The `-import` command generates the `migration.todo.txt` file, which describes required tasks that you must perform to complete the migration. The `migration.todo.txt` file is in this directory:
   - `install_dir\Migration`
   - `install_dir\Migration\migration_import.xml`

3. Disconnect all user sessions and place InfoSphere Information Server into maintenance mode. For more information, see Maintenance mode.

4. If the validation is unsuccessful, do one of the following:
   - Resolve problems that are reported to the console window and run the `-resp` command with the `-restart` parameter until the validation is successful.
   - If the migration validation fails, review the migration log file for severe error messages. The migration log file is in this directory:
     - `install_dir\Migration\logs`
     - `install_dir\Migration\logs`

   The validation might be unsuccessful if:
   - You are using a response file that was created for a different migration environment.
   - You have entered invalid credentials.
- You have entered invalid directory names. 
Modify the migration environment as necessary, and then use the `-restart` command to restart the validation process.

5. If you chose to manually import the metadata repository database, the import process will stop with the instruction to run the import script. When the import process pauses, do the following:
   - If you manually exported the metadata repository database, the migration tool prompts you to run the import script in the folder you specified in the `Directory for generated scripts` field. Copy the complete directory structure under the folder you specified in the `Directory for generated scripts` field to the computer where the database is located. The default folder is:
     - `/opt/IBM/InformationServer/Migration/DatabaseSupport/Metadata`
     - `C:\IBM\InformationServer\Migration\DatabaseSupport\Metadata`

   After you run the script to manually import the metadata repository database, issue the following command:
   - `ismigration.sh -restart`
   - `ismigration.bat -restart`

6. Review the to-do file that was generated during the import and perform all actions described in the file. The `migration.todo.txt` file is located in the following folder if you used the default directory:
   - `/opt/IBM/InformationServer/Migration`
   - `C:\IBM\InformationServer\Migration`

7. Manually import any components that you chose to manually import during the interview you completed while using the wizard. You manually import the components by using scripts that were generated by the migration tool. The scripts are stored in the folder that you specified in the `Directory for generated scripts` field in the wizard. The default directory is:
   - `/opt/IBM/InformationServer/Migration/DatabaseSupport`
   - `C:\IBM\InformationServer\Migration\DatabaseSupport`

   Scripts to manually import each database are stored in folders such as `C:\IBM\InformationServer\Migration\DatabaseSupport\IA` or `/opt/IBM/InformationServer/Migration/DatabaseSupport/IA` for the InfoSphere Information Analyzer analysis database. You can manually import the following components:
   - InfoSphere Information Analyzer analysis database
   - IBM InfoSphere DataStage and QualityStage Operations Console database
   - IBM InfoSphere QualityStage Standardization Rules Designer database
   - IBM InfoSphere Data Quality Console database

8. When all tiers are imported, you can:
   - Start the InfoSphere Information Server services and WebSphere Application Server services. For more information, see `Administering IBM InfoSphere Information Server and IBM WebSphere Application Server services`.
   - Disable maintenance mode if it is enabled. For more information, see `Maintenance mode`.

**Running a script to import the metadata repository database:**

If you chose to manually migrate the metadata repository database, the import command pauses so that you can run a script that migrates the database.
Before you begin

Read the readme.txt file before you run the script to import the metadata repository database. The script is stored in the folder that you specified in the Directory for generated scripts field in the import wizard. The default directory is:

- /opt/IBM/InformationServer/Migration/DatabaseSupport
- C:\IBM\InformationServer\Migration\DatabaseSupport

About this task

You run the script to complete the following tasks on the target computer:

- Saving model data
- Restoring the source metadata repository database
- Running upgrade SQL
- Restoring model data and updating statistics

You must have the following roles to run the script that imports the metadata repository database:

**DB2 databases**
You must have SYSADM, SYSCTRL, or SYSMAINT privileges and the ability to run back and restore operations on the metadata repository database.

**Oracle databases**
You must have system administrator authority (SYSDBA) privileges.

**Microsoft SQL Server databases**
You must have Microsoft SQL Server system administrator privileges.

Procedure

1. Run the masterGendb.bat or masterGendb.sh script on the computer that hosts the metadata repository. The default directory is:
   - /opt/IBM/InformationServer/Migration/DatabaseSupport/Metadata/bin
   - C:\IBM\InformationServer\Migration\DatabaseSupport\Metadata\bin
   If the metadata repository is not on the services tier computer, you must first move the readme.txt file and the script to the computer that hosts the metadata repository. These files are in the directory that you specified in the Directory for generated scripts field in the import wizard. You need to move the entire directory to the computer where the database is located. The default directory is:
   - /opt/IBM/InformationServer/Migration/DatabaseSupport/Metadata
   - C:\IBM\InformationServer\Migration\DatabaseSupport\Metadata
   2. Enter this command to restart the import process:
      - `install_dir/Migration/bin/ismigration.sh -restart`
      - `install_dir\migration\bin\ismigration.bat -restart`

What to do next

After the script runs, you receive a message that says the script completed successfully. The logs that are generated during the import process are stored in the following location:

- `install_dir/IBM/InformationServer/Migration/DatabaseSupport/Metadata/logs`
- `install_dir\IBM\InformationServer\Migration\DatabaseSupport\Metadata\logs`
Running a script to import the InfoSphere Information Analyzer analysis database:

If you chose to manually migrate the InfoSphere Information Analyzer analysis database, you run scripts that migrate the database.

About this task

You must have the following roles to run the script that imports the analysis database:

**DB2 databases**
- You must have SYSADM, SYSCTRL, or SYSMAINT privileges.

**Oracle databases**
- You must have system administrator authority (SYSDBA) privileges.

**Microsoft SQL Server databases**
- You must have Microsoft SQL Server system administrator privileges.

Procedure

1. Move the `database_restore.bat` or `database_restore.sh` script from the services tier computer to the computer where the InfoSphere Information Analyzer analysis database is in the source installation. The default directory is:
   - `/opt/IBM/InformationServer/Migration/DatabaseSupport/ia/bin`
   - `C:\IBM\InformationServer\Migration\DatabaseSupport\ia\bin`

2. To run the script, follow the instructions in the `readme.txt` file. The file is in the directory that you specified in the **Directory for generated scripts** field in the import wizard.

3. Complete these tasks:
   a. Move the script to the computer where the InfoSphere Information Analyzer analysis database is in the target installation. You need to move the entire directory to the computer where the database is located.
   b. Edit the script for your migration.
   c. Run the script.
   d. Follow the steps in the `README.txt` file to load the data.

What to do next

After the script runs, you receive a message that says the script completed successfully. The logs that are generated during the import process are stored in the following location:

- `install_dir/IBM/InformationServer/Migration/DatabaseSupport/IA/logs`
- `install_dir\IBM\InformationServer\Migration\DatabaseSupport\IA\logs`

**Completing post-migration tasks**
Complete these tasks after you finish the import process.

Procedure

1. “Completing post-import tasks from the migration.todo.txt file” on page 48
2. “Updating InfoSphere DataStage projects” on page 48
3. “Updating InfoSphere QualityStage modules” on page 49
4. “Updating the Match Designer database” on page 49
Completing post-import tasks from the migration.todo.txt file:

The migration.todo.txt file lists the required tasks that you must perform after you import the source.

Procedure
1. Open the migration.todo.txt file. The file is located in this directory:
   - `install_dir/Migration`
   - `install_dir\Migration`
2. Complete the tasks that are listed in the file.

Updating InfoSphere DataStage projects:

If you deselected Update all projects on the InfoSphere DataStage Project Updates screen in the import wizard, the migration process does not automatically update the projects. You must update them by using one of the methods described below.

About this task

When you update projects, you must have permission to read and load the templates for the project. Therefore, you must be an InfoSphere DataStage administrator user. By default, this user is named dsadm. If you use credential mapping, the user must be mapped to the InfoSphere DataStage administrator user that was specified when you were completing the import wizard.

Procedure

Use one of the following methods to update each job in the target installation:
- From the IBM InfoSphere DataStage and QualityStage Administrator client, select a project and then click Migrate.
- From the command line of the computer that hosts the engine tier, complete these steps:
  1. Go to the `install_dir/Server/DSEngine` directory.
  2. Enter `./dsenv` to source the dsenv file.
  3. Enter `./bin/uvsh` to go to the DSEngine command shell.
  4. Enter `LOGTO ProjectName` to go to a project.
  5. Enter one of the following commands to update the projects:
     - `UPDATEPROJECT ProjectName`
     - `UPDATEPROJECT ALL`
- From the command line of the computer that hosts the engine tier, complete these steps:
  1. Go to the `install_dir\Server\DSEngine` directory.
  2. Enter `\bin\uvsh` to go to the DSEngine command shell.
  3. Enter `LOGTO ProjectName` to go to a project.
  4. Enter one of the following commands to update the projects:
     - `UPDATEPROJECT ProjectName`
     - `UPDATEPROJECT ALL`

Configuring IBM InfoSphere DataStage log settings:
If you are migrating from IBM InfoSphere DataStage versions 8.1 and earlier, after you finish migrating IBM InfoSphere DataStage, you might want to configure the log settings.

The architecture for IBM InfoSphere DataStage logging changed in versions 8.5 and later. The default configuration is run time logging only and run time logging is always enabled. If you want to also enable operational repository logging, see Enabling operational repository logging.

Updating InfoSphere QualityStage modules:

The migration tool does not migrate the InfoSphere QualityStage modules or the reference files for the modules. You must manually update the modules and files.

Procedure
1. Download and install compatible versions of the InfoSphere QualityStage modules on the target installation.

   Note: For the latest migration information related to InfoSphere QualityStage modules that are supported by the migration tool, see http://www.ibm.com/support/docview.wss?uid=swg21610853.
2. Download and install the associated reference files on the target installation.
3. Edit InfoSphere QualityStage jobs to point to the location of the reference files.
4. Edit the InfoSphere QualityStage jobs, as necessary, to take advantage of updates to the modules.

Updating the Match Designer database:

If the source installation uses the Match Designer database, you must restore or recreate the database on the target installation.

Procedure
1. On the target installation, do one of the following:
   - Restore the Match Designer database from the backup that you created.
   - Recreate the Match Designer database, and then update the environment for each match specification. For more information, see this topic: Creating the InfoSphere QualityStage Match Designer database.
2. Recreate the ODBC data source name (DSN) and DSN connections. For more information, see this topic: Configuring InfoSphere QualityStage Match Designer.

Backing up the installation:

Before you begin the export or after you complete the import process, it is a best practice to back up the installation.

About this task

Backing up the installation before you begin the export process is optional. It is mandatory only if you are uninstalling InfoSphere Information Server and replacing it with a new installation on the same machine. In the case of side-by-side migration, backing up the installation is highly recommended. It is also recommended when the target system is on separate hardware.
Backing up the target system after you complete the import process is optional, but highly recommended.

**Procedure**

To back up the installation, use one of these procedures based on the version of the source installation:

<table>
<thead>
<tr>
<th>Version</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version 8.0.1</td>
<td>Use the 8.1 instructions below to back up version 8.0.1.</td>
</tr>
</tbody>
</table>

**Migrating InfoSphere Information Server installations that use DB2 Version 9.1 databases to installations that use DB2 Version 10**

The migration tool cannot automatically migrate InfoSphere Information Server databases that use IBM DB2 Database for Linux, UNIX, and Windows, Version 9.1 on the source computer to InfoSphere Information Server installations that use DB2 Version 10. To complete the migration process, you must perform additional steps.

You might use DB2 Version 9.1 databases as metadata repository databases or InfoSphere Information Analyzer analysis databases.

**Migrating to an InfoSphere Information Server installation that uses a DB2 Version 9.1 database to an installation that uses a DB2 Version 9.7 database**

If you are migrating from an installation of InfoSphere Information Server that uses an IBM DB2 Database for Linux, UNIX, and Windows, Version 9.1 to an installation of InfoSphere Information Server that is uses DB2 Version 10, then you must complete additional steps to complete the migration.

**Procedure**

1. Export InfoSphere Information Server by using the migration tool. For information about exporting by using the migration tool, see Exporting the source installation.
2. Install InfoSphere Information Server on the target computer. When you specify installation options for the metadata repository tier, configure an existing DB2 instance and specify the location of the Version 9.7 DB2 database. For more information about installing InfoSphere Information Server, see Installing IBM InfoSphere Information Server by using the wizard (graphical mode). For more information about specifying installation options for the metadata repository tier, see Specifying installation options (metadata repository tier).
3. Import InfoSphere Information Server by using the migration tool. For information about importing by using the migration tool, see Importing the source installation into the target installation.


Note: You can continue to use DB2 Version 9.7 on the target computer. It is not mandatory to upgrade to DB2 Version 10.

Converting a back up of your DB2 Version 9.1 database to Version 9.5 or Version 9.7

If you are migrating from an installation of InfoSphere Information Server that uses an IBM DB2 Database for Linux, UNIX, and Windows, Version 9.1 to an installation of InfoSphere Information Server that uses DB2 Version 10, then you must complete additional steps to complete the migration.

Procedure


2. Install DB2 Version 9.5 or Version 9.7 on the source computer. You can install it on the same computer or a different computer. For more information about installing DB2, see http://publib.boulder.ibm.com/infocenter/db2luw/v9r5/nav/2_0

3. Restore the DB2 Version 9.1 database that you backed up to the new DB2 Version 9.5 or Version 9.7 database that you installed. For more information about restoring a database, see http://publib.boulder.ibm.com/infocenter/db2luw/v9/topic/com.ibm.db2.udb.admin.doc/doc/c0006237.htm

4. Export InfoSphere Information Server.
   a. Use the export wizard to create a response file. For information about exporting InfoSphere Information Server by using the export wizard, see Creating a response file by using the IBM(r) InfoSphere(tm) Information Server export wizard. You must select manual migration options when you are using the export wizard. When you select the manual options, the migration tool generates scripts that will manually back up and restore your DB2 database.

   b. Use the migration tool to export the source installation by using the response file that was generated in step a. For more information, see Validating and exporting the migrated environment.

At this point in the procedure, InfoSphere Information Server is still using the DB2 Version 9.1 instance, even though DB2 Version 9.5 or Version 9.7 is installed on the source computer.

5. Back up the restored Version 9.5 or Version 9.7 database by using the scripts that were generated in step 4. The scripts that are generated by the migration tool are stored in the directory that you specify in the export wizard. The default directory for the metadata repository is:
   • /opt/IBM/InformationServer/Migration/DatabaseSupport/xmeta
   • C:\IBM\InformationServer\Migration\DatabaseSupport\xmeta

The default directory for the InfoSphere Information Analyzer analysis database is:
   • /opt/IBM/InformationServer/Migration/DatabaseSupport/ia
6. Import InfoSphere Information Server.
   a. Use the import wizard to create a response file. For information about importing InfoSphere Information Server by using the import wizard, see Creating a response file by using the IBM(r) InfoSphere(tm) Information Server import wizard. The migration tool generates scripts that will manually back up and restore your DB2 database.
   b. Use the migration tool to import the source installation by using the response file that was generated in step a. For more information, see Validating and importing the migrated environment.

Results

After the DB2 Version 9.1 databases are converted to Version 9.5 or 9.7, the tool can migrate the databases to a target computer that has DB2 Version 10 databases installed.

Response file settings

The InfoSphere Information Server migration wizards automatically create response files, which contain the properties that are required to migrate InfoSphere Information Server. You can manually update the response files that were created by the wizards to change user name and password values. You must use the wizards to create the response file, and you must not modify any response file settings, other than user names and passwords. Any other modifications might result in a failed migration.

The response file that is automatically created by the export and imports wizards is stored in the following default directory:

- `install_dir/Migration`
- `install_dir\Migration`

The default response file name for imports is `migration_import.xml`. The default response file name for exports is `migration_export.xml`. For example, `C:\IBM\InformationServer\Migration\migration_import.xml`.

Modify the user names and passwords, as necessary:
### Table 11. Response file settings

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM InfoSphere Information Analyzer user name and password</td>
<td></td>
</tr>
<tr>
<td><strong>User name</strong></td>
<td></td>
</tr>
<tr>
<td>DB2</td>
<td>Specify the user name of the DB2 database user who has SYSADM, SYSCTRL, or SYSMAINT privileges.</td>
</tr>
<tr>
<td>Oracle</td>
<td>Specify the Oracle system administrator ID.</td>
</tr>
<tr>
<td>Microsoft SQL Server</td>
<td>Specify the Microsoft SQL Server system administrator ID.</td>
</tr>
<tr>
<td><strong>Password</strong></td>
<td></td>
</tr>
<tr>
<td>DB2</td>
<td>Enter the password or the encrypted password. To obtain encrypted passwords, use the IBM Support Assistant Lite for InfoSphere Information Server tool to generate the Migration Properties report.</td>
</tr>
<tr>
<td>Oracle</td>
<td>Enter the password or the encrypted password. To obtain encrypted passwords, use the IBM Support Assistant Lite for InfoSphere Information Server tool to generate the Migration Properties report.</td>
</tr>
<tr>
<td>Microsoft SQL Server</td>
<td>Specify the Microsoft SQL Server system administrator password or the encrypted password. To obtain encrypted passwords, use the IBM Support Assistant Lite for InfoSphere Information Server tool to generate the Migration Properties report.</td>
</tr>
<tr>
<td><strong>Response file settings</strong></td>
<td></td>
</tr>
<tr>
<td>&lt;resp&gt;</td>
<td></td>
</tr>
<tr>
<td>&lt;IA&gt;</td>
<td></td>
</tr>
<tr>
<td>&lt;adminUsername&gt;</td>
<td></td>
</tr>
<tr>
<td>@ADIB_user_name&quot;</td>
<td></td>
</tr>
<tr>
<td>adminPassword=&quot;</td>
<td></td>
</tr>
<tr>
<td>@ADIB_password&quot;&gt;</td>
<td></td>
</tr>
<tr>
<td>&lt;/IA&gt;</td>
<td></td>
</tr>
<tr>
<td>&lt;/resp&gt;</td>
<td></td>
</tr>
</tbody>
</table>
Table 11. Response file settings (continued)

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
</table>
| IBM InfoSphere DataStage and QualityStage Operations Console database owner user name and password | User name  
DB2 Specify the user name of the DB2 database user who has SYSADM, SYSCTRL, or SYMAINT privileges.  
Oracle Specify the Oracle system administrator ID.  
Microsoft SQL Server Specify the Microsoft SQL Server system administrator ID. |
| Password  
DB2 Enter the password or the encrypted password. To obtain encrypted passwords, use the IBM Support Assistant Lite for InfoSphere Information Server tool to generate the Migration Properties report.  
Oracle Enter the password or the encrypted password. To obtain encrypted passwords, use the IBM Support Assistant Lite for InfoSphere Information Server tool to generate the Migration Properties report.  
Microsoft SQL Server Specify the Microsoft SQL Server system administrator password or the encrypted password. To obtain the encrypted password, use the IBM Support Assistant Lite for InfoSphere Information Server tool to generate the Migration Properties report. |
| Response file settings  
<resp>  
<ODB>  
<adminUsername="operations_database_user_name">  
<adminPassword="operations_database_password">  
</牡>  
</resp> |
<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
</table>
| IBM InfoSphere QualityStage Standardization Rules Designer database owner user name and password | **User name**<br>**DB2** Specify the user name of the DB2 database user who has SYSADM, SYSCTRL, or SYSMAINT privileges.<br>**Oracle** Specify the Oracle system administrator ID.<br>**Microsoft SQL Server** Specify the Microsoft SQL Server system administrator ID. **Password**<br>**DB2** Enter the password or the encrypted password. To obtain encrypted passwords, use the IBM Support Assistant Lite for InfoSphere Information Server tool to generate the Migration Properties report.<br>**Oracle** Enter the password or the encrypted password. To obtain encrypted passwords, use the IBM Support Assistant Lite for InfoSphere Information Server tool to generate the Migration Properties report.<br>**Microsoft SQL Server** Specify the Microsoft SQL Server system administrator password or the encrypted password. To obtain encrypted passwords, use the IBM Support Assistant Lite for InfoSphere Information Server tool to generate the Migration Properties report. **Response file settings**<br>**<resp>**<br>**<SRD>**<br>**<adminUsername>**"standardization_rules_designer_user_name"<br>**adminPassword>**"standardization_rules_designer_password"</SRD></resp>
### Table 11. Response file settings (continued)

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
</table>
| Metadata repository database owner name and password | **User name**

- **DB2**
  - User name of the DB2 database user who has SYSADM, SYSCtrl, or SYSSMAINT privileges and who can run back and restore operations on the metadata repository database. The db2instance user typically has SYSADM authority. On Microsoft Windows, the operating system user used to install DB2 (default db2admin) typically has SYSADM authority. The operating system user must have authority either directly or indirectly granted to them as a DB2 user or indirectly as part of the operating system administrator group.
  - If the source computer has versions 8.0.1, 8.1 or 8.5 installed, then the xmeta or db2admin users must have DBADM privileges. This is required to create and grant user privileges on the target computer.
  - **Note:** By default, the xmeta and xmetausr users are not assigned the privileges necessary to migrate the DB2 database.

- **Oracle**
  - User name of an Oracle user that has system administrator authority (SYSDBA) privileges. The user must be able to connect on the SQL prompt as a system database administrator (sqlplus user/password@SID as sysdba). The user must also be able to connect from the SQL*Plus command line interface as SYSDBA. This property is used to access the remote database and gather the information that is required to create the scripts that migrate the metadata repository.

- **Microsoft SQL Server**
  - Specify the Microsoft SQL Server system administrator ID.

<table>
<thead>
<tr>
<th>Password</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DB2</strong></td>
<td>Enter the password or the encrypted password. To obtain encrypted passwords, use the IBM Support Assistant Lite for InfoSphere Information Server tool to generate the Migration Properties report.</td>
</tr>
<tr>
<td><strong>Oracle</strong></td>
<td>Enter the password or the encrypted password. To obtain encrypted passwords, use the IBM Support Assistant Lite for InfoSphere Information Server tool to generate the Migration Properties report.</td>
</tr>
<tr>
<td><strong>Microsoft SQL Server</strong></td>
<td>Specify the Microsoft SQL Server system administrator password or the encrypted password. To obtain encrypted passwords, use the IBM Support Assistant Lite for InfoSphere Information Server tool to generate the Migration Properties report.</td>
</tr>
</tbody>
</table>

**Response file settings**

```xml
<resp>
  <XMeta>
    <adminUsername="metadata_repository_user_name" adminPassword="metadata_repository_password"> 
  </XMeta>
</resp>
```
### Table 11. Response file settings (continued)

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>InfoSphere Information Server engine tier user name and password</strong></td>
<td><strong>User name</strong>&lt;br&gt;If you use the installation defaults, dsadm is the administrator user name. If you did not use the installation default, enter the name that you specified during installation. If you are using a Windows machine, and are not using the dsadm user name, then you can enter the user name that you specified during installation.&lt;br&gt;&lt;br&gt;<strong>Password</strong>&lt;br&gt;Enter the password or the encrypted password. To obtain encrypted passwords, use the IBM Support Assistant Lite for InfoSphere Information Server tool to generate the Migration Properties report.</td>
</tr>
</tbody>
</table>
| **Response file settings**<br>  
<resp>  
<DataStage>  
<adminUsername>"IS_engine_tier_user_name"  
adminPassword="IS_engine_tier_password">  
</DataStage>  
</resp> |
| **InfoSphere Information Server suite administrator user name and password** | **User name**<br>If you used the installation defaults, the user name is isadmin. If you did not use the installation default, enter the name of the InfoSphere Information Server administrator as set on the source computer.<br><br>**Password**<br>Enter the password or the encrypted password for the InfoSphere Information Server administrator as set on the source computer. To obtain encrypted passwords, use the IBM Support Assistant Lite for InfoSphere Information Server tool to generate the Migration Properties report. |
| **Response file settings**<br>  
<resp>  
<IS>  
<Suite adminUsername="IS_admin_user_name"  
adminPassword="IS_admin_password">  
</Suite>  
</IS>  
</resp> |
| **WebSphere Application Server suite administrator** | **User name**<br>Enter the user name of the WebSphere Application Server administrator. The default value is wasadmin. <br><br>**Password**<br>Enter the password or the encrypted password. |
| **Response file settings**<br>  
<resp>  
<IS>  
<WebSphere adminUsername="WAS_user_name"  
adminPassword="WAS_password">  
</WebSphere>  
</IS>  
</resp> |
Performing a manual migration

Use these procedures to perform a manual migration. The manual migration process includes exporting and importing assets using the istool command line.

You can manually migrate these products:

- “Manually migrating InfoSphere DataStage”
- “Manually migrating InfoSphere Business Glossary” on page 75
- “Manually migrating InfoSphere FastTrack” on page 76
- “Manually migrating InfoSphere Information Analyzer” on page 77
- “Manually migrating InfoSphere Metadata Workbench” on page 78
- “Manually migrating InfoSphere Information Services Director” on page 81
- “Manually migrating reports” on page 82
- “Manually migrating credentials” on page 83

Note: Depending on the version of InfoSphere Information Server on the source computer that you are migrating from, you might not be able to migrate all of the common metadata assets associated with InfoSphere FastTrack, InfoSphere Information Analyzer, the IBM InfoSphere QualityStage Standardization Rules Designer database, the metadata repository database, InfoSphere Metadata Workbench, the IBM InfoSphere Data Quality Console database, or your credentials. You should use the InfoSphere Information Server migration tool for these products. If you use the manual method, carefully review the manual migration limitations based on your source version.

Manually migrating InfoSphere DataStage

Use one of these procedures to manually migrate InfoSphere DataStage. You need to export InfoSphere DataStage, and then import InfoSphere DataStage to complete the migration.

Procedure

To manually migrate from InfoSphere DataStage 7.5.3 or later to InfoSphere DataStage 9.1, see “Manually migrating from InfoSphere DataStage” on page 59. Use the links in the table below for details of the specific export tools available in each version.InfoSphere DataStage:

<table>
<thead>
<tr>
<th>Version</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version 8.0.1</td>
<td><img src="http://publib.boulder.ibm.com/infocenter/iisinfsv/v8r0/topic/com.ibm.swg.im.iis.productization.iisinfsv.migrate.doc/tasks/exportinglegacyprojects.html" alt="Link to Procedure" /></td>
</tr>
<tr>
<td></td>
<td><img src="http://publib.boulder.ibm.com/infocenter/iisinfsv/v8r0/topic/com.ibm.swg.im.iis.productization.iisinfsv.migrate.doc/tasks/importingdatastageprojects.html" alt="Link to Procedure" /></td>
</tr>
<tr>
<td>Versions 8.1, 8.1.1, 8.1.2</td>
<td><img src="http://publib.boulder.ibm.com/infocenter/iisinfsv/v8r1/topic/com.ibm.swg.im.iis.ds.design.doc/topics/g_ddesref_Exporting_Objects.html" alt="Link to Procedure" /></td>
</tr>
<tr>
<td></td>
<td><img src="http://publib.boulder.ibm.com/infocenter/iisinfsv/v8r1/topic/com.ibm.swg.im.iis.ds.design.doc/topics/c_ddesref_Importing_Objects.html" alt="Link to Procedure" /></td>
</tr>
<tr>
<td>Version</td>
<td>Procedure</td>
</tr>
<tr>
<td>---------</td>
<td>-----------</td>
</tr>
</tbody>
</table>

### Manually migrating from InfoSphere DataStage

Complete these tasks to migrate from IBM InfoSphere DataStage Version 7.5.3 or later.

#### About this task

Before you use this process to migrate jobs from Version 7.5.3 or later to Version 9.1, review the jobs that you plan to migrate to determine which items might require manual intervention. The following list describes the additional items that you might need to manually move to the target:

- Parameter sets, which are listed under the project directory
- DSNParams for each project and the DSNParams in the template for new projects
- User-modified IBM InfoSphere QualityStage overrides
- The FTP/Sendmail template in the project directory
- The `uvodbc.config` file in the project directory
- MessageHandlers, which are under the Server directory
- Job control language (JCL) templates (DS390)
- Parallel engine configuration `uvconfig` file which contains specific options for the environment
- User-defined entries in the `dsenv` file
- Data sources in the `odbc.ini` file
- Parallel engine maps and locales
- Parallel engine configuration files

The following list describes the additional tasks that you might need to perform:

- Recreate user names and credential mappings
- Run the Connector Migration tool to update connectors

Prerequisites for manually migrating InfoSphere DataStage jobs that use Oracle 8 projects:

If you are migrating from InfoSphere DataStage, Version 7.5 and earlier, and have jobs that are using ORAOCI8 plugins, then you must first convert the jobs to use the ORAOCI9 plugin.

About this task

The OCI8TO9.B utility allows you to migrate any Oracle OCI 8 (OCI8) stage in your jobs to an Oracle OCI (OCI9) stage. This utility can be run on the InfoSphere DataStage release 6.0 and later. Before you begin to migrate the jobs, create a backup of the project to be converted. Also verify that no other user is accessing the project at the time of the conversion.

Procedure

1. Use ftp in binary mode to move the utility to your InfoSphere DataStage server, with the name OCI8TO9.B, placing it into a temporary directory. The OCI8TO9.B conversion utility is located on the WebSphere DataStage versions 6.1 to 7.5.3 installation media in the following directory: Utilities/Unsupported/Oci82Oci9.
2. Copy the utility into the DSU_BP.O directory of each project that you want to convert. In addition, on Unix you need to run the following command: chmod 750 OCI8TO9.B.
3. Start the InfoSphere DataStage and QualityStage Administrator from any of the InfoSphere DataStage Client workstations.
   a. Select the Project tab, highlight the project you are converting, and click Command.
   b. At the command prompt, type the following command: RUN DSU_BP OCI8TO9.B.
4. Click Execute. You are prompted to continue or exit. Reply with either 'Y' or 'N' and click Respond. If continuing, the output will pause at end-of-page by default; you can either click Next after each pause or clear Pause....

Results

The utility creates a report of the jobs that were converted in the &COMO& directory called OCI8TO9.CONV.

What to do next

To migrate from versions of InfoSphere DataStage prior to version 6.0 on which the OCI8TO9.B utility is not available, you need to use an intermediate WebSphere DataStage version 6.0 or version 7.5 installation, which contains the tool. Perform the following steps:
1. Migrate the jobs with OCI8 stages to jobs with OCI9 stages on a WebSphere DataStage version 6.0 or version 7.5 installation that contains the tool.
2. Import those migrated jobs to InfoSphere Information Server, version 8.1 or later.

Exporting InfoSphere DataStage projects:
Complete these tasks to export InfoSphere DataStage projects.

Procedure
1. “Capturing job log information”
2. “Backing up the installation” on page 20
3. “Saving InfoSphere DataStage settings files” on page 63
4. “Saving job dependency files, hashed files, and environment information” on page 64
5. “Exporting the projects” on page 65

Capturing job log information:

If you plan to remove the source installation and replace it with the target installation, save the job log information, which includes environment settings and other information that you later use to validate the results on the target system.

Procedure
1. On the source system, run a small number of jobs to capture the job log information.

   Note: Run both server and parallel jobs, if you have both in your environment, because the environment variables might be different for the job types.
2. For each job, complete these steps:
   a. From the InfoSphere DataStage and QualityStage Director, open the job log view for one of the jobs.
   b. Choose Project > Print All entries > Full details > Print to file, and then enter a file name that clearly identifies the job.
3. Save the logs for future use.

Backing up the installation:

Before you begin the export or after you complete the import process, it is a best practice to back up the installation.

About this task

Backing up the installation before you begin the export process is optional. It is mandatory only if you are uninstalling InfoSphere Information Server and replacing it with a new installation on the same machine. In the case of side-by-side migration, backing up the installation is highly recommended. It is also recommended when the target system is on separate hardware.

Backing up the target system after you complete the import process is optional, but highly recommended.

Procedure

To back up the installation, use one of these procedures based on the version of the source installation:

<table>
<thead>
<tr>
<th>Version</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version 8.0.1</td>
<td>Use the 8.1 instructions below to back up version 8.0.1.</td>
</tr>
</tbody>
</table>
Backing up Version 7.5.3 and earlier on UNIX or Linux:

Before you begin the export process and after you complete the import process, back up your Version 7.5.3 (or earlier) installation.

Procedure

1. Complete these steps to stop InfoSphere DataStage services:
   a. Disconnect all user sessions and ensure that no jobs are running.
   b. Log on to the InfoSphere DataStage server as dsadm or an equivalent administrative user.
   c. Change to the `../Ascential/DataStage/DSEngine/` directory.
   d. Source the `dsenv` file:
      ```shell
      . ./dsenv
      ```
   e. Run the following commands to stop the services:
      ```shell
      ./bin/uv -admin -stop
      ```
   f. Back up the `../Ascential/DataStage` directory and all of its subdirectories. If any projects are located in other directories, back up those projects.
   g. Back up all directories that contain external files or libraries that the jobs use. External files are data sets, file sets, sequential files, hashed files, and other similar files. External libraries might be custom C++ functions that the parallel engine calls.

2. Complete these steps to start the InfoSphere DataStage services:
   a. Log on to the InfoSphere DataStage server as the dsadm user or as an equivalent administrative user.
   b. Change to the `../Ascential/DataStage/DSEngine/` directory.
   c. Source the `dsenv` file:
      ```shell
      . ./dsenv
      ```
   d. Run the following commands to start the services:
      ```shell
      ./bin/uv -admin -start
      ```

Backing up Version 7.5.3 and earlier on Microsoft Windows:

Before you begin the export or import process, back up your Version 7.5.3 (or earlier) installation.
Procedure

1. Complete these steps to stop InfoSphere DataStage services:
   a. Close all DataStage clients.
   b. Log on to the DataStage server. Choose Start > Settings > Control Panel > DataStage.
   c. Click Stop all services.
   d. Back up the ..\Ascential\DataStage directory and all of its subdirectories. If any projects are located in other directories, back up those projects.
   e. Back up all directories that contain external files or libraries that the jobs use. External files are data sets, file sets, sequential files, hashed files, and other similar files. External libraries might be custom C++ functions that the parallel engine calls.

2. Complete these steps to start the InfoSphere DataStage services:
   a. Log on to the DataStage server. Choose Start > Settings > Control Panel > DataStage.
   b. Select DSRPC Service and then click Start.
   c. If Startup is not listed as Automatic, click Startup..., then click Automatic. The service now restarts automatically whenever the server is rebooted.
   d. Repeat Steps b and c for the DataStage Engine Resource Service, and DataStage Telnet Service.

Saving InfoSphere DataStage settings files:

Save the settings files from the source installation. Then after you install the new version, integrate the saved settings into the settings files on the target installation.

About this task

In the following procedure, the environment variable $DSHOME identifies the engine directory of the IBM InfoSphere DataStage installation.

In Linux and UNIX, for Version 7.5.3 and earlier, the engine directory is /user_home/Ascential/DataStage/DSEngine, where user_home is the home directory of the InfoSphere DataStage administrator who originally installed InfoSphere DataStage. By default, this user is named dsadm. For Version 8.0.1 and later, the engine directory is /opt/IBM/InformationServer/Server/DSEngine. For Version 7.5.3 and earlier, each project is in its own directory in the /user_home/Ascential/DataStage/Projects directory. For Version 8.0.1 and later, each project is in its own directory in the /opt/IBM/InformationServer/Server/Projects directory.

In Microsoft Windows, the engine directory is C:\IBM\InformationServer\Server\DSEngine. For Version 7.5.3 and earlier, each project has its own directory located, by default, in the C:\Ascential\DataStage\Projects directory. For Version 8.0.1 and later, each project has its own directory located, by default, in the C:\IBM\InformationServer\Server\Projects directory.

Procedure

1. Complete these steps to save the required settings files:
   a. Copy the $DSHOME/dsenv file to a location that is outside of the InfoSphere DataStage file structure.
   b. To keep a record of the existing configuration and the configuration of the ODBC drivers, copy the following files to a location that is outside of the InfoSphere DataStage file structure:
2. Complete these steps to save the required settings files:
   a. Copy the DSParams file from each project directory to a safe location.
   b. Copy the DSParams file from the Template project. For example, save the C:\Ascential\DataStage\Template\DSParams file.
   c. Copy the $DSHOME/uvodbc.config file in the engine directory.
   d. Copy the uvodbc.config file that is located in each project directory.

**Saving job dependency files, hashed files, and environment information:**

If the jobs in the source installation depend on files such as flat files, schema files, library files, and hashed files that are located in the directory structure of InfoSphere DataStage, you must save the files and manually move them to the target installation.

**About this task**

The InfoSphere DataStage export procedure exports InfoSphere DataStage objects such as job designs, table definitions, and custom routines. If jobs rely on flat files, files that contain schemas that parallel jobs use, and libraries that are called by parallel job custom routines, you must manually move the files if they are located in the InfoSphere DataStage server directory structure or in the InfoSphere DataStage client directory structure or if you are installing InfoSphere DataStage on a different target computer.

If the parallel job custom routines call libraries, you cannot move the libraries if the target operating system or computer is different from the source operating system or computer. For these libraries, you must find alternative versions of the libraries or rebuild them from source code.

In addition to saving files, document the current operating system. Record the project and directory structure, security settings, database connection information, ODBC driver installation, and other key information about the environment. Also log into the IBM InfoSphere DataStage and QualityStage Administrator client and record the non-administrator user roles for each project.

If you need information about hashed files that come from a computer that uses a different byte order, or for information about moving hashed files that come from a non-globalized (non-NLS) installation when you are migrating to a globalized (NLS) installation, see [Restoring job dependency files and hashed files](#).

Review the jobs that you are planning to migrate to determine all of the items that must be manually copied to the target computer. The following list contains items that you might need to copy:

- Parameter sets, which are under the Project directory
- DSParams settings, which are per-project.
- User-modified IBM InfoSphere QualityStage overrides.
- FTP/Sendmail template in the Project directory.
- uvodbc.config file in the Project directory.
- Message handlers, which are under the Server directory.
- Java Control Language (JCL) templates.
• DSEngine configuration, which is in the uvconfig file.
• User-defined entries in the dsenv file. For more information about setting up the dsenv file, see Configuring the dsenv file.
• Data sources in the odbc.ini file.
• Parallel job configuration files.

In InfoSphere DataStage versions 8.5 and later, you can export DSParams environment variables by using the Administrator client.

Procedure
1. To move the files, use operating system commands. If you have jobs that can repopulate the data sets and file sets from external sources, use the jobs to repopulate the data sets and file sets rather than manually moving them.
2. To move hashed files, perform these steps:
   a. Locate the hashed files in the directory structure:
      • Each static hashed file is represented by two operating system files. For example, a static hashed file named price_lookup is contained in the two files named price_lookup and d_price_lookup.
      • Each dynamic hashed file is represented by a directory with the same name as the hashed file and a file named D_hashed_file_name. For example, a dynamic hashed file named code_lookup is represented by the directory named code_lookup and the file named D-code_lookup.
   b. Copy the files and directories that represent each hashed file to a safe location that is outside of the InfoSphere DataStage directory structure.

Exporting the projects:

Use the dscmdexport command to export all versions of InfoSphere DataStage projects. You can also use the InfoSphere DataStage Manager client for Version 7.5.3 or earlier or the InfoSphere DataStage Designer client for Version 8.0.1 or later to export InfoSphere DataStage projects. If you use the command line, you can create a script that exports all projects at one time.

About this task

Do not export compiled jobs. You will recompile all migrated jobs when the migration is complete. If any export file is larger than 2 GB, export the project into two or more smaller files.

Procedure
1. To use the command line to export projects, complete these steps:
   a. On the DataStage client computer, open a command line editor and go to the DataStage client directory. For Version 7.5.3 and earlier, the default path is C:\Ascential\Program Files\Ascential\DataStage\version. For Version 8.0.1 and later, the default path is C:\IBM\InformationServer.
   b. Enter the following command:
      
      dscmdexport /AF=authfile | /D=domainname /U=username /P=password /H=hostname project_name export_file_path [/V]

      The arguments are the following:
      • authfile is the name of the encrypted credentials file that contains the connection details.
• **domainname** is the name of the services tier computer.
• **hostname** is the name of the InfoSphere DataStage services tier computer.
• **username** is your user name to log on to InfoSphere DataStage.
• **password** is the password for the user name.
• **project_name** is the name of the project that you are exporting.
• **export_file_path** is the path name of the destination file. By convention, export files have the file extension `.dsx`.
• `/V` turns the verbose option on so that you can follow the progress of the export procedure.

**Example:** This example uses the command line to export the project named `monthlyaudit` that is located on the server named `R101` and writes the project to a file named `monthlyaudit.dsx`. The target file is located in a directory named `migrated_projects` on the client computer:

```
dscmexport /D=DOM1 /U=BillG /P=paddock /H=R101 monthlyaudit
C:\migrated_projects\monthlyaudit.dsx
```

2. To use the InfoSphere DataStage Manager client to export projects, complete these steps:
   a. Open the InfoSphere DataStage Manager client and attach to the project that you want to export.
   b. Confirm that **View > Host View** is selected.
   c. Select **Export > DataStage Components**.
   d. In the **Export** window, specify details about the project that you want to export:
      • In the **Export to file** field, type or browse for the path name of the file in which to store the project. By default, export files have the file extension `.dsx`.
      • On the **Components** tab, select **Whole Project**.
   e. Click **OK** The project is exported to the file that you specify.
   f. In the left pane of the InfoSphere DataStage Manager client, select the next project and repeat steps c through e.

3. To use the InfoSphere DataStage Designer client to export projects, complete these steps:
   a. Select the project in the tree on the left pane of the Designer client.
   b. Right-click the project and select **Export item** from the context menu. This brings up the **Repository Export** dialog. All items in the project are automatically selected in this dialog.
   c. Edit the **Export to file** field. Specify the absolute path of the export file name. This file is created by the export process. For example, `C:\Temp\project_export_file.dsx`.
   d. Select **Export**.
   e. Select **Close** when the export is complete.

To export other projects, close the InfoSphere DataStage Designer client and open the InfoSphere DataStage Designer client against another project to repeat the export process.

**Removing the InfoSphere DataStage server and clients:**

If you plan to replace the existing version with the new version, remove the InfoSphere DataStage server and clients before you install the new version.
About this task

In Version 8.0.1 and later, the InfoSphere DataStage server is called the engine tier.

Procedure

1. **Windows** To remove InfoSphere DataStage Version 7.5.3 and earlier, perform these steps:
   
a. Ensure that DataStage is not running and that no clients are connected to the server.

b. Open the Microsoft Windows Control Panel, and select **Add or Remove Programs**.

c. In the list of installed programs, select **DataStage server**.

d. Click **Change/Remove**.

2. **Linux** To remove InfoSphere DataStage 7.5.3 and earlier, perform these steps:

a. Mount the original installation CD, or copy the CD contents to the computer.

b. Log in as the root user.

c. Change the directory to the top-level directory of the CD or to the directory where you copied the CD contents.

d. Enter one of the following commands to start the uninstallation program, which guides you through the process for removing the InfoSphere DataStage server:

   **Table 13. Commands for removing the InfoSphere DataStage server**

<table>
<thead>
<tr>
<th>Operating system</th>
<th>Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP-UX</td>
<td>‘UNINSTLL.SH;1’</td>
</tr>
<tr>
<td>IBM AIX</td>
<td>uninstll.sh</td>
</tr>
<tr>
<td>Linux</td>
<td>‘uninstll.sh’</td>
</tr>
<tr>
<td>Solaris</td>
<td>uninstll.sh</td>
</tr>
</tbody>
</table>

3. To remove the InfoSphere DataStage clients, complete these steps:

a. Open the Microsoft Windows control panel, and select **Add or Remove Programs**.

b. In the list of installed programs, select **DataStage clients**.

c. Click **Change/Remove**.

4. To remove InfoSphere Information Server, Version 8.0.1 or later, see the following topics:

   **Version** | **Procedure** |
   ---------- |--------------|
   Version 8.5, 8.7, and 9.1 | [Removing InfoSphere Information Server software](http://publib.boulder.ibm.com/infocenter/iisinfsv/v8r0/topic/com.ibm.swg.im.iis.productization.iisinfsv.install.doc/containers/wsisinst_rem_is.html) |
Installing the new version of InfoSphere Information Server on the client computer:

You do not migrate the client; instead, you install the new version of the client programs on the client tier.

About this task

Note: If you are planning on migrating by using the migration tool, after you install Version 9.1, do not use it to do any work until the migration is complete. Do not create any artifacts such as projects, connections from clients, and so on. Do not perform any testing to verify that the installation is working.

Procedure


2. If your topology includes multiple versions of IBM InfoSphere Information Server, you can install the Version 9.1 client tier on a separate Microsoft Windows computer or install it on the same computer with the prior versions of the client. For InfoSphere DataStage, use the Multi-client Manager to switch between versions. If you choose to install the Version 9.1 client tier along with prior clients, use the Microsoft Windows Add or Remove Programs utility to remove the existing MKS Toolkit before you install the Version 9.1 client tier. After you install Version 9.1, both the prior versions and Version 9.1 will use the latest MKS Toolkit, which is installed along with the client tier.

Note: If you want to install the Version 9.1 client tier along with a Version 9.1 engine or services tier on the same Microsoft Windows computer, you cannot have any additional client installations on the computer. You can install only one Version 9.1 client on the computer. In addition, you must install the client tier and the engine tier in the same installation directory. Complete these steps to install the Version 9.1 client on the same Microsoft Windows computer where the client for the prior version is located.

   a. Log on to the Windows computer as an administrator.
   b. Turn off any firewall software that is installed on the computer.
   c. Optional: Turn off antivirus software.
   d. Go to the root directory on the InfoSphere Information Server Version 9.1 installation media or downloaded installation image.
   e. Double-click setup.exe and run the file as an administrator.
   f. When asked for an installation directory, select New Installation and specify a directory that does not contain an existing InfoSphere Information Server client.
   g. Select the product modules and components as required.

Importing InfoSphere DataStage projects:

Complete these tasks to import IBM InfoSphere DataStage projects into the new version of InfoSphere Information Server.
Procedure

1. "Manually importing project information"
2. "Merging the contents of the InfoSphere DataStage settings files"
3. "Restoring job dependency files and hashed files" on page 70
4. "Recompiling jobs" on page 71

Manually importing project information:

Use the dscmdimport command or the InfoSphere DataStage Designer client to import projects.

About this task

For information about using the dscmdimport command to import project information, see dscmdimport command.

Procedure

1. Move the .dsx files that you created to the computer where the IBM InfoSphere DataStage clients are installed.
2. Open the InfoSphere DataStage Administrator client, and complete these steps to create a new target project:
   - On the Projects page, click Add.
   - In the Add Project window, type the name of the project that you want to create and specify a path name for it. You can use the original name of the project.
   - Click OK to create the project.
3. Open the InfoSphere DataStage Designer client and attach to the target project.
4. Select Import > DataStage Components.
5. Specify the name of the .dsx file to import, and click OK.
6. Repeat steps 2 through 5 for each project that you need to import.

Merging the contents of the InfoSphere DataStage settings files:

For Version 8.1 and later, use the InfoSphere DataStage Administrator client or the dsadmin command line tools to merge the settings files that you saved during the export process. For Version 8.0.1 and earlier, use the Administrator client to perform these tasks.

About this task

The import process sets the required environment variable definitions in the project, if they are used as parameter variables in the job or parameter set. In general you only set project environment variable values, if required, and environment variables that are required by third-party components and that are not referenced as job parameters.

If your source computer has InfoSphere DataStage, Version 8.1 or later, use the InfoSphere DataStage Administrator client to export environment variables to *.env files. You can then import these files into InfoSphere DataStage, Version 9.1. The environment variables are exported per project. An .env file is created to hold environment variables for that project. When you complete the import process, you will import the corresponding files. Other settings files, such as DSParams, uvconfig, .odbc.init, and so on, must be exported manually.
Only add settings to or edit settings in the new versions of the settings files. Do not delete any settings and do not copy the saved versions of the files onto the new versions of the files.

For more information about using the dsadmin command line tools, see the following topic: **Commands for administering projects**

Restoring job dependency files and hashed files:

Restore job dependency and hashed files to the new installation.

**Procedure**

1. To restore each job dependency file, complete these tasks:
   a. Find the location for the file in the new IBM InfoSphere Information Server directory structure. For example, if the file was in the project directory in the previous installation, find the project directory to which you imported the project contents.
   b. Use operating system commands to copy the saved file to the required location. Verify that the file ownership and permissions will allow appropriate access by using your InfoSphere DataStage credentials.
   c. Ensure that the job that references the file can locate it. If the file is referred to directly, you must edit the path name in the job design. If the file is referred to by a job parameter, you might need to edit the default value of the parameter to reference the new location for the file.

2. To restore hashed files, complete these steps:
   a. Open the IBM InfoSphere DataStage and QualityStage Director client and attach to the migrated project that uses the hashed files.
   b. Run or validate the job that creates the hashed files.
   c. Close all InfoSphere DataStage clients and stop the InfoSphere DataStage services.
   d. Locate the newly created files in the directory structure and copy the hashed files on top of them. For a dynamic file, ensure that the .Type30 file accompanies the DATA.30 and OVER.30 files in the hashed file directory.
   e. Restart the InfoSphere DataStage services.

3. If the hashed files come from a computer that uses a different byte order, complete these steps. Note that file formats are compatible between certain operating systems. Files moved between Microsoft Windows, Suse, and Redhat should not require this step. The same is true for relocating files between IBM AIX, Solaris, HP-UX, and Z Linux.
   a. Log in as dsadm or an equivalent user.
   b. Change to the ../InformationServer/Server/DSEngine directory.
   c. Source the dsenv file to set up the required environment variables:
      ```bash
      .\dsenv
      ```
   d. Change to the project home directory.
   e. Run $DSHOME/bin/fnuxihash_file.
   f. Run ..\InformationServer\DSEngine\bin\fnuxihash_file.
4. If the hashed files come from a non-globalized (non-NLS) installation and you are migrating to a globalized (NLS) installation, complete these steps to run the `UNICODE.FILE`

   a. Log in as dsadm or an equivalent user.
   b. Change to the `../InformationServer/Server//DSEngine` directory.
   c. Source the `dsenv` file to set up the required environment variables:
      ```
      ./dsenv
      ```
   d. Run `bin/uvsh` (Linux or UNIX) or `bin\uvsh` (Microsoft Windows) to get the DSEngine shell prompt.
   e. The shell converts uppercase characters to lowercase characters, and vice-versa. To turn off this feature, enter the command `PTERM CASE NOINVERT`.
   f. Enter the command `LOGTO project_name` to change to the project.
   g. Enter the command `UNICODE.FILE hash_file`.
   h. Repeat steps f and g for each project.
   i. Enter `QUIT` to exit the DSEngine shell.

Recompiling jobs:

Before you can run jobs and routines, you must recompile them.

**Procedure**

1. From the DataStage Designer client, select **Tools > Multiple Job Compile** and specify the criteria for selecting items to compile. Choose one or more of the following:
   - Server
   - Parallel
   - Mainframe
   - Sequence
   - Custom server routines
   - Custom parallel stages

   You can also specify that you want to manually select the items to compile.

2. Click **Next**. If you chose **Show manual selection page**, the **Job Selection Override** window appears. Use the Add and Remove buttons to add all of the jobs that you want to recompile to the right pane.

3. Click **Next**. If you are compiling parallel or mainframe jobs, specify **Force compile** for parallel jobs or specify an upload profile for mainframe jobs.

4. Click **Next**. The name of each selected item and the compilation status displays.

5. Click **Start Compile** to start the compilation. The compilation output window displays the current status and details about each compiled job.

6. Click **Finish**. If you selected **Show compile report**, the report that is generated by the compilation displays.

**What to do next**

For information about additional ways to recompile jobs, see the following topics:

- [Compiling from the client command line](#)
• **Compiling Multiple Jobs**

*Configuring IBM InfoSphere DataStage log settings:*

If you are migrating from IBM InfoSphere DataStage versions 8.1 and earlier, after you finish migrating IBM InfoSphere DataStage, you might want to configure the log settings.

The architecture for IBM InfoSphere DataStage logging changed in versions 8.5 and later. The default configuration is run time logging only and run time logging is always enabled. If you want to also enable operational repository logging, see [Enabling operational repository logging](#).

**Manually migrating InfoSphere QualityStage**

Use one of these procedures to manually migrate InfoSphere QualityStage.

**About this task**

The IBM InfoSphere QualityStage migration utility and the QualityStage Legacy stage are no longer available. If you have jobs that use stages from InfoSphere QualityStage Version 7.5.3 or earlier, you must configure the jobs to use the stages that are available in the current version. To manually migrate standardization rule sets from InfoSphere QualityStage, use the Version 9.1 import and export commands that are listed below.

**Procedure**

Use one of these procedures to manually migrate InfoSphere QualityStage:

<table>
<thead>
<tr>
<th>Version</th>
<th>Procedure</th>
</tr>
</thead>
</table>

72 Guide to Migrating to IBM InfoSphere Information Server
### Updating jobs to use newer stages

Use this table to select the stage to substitute for InfoSphere QualityStage stages.

If you have jobs from IBM InfoSphere QualityStage 7.5.3 or earlier, you must configure the jobs to use the stages that are available in the current version.

The following table lists replacement stages for previous versions of InfoSphere QualityStage stages.

#### Table 15. Replacement stages for InfoSphere QualityStage stages

<table>
<thead>
<tr>
<th>Stage</th>
<th>Purpose</th>
<th>Replacement stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbreviate</td>
<td>Creates match keys from company names.</td>
<td>No direct replacement. Use the Standardize stage to reformat company names and pair with an appropriate match.</td>
</tr>
<tr>
<td>Build</td>
<td>Rebuilds a single record from multiple records that are created with a Parse stage.</td>
<td>No direct replacement. Build was often used with Parse to analyze multi-domain data fields. Use Standardize to accomplish the same function in one step.</td>
</tr>
<tr>
<td>Collapse</td>
<td>Generates a list of each unique value in single-domain data fields.</td>
<td>Sort stage</td>
</tr>
<tr>
<td>Collapse</td>
<td>Generates frequency counts of data values in a field or a group of fields.</td>
<td>Aggregate stage</td>
</tr>
<tr>
<td>Format Convert</td>
<td>Reformats files from delimited to fixed-length and vice versa.</td>
<td>Sequential File stage</td>
</tr>
<tr>
<td>Format Convert</td>
<td>Provides I/O to an ODBC database.</td>
<td>ODBC stage or database specific stage</td>
</tr>
<tr>
<td>Investigate</td>
<td>Analysis of data quality.</td>
<td>Investigate stage and the Reporting tab for the Web Console for InfoSphere Information Server.</td>
</tr>
<tr>
<td>Match</td>
<td>Identifying data duplicates in a single file by using fuzzy match logic.</td>
<td>One-source Match stage in conjunction with the Match Frequency stage.</td>
</tr>
<tr>
<td>Match</td>
<td>Pairing records from one file with those in another by using fuzzy match logic.</td>
<td>Two-source Match stage in conjunction with the Match Frequency stage.</td>
</tr>
<tr>
<td>Multinational Standardize</td>
<td>Standardize multinational address data.</td>
<td>MNS stage</td>
</tr>
</tbody>
</table>
### Table 15. Replacement stages for InfoSphere QualityStage stages (continued)

<table>
<thead>
<tr>
<th>Stage</th>
<th>Purpose</th>
<th>Replacement stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parse</td>
<td>Tokenizes a text field by resolving free-form text fields into fixed-format records that contain individual data elements.</td>
<td>No direct replacement. Parse was often used with Build to analyze multi-domain data fields. Use the Standardize stage to accomplish the same function in one step.</td>
</tr>
<tr>
<td>Program</td>
<td>Invokes a customer-written program.</td>
<td>Depends on the functionality of the customer-written program. Possibilities include adding a Parallel Build, Custom, or Wrapped stage type.</td>
</tr>
<tr>
<td>Select</td>
<td>Conditionally routes records that are based on values in selected fields.</td>
<td>Switch and Filter stages</td>
</tr>
<tr>
<td>Sort</td>
<td>Sorts a list.</td>
<td>Sort stage</td>
</tr>
<tr>
<td>Standardize</td>
<td>Breaks down multi-domain data columns into a set of standardized single-domain columns.</td>
<td>Standardize stage</td>
</tr>
<tr>
<td>Survive</td>
<td>Produces the best results record from a group of related records.</td>
<td>Survive stage</td>
</tr>
<tr>
<td>Transfer</td>
<td>Rearranges and reformats columns in a record.</td>
<td>No separate stage is required to do this</td>
</tr>
<tr>
<td>Transfer</td>
<td>Acts as a gatekeeper for files in non-standard formats (variable length records, non-standard code page, binary or packed data).</td>
<td>Sequential File or Complex Flat File stage</td>
</tr>
<tr>
<td>Transfer</td>
<td>Produces multiple output records from a single input record.</td>
<td>Splitting records can be achieved by Copy stage followed by Funnel stage</td>
</tr>
<tr>
<td>Transfer</td>
<td>Adds record keys that consists of sequence number plus an optional fixed “file identifier.”</td>
<td>Surrogate Key Generator stage</td>
</tr>
<tr>
<td>Unijoin</td>
<td>Join records from two files based on a key.</td>
<td>Join stage or Lookup stage</td>
</tr>
<tr>
<td>Unijoin</td>
<td>Pairing records from one file with those in another by using fuzzy match logic.</td>
<td>Two-source Match stage in conjunction with Match Frequency stage</td>
</tr>
<tr>
<td>Unijoin</td>
<td>Merges data from multiple records into one.</td>
<td>Join stage and Merge stage</td>
</tr>
<tr>
<td>Unijoin</td>
<td>Manipulate and transform data record.</td>
<td>Transformer stage</td>
</tr>
</tbody>
</table>

### Manually migrating IBM WebSphere RTI

Use the WebSphere RTI Export Wizard to migrate IBM WebSphere RTI to InfoSphere Information Services Director.
About this task

Use this task to migrate IBM WebSphere RTI Version 7.5, 7.5.1, or 7.5.2 to IBM InfoSphere Information Services Director Version 9.1.

Procedure

1. Use the WebSphere RTI Export Wizard on the source computer to create an RTIX file. This RTIX file contains descriptions of operations and services.
2. Move the RTIX file to the computer that has the newer version of InfoSphere Information Server on it.
3. Use the IBM InfoSphere Information Server console Import function to import the RTIX file. This imported file is the equivalent of the output of the console design function.
4. You must associate the imported service descriptions with an application object before you can deploy the services. The import function is done at the application level to create this association.

Results

The imported service description is the equivalent of a service that is designed in InfoSphere Information Server. You can deploy the service description the same way that you deploy any natively designed information service.

Manually migrating InfoSphere Business Glossary

Use these procedures to migrate content from InfoSphere Business Glossary.

About this task

When choosing an export method, review the metadata that each method supports. The migration tool provides the most complete migration of all InfoSphere Business Glossary assets.

Procedure

To manually migrate content from InfoSphere Business Glossary, use one of the following procedures:

<table>
<thead>
<tr>
<th>Version</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version 8.0.1</td>
<td><img src="http://publib.boulder.ibm.com/infocenter/iisinfsv/v8r0/topic/com.ibm.swg.im.iis.bg.doc/topics/t_iadmgde_ImportingExportingCatsTerms.html" alt="Link to Version 8.0.1 Procedure" /></td>
</tr>
</tbody>
</table>
Table 16. Procedures for manually migrating Business Glossary content (continued)

<table>
<thead>
<tr>
<th>Version</th>
<th>Procedure</th>
</tr>
</thead>
</table>

Manually migrating InfoSphere FastTrack

Use one of these procedures to manually migrate InfoSphere FastTrack.

About this task

When choosing an export method, review the metadata that each method supports. The migration tool provides the most complete migration of all InfoSphere FastTrack assets.

Procedure

Use one of the following procedures to manually migrate InfoSphere FastTrack:

Table 17. Procedure for manually migrating InfoSphere FastTrack

<table>
<thead>
<tr>
<th>Version</th>
<th>Procedure</th>
</tr>
</thead>
</table>
  - The switch mapping element is not exported or imported. |
  - The switch mapping element is not exported or imported. |
  - The switch mapping and aggregate mapping elements are not exported or imported. |
### Manually migrating InfoSphere Information Analyzer

Use these procedures to manually migrate InfoSphere Information Analyzer.

#### About this task

When choosing an export method, review the metadata that each method supports. The migration tool provides the most complete migration of all InfoSphere Information Analyzer assets.

#### Procedure

Use one of the following procedures to manually migrate InfoSphere Information Analyzer:

### Table 18. Procedures for manually migrating InfoSphere Information Analyzer

<table>
<thead>
<tr>
<th>Version</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version 8.0.1</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
## Table 18. Procedures for manually migrating InfoSphere Information Analyzer (continued)

<table>
<thead>
<tr>
<th>Version</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version 8.1</td>
<td>Not available.</td>
</tr>
<tr>
<td>Versions 8.1.1 and 8.1.2</td>
<td></td>
</tr>
</tbody>
</table>

### Manually migrating InfoSphere Metadata Workbench

Use these procedures to manually migrate InfoSphere Metadata Workbench.

### About this task

When choosing an export method, review the metadata that each method supports. The migration tool provides the most complete migration of all InfoSphere Metadata Workbench assets.
Procedure

Use one of the following procedures to manually migrate InfoSphere Metadata Workbench:

Table 19. Procedures for manually migrating InfoSphere Metadata Workbench

<table>
<thead>
<tr>
<th>Version</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version 8.1</td>
<td>• Option 1</td>
</tr>
<tr>
<td></td>
<td>- Extension mappings and data sources are not supported.</td>
</tr>
<tr>
<td></td>
<td>• Option 2</td>
</tr>
<tr>
<td>Version 8.1.1</td>
<td>• Option 1</td>
</tr>
<tr>
<td></td>
<td>- Extension mappings and data sources are not supported.</td>
</tr>
<tr>
<td></td>
<td>• Option 2</td>
</tr>
<tr>
<td>Version 8.1.2</td>
<td>• Option 1</td>
</tr>
<tr>
<td></td>
<td>• Option 2</td>
</tr>
<tr>
<td>Version 8.5</td>
<td>• Option 1</td>
</tr>
<tr>
<td></td>
<td>• Option 2</td>
</tr>
</tbody>
</table>
Table 19. Procedures for manually migrating InfoSphere Metadata Workbench (continued)

<table>
<thead>
<tr>
<th>Version</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version 8.7</td>
<td>1. Import all common metadata assets (such as databases, data file, and BI reports) by using asset interchange. Verify that the host name is identical. For information about importing common metadata assets by using asset interchange, see <a href="http://publib.boulder.ibm.com/infocenter/iisinfsv/v8r7/topic/com.ibm.swg.im.iis.imsw.lab.doc/topics/move_manage_commonmetadata.html">http://publib.boulder.ibm.com/infocenter/iisinfsv/v8r7/topic/com.ibm.swg.im.iis.imsw.lab.doc/topics/move_manage_commonmetadata.html</a>.</td>
</tr>
<tr>
<td></td>
<td>2. InfoSphere DataStage:</td>
</tr>
<tr>
<td></td>
<td>• Import all InfoSphere DataStage projects (InfoSphere DataStage jobs, table definitions, and so on) by using asset interchange. Verify that you use the same host name, the same engine and project names, and so on. For more information, see <a href="http://publib.boulder.ibm.com/infocenter/iisinfsv/v8r7/topic/com.ibm.swg.im.iis.imsw.lab.doc/topics/dstageassets.html">http://publib.boulder.ibm.com/infocenter/iisinfsv/v8r7/topic/com.ibm.swg.im.iis.imsw.lab.doc/topics/dstageassets.html</a>.</td>
</tr>
<tr>
<td></td>
<td>• Copy the InfoSphere DataStage environment variables (DS Params) file for each InfoSphere DataStage project between systems.</td>
</tr>
<tr>
<td></td>
<td>3. Extended data sources:</td>
</tr>
<tr>
<td></td>
<td>• Export all extended data sources from the old system by using the InfoSphere Metadata Workbench user interface.</td>
</tr>
<tr>
<td></td>
<td>• Import those sources on the new system by using asset interchange. For more information see, <a href="http://publib.boulder.ibm.com/infocenter/iisinfsv/v8r7/topic/com.ibm.swg.im.iis.imsw.lab.doc/topics/ct_importingManagingExtendedDataSources.html">http://publib.boulder.ibm.com/infocenter/iisinfsv/v8r7/topic/com.ibm.swg.im.iis.imsw.lab.doc/topics/ct_importingManagingExtendedDataSources.html</a>.</td>
</tr>
<tr>
<td></td>
<td>The export of the extended data sources does not include steward assignment or term assignment.</td>
</tr>
<tr>
<td></td>
<td>The import of extended data sources is limited to files of 200K in size.</td>
</tr>
<tr>
<td></td>
<td>5. Extension Mapping Documents:</td>
</tr>
<tr>
<td></td>
<td>• Export all extended mapping documents from the old system by using the via the InfoSphere Metadata Workbench user interface.</td>
</tr>
<tr>
<td></td>
<td>The export of extension mapping documents does not include the type, description, term or steward assignment of the document. The import of mapping document is limited to files of 200K in size.</td>
</tr>
<tr>
<td></td>
<td>Warnings will be given if the mapping is not able to reconcile to an existing source or target asset.</td>
</tr>
<tr>
<td></td>
<td>6. Data Lineage:</td>
</tr>
<tr>
<td></td>
<td>• Invoke the automated services on the new system.</td>
</tr>
<tr>
<td></td>
<td>• Map any required database alias mappings on the new system. The mapping should be identical to that of the old system (this is a manual step). Re-invoke the automated services to account for the alias mapping. For more information, see <a href="http://publib.boulder.ibm.com/infocenter/iisinfsv/v8r7/topic/com.ibm.swg.im.iis.imsw.lab.doc/topics/ct_manageCLL.html">http://publib.boulder.ibm.com/infocenter/iisinfsv/v8r7/topic/com.ibm.swg.im.iis.imsw.lab.doc/topics/ct_manageCLL.html</a>.</td>
</tr>
<tr>
<td></td>
<td>• Re-create any manual bindings of the old system, data item binding, or stage binding (this is a manual step).</td>
</tr>
<tr>
<td></td>
<td>• Re-configure business lineage according to the settings of the old system.</td>
</tr>
<tr>
<td></td>
<td>• Re-map the data source identities.</td>
</tr>
</tbody>
</table>
Table 19. Procedures for manually migrating InfoSphere Metadata Workbench (continued)

<table>
<thead>
<tr>
<th>Version</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version 9.1</td>
<td>1. Import all common metadata assets (such as databases, data file, and BI reports) by using asset interchange. Verify that the host name is identical. For information about importing common metadata assets by using asset interchange, see <a href="http://publib.boulder.ibm.com/infocenter/iisinfsv/v9r1/topic/com.ibm.swg.im.iis.iisinfsv.assetint.doc/topics/move_manage_commetadata.html">http://publib.boulder.ibm.com/infocenter/iisinfsv/v9r1/topic/com.ibm.swg.im.iis.iisinfsv.assetint.doc/topics/move_manage_commetadata.html</a>.</td>
</tr>
<tr>
<td></td>
<td>2. InfoSphere DataStage:</td>
</tr>
<tr>
<td></td>
<td>• Import all InfoSphere DataStage projects (InfoSphere DataStage jobs, table definitions, and so on) by using asset interchange. Verify that you use the same host name, the same engine and project names, and so on. For more information, see <a href="http://publib.boulder.ibm.com/infocenter/iisinfsv/v9r1/topic/com.ibm.swg.im.iis.iisinfsv.assetint.doc/topics/dstageassets.html">http://publib.boulder.ibm.com/infocenter/iisinfsv/v9r1/topic/com.ibm.swg.im.iis.iisinfsv.assetint.doc/topics/dstageassets.html</a>.</td>
</tr>
<tr>
<td></td>
<td>• Copy the InfoSphere DataStage environment variables (DS Params) file for each InfoSphere DataStage project between systems.</td>
</tr>
<tr>
<td></td>
<td>3. Extended data sources:</td>
</tr>
<tr>
<td></td>
<td>• Export all extended data sources from the old system by using the InfoSphere Metadata Workbench user interface.</td>
</tr>
<tr>
<td></td>
<td>• Import those sources on the new system by using asset interchange. For more information see, <a href="http://publib.boulder.ibm.com/infocenter/iisinfsv/v9r1/topic/com.ibm.swg.im.iis.mdwb.admin.doc/topics/ct_importingManagingExtendedDataSources.html">http://publib.boulder.ibm.com/infocenter/iisinfsv/v9r1/topic/com.ibm.swg.im.iis.mdwb.admin.doc/topics/ct_importingManagingExtendedDataSources.html</a>. The export of the extended data sources does not include steward assignment or term assignment. The import of extended data sources is limited to files of 2MB in size.</td>
</tr>
<tr>
<td></td>
<td>5. Extension Mapping Documents:</td>
</tr>
<tr>
<td></td>
<td>• Export all extended mapping documents from the old system by using the via the InfoSphere Metadata Workbench user interface.</td>
</tr>
<tr>
<td></td>
<td>• Import the mapping documents on the new system using asset interchange. For more information see, <a href="http://publib.boulder.ibm.com/infocenter/iisinfsv/v9r1/topic/com.ibm.swg.im.iis.mdwb.admin.doc/topics/ct_createManageExtensionMappings.html">http://publib.boulder.ibm.com/infocenter/iisinfsv/v9r1/topic/com.ibm.swg.im.iis.mdwb.admin.doc/topics/ct_createManageExtensionMappings.html</a>. The export of extension mapping documents does not include the type, description, term or steward assignment of the document. The import of mapping document is limited to files of 2MB in size. Warnings are given if the mapping is not able to reconcile to an existing source or target asset.</td>
</tr>
<tr>
<td></td>
<td>6. Data Lineage:</td>
</tr>
<tr>
<td></td>
<td>• Invoke the automated services on the new system.</td>
</tr>
<tr>
<td></td>
<td>• Map any required database alias mappings on the new system. The mapping should be identical to that of the old system (this is a manual step). Re-invoke the automated services to account for the alias mapping. For more information, see <a href="http://publib.boulder.ibm.com/infocenter/iisinfsv/v9r1/topic/com.ibm.swg.im.iis.mdwb.admin.doc/topics/ct_manageCLI.html">http://publib.boulder.ibm.com/infocenter/iisinfsv/v9r1/topic/com.ibm.swg.im.iis.mdwb.admin.doc/topics/ct_manageCLI.html</a>.</td>
</tr>
<tr>
<td></td>
<td>• Re-create any manual bindings of the old system, data item binding, or stage binding (this is a manual step).</td>
</tr>
<tr>
<td></td>
<td>• Re-configure business lineage according to the settings of the old system.</td>
</tr>
<tr>
<td></td>
<td>• Re-map the data source identities.</td>
</tr>
</tbody>
</table>

**Manually migrating InfoSphere Information Services Director**

Use one of these procedures to manually migrate InfoSphere Information Services Director.

**Procedure**

Use one of the following procedures to manually migrate InfoSphere Information Services Director:
<table>
<thead>
<tr>
<th>Version</th>
<th>Procedure</th>
</tr>
</thead>
</table>

**Manually migrating reports**

Use this procedure to manually migrate reports.
About this task

You can migrate reports from IBM InfoSphere Business Glossary, IBM InfoSphere DataStage and QualityStage, IBM InfoSphere Information Analyzer, IBM InfoSphere QualityStage and administration reports for the suite.

Procedure

To manually migrate reports:

Table 21. Procedures for manually migrating reports

<table>
<thead>
<tr>
<th>Version</th>
<th>Procedure</th>
</tr>
</thead>
</table>

Manually migrating credentials

Use this procedure to manually migrate user IDs, user groups, user roles, and associated credentials.

Procedure

To manually migrate security assets:

Table 22. Procedures for manually migrating security assets

<table>
<thead>
<tr>
<th>Version</th>
<th>Procedure</th>
</tr>
</thead>
</table>

Working with multiple engine tiers

If your topology includes multiple engine tiers, use these tasks to work with them.

Procedure

- “Using InfoSphere DataStage clients”
- “Starting and stopping InfoSphere Information Server engine” on page 85

Using InfoSphere DataStage clients

Use the Multi-client Manager to choose which version of the client you want to use.

About this task

You use a different procedure depending on the version of IBM InfoSphere DataStage and whether you are connecting from the command line. The clients for Version 7.5.3 and earlier attach directly to the engine. The clients for Version 8.0.1
and later connect to the services tier, and credential mapping provides the necessary credentials that you need to connect to the engine tier.

**Procedure**

1. To specify the client version that you want to use, complete these steps:
   a. Start the Multi-client Manager by double-clicking the desktop shortcut.
   b. In the Current Installation field, check whether the currently selected version is the version that you want to use. If the correct version is selected, take no further action. If the correct version is not selected, select the correct client in the **Known installations** list, and click **Select**.
   c. Click **Close** to close the Multi-client Manager.

2. To connect to Version 7.5.3 or earlier, complete these steps:
   a. Select the client from the Start menu.
   b. In the **Host System** field of the **Attach to Project** window, type the identify of the server in the form `hostname:portnumber`, where `portnumber` is the port number that the server uses. For example, type `R101:31538`.
   c. Type your user name and password.
   d. If you used the Manager, Director, or Designer client, specify the name of the project that you want to attach to.

3. To use the Designer or Director client to connect to Version 8.0.1 and later, complete these steps:
   a. Select the client from the Start menu.
   b. In the **Services tier** field, type the identify of the server in the form `hostname:portnumber`, where `portnumber` is the port number that the server uses. For example, type `R101:9080`.
   c. Type your user name and password.
   d. In the **Project** field, specify the identity of the project that you want to attach to in the form `engine_hostname/project`. For example, type `R101/datastage`.

4. To use the Administrator client to connect to Version 8.0.1 and later, complete these steps:
   a. Select the client from the Start menu.
   b. In the **Services tier** field of the **Attach to DataStage** window, type the host name of the InfoSphere DataStage services tier in the form `hostname:9080`.
      For example, type `R101:9080` in the field or type `R201:80` in the field if you are using a front-end Web server.
   c. Enter your user name and password.
   d. In the **DataStage Engine** field, specify the host name of the computer that you want to attach to.

5. To use the command line to connect to Version 8.0.1 and later, complete these steps:
   a. Log into the operating system as the user who runs the job.
   b. Use one of the following to run a job:
      - To connect to a project from the command line, specify the server name and port number of the required instance with the `-server` argument in the form `-server server:portnumber` for local computers.
      - For computers that do not use the default ports, to connect to a project that is on a local server, specify the `-server` option with only the port
Starting and stopping InfoSphere Information Server engine

When multiple versions of InfoSphere DataStage are installed on a single computer, you must identify the version that you want to start or stop.

About this task

You identify the InfoSphere Information Server engine that you want to start or stop by setting the $DSHOME environment variable to reference the DSEngine subdirectory of the server that hosts the engine. For example, there are two engines on the same computer with the following DSEngine subdirectories:

- `/disk1/Ascential/DataStage/DSEngine` (Version 7.5.1 engine)
- `/opt/IBM/InformationServer/Server/DSEngine` (Version 8.7 engine)

Important: When you install the InfoSphere Information Server engine tier on a computer that runs UNIX, the file `.dshome` is created. This file contains the path that is used as the default setting for the $DSHOME environment variable. Before and after you install an additional InfoSphere Information Server engine, delete the `.dshome` file. When a computer hosts more than one InfoSphere Information Server engine, having a default setting for the $DSHOME environment variable might result in administrative tasks being run on the wrong engine.

Procedure

1. Log on as the InfoSphere DataStage Administrator.
2. Source the dsenv file.
   a. Set the $DSHOME environment variable to point to the `/opt/IBM/InformationServer/Server/DSENGINE` directory.
   b. Change to the directory that contains the dsenv file, which you specified `/opt/IBM/InformationServer/Server/DSENGINE`.
   c. Run the following command to source the dsenv file.
      ```
      . ./dsenv
      ```
3. Enter the following command to stop the engine services:
   ```
   $DSHOME/bin/uv -admin -stop
   ```
4. Wait 30 seconds so that the engine services stop.
5. Enter the following command to start the engine services:
   ```
   $DSHOME/bin/uv -admin -start
   ```
Migration reference

These topics describe the response file parameters, log files, commands, and the encryption tool, all of which are part of the migration tool.

Frequently asked questions about migration

Find the answers to frequently asked questions about migration, such as how do I manually migrate InfoSphere DataStage project environment variables and how do I know if all third-party library files are available

How do I manually migrate environment variables for IBM InfoSphere DataStage jobs?

To manually migrate project environment variables, perform the following tasks:

- Merge the contents of the InfoSphere DataStage settings files.
- During the import process, InfoSphere DataStage sets the required environment variable definitions in the project, if the variable definitions are used as parameter variables in the job or parameter set. In general, you set project environment variable values, if required, and any environment variables that are required by third-party components and are not referenced as job parameters, for example variables for the Oracle database or the IBM DB2 database. Do not directly edit the DSPrams project files. Instead, for versions 8.5 fix pack 2 and after, you can use the InfoSphere DataStage Administrator to set the variables. You can use the dsadmin command line tools to set the variables for all versions.
- If the platforms are changing, there are some environment variable settings that you do not copy, for example, compiler settings and operating-system-specific paths.
- There may be specific non-default settings which you have set on your source system and you need to preserve. Review the DSPrams EnvVarValues section on the source computer for these settings.

How do I determine if all third-party library files are available?

- **Linux** or **UNIX** Use the following command inside the InfoSphere DataStage environment, after you source dsenv, and look for unresolved module errors:
  
  ldd<shared module name>

- **Windows** To determine if all third-party libraries are available use the Dependency Walker, which is a free tool and is available at www.dependencywalker.com.

Can I migrate from an older version of InfoSphere DataStage, for example, Version 4.5 or 6.5, to Version 8.7?

Yes. To migrate from any version that is earlier than Version 7.5.3, you use the manual migration process.

Migration log files

The migration tool log files contain information that you can use for troubleshooting purposes.

The migration tool log files are in this default directory:

- /opt/IBM/InformationServer/Migration/logs
Migration tool commands

You run the migration tool from the command line by specifying the migration script, followed by a command, and optional parameters.

The migration script is located in this default directory:
- /opt/IBM/InformationServer/Migration/bin/ismigration.sh
- C:\IBM\InformationServer\Migration\bin\ismigration.bat

The migration tool command syntax is as follows:

ismigration
ismigration -resp [-force] [-validateonly]
ismigration -restart
ismigration -version
ismigration -help

For example, use the following command to start the export and import operations:

- ismigration.sh -resp </opt/ResponseFilePath/ReponseFileName.xml>
- ismigration.bat -resp <C:\ResponseFilePath\ReponseFileName.xml>

To launch the migration wizards, run ismigration.sh or ismigration.bat without specifying any other parameters.

Response command

The migration tool -resp command provides the name of the response file.

The response command

You use the -resp command to start the export or import operations.

The -resp command requires the path to the response file, as well as the response file name.

The -resp command:

install_dir/migration/bin/ismigration.sh -resp response_file_name
install_dir/migration/bin/ismigration.bat -resp response_file_name [-force] [-validateonly]

Optional parameters

When you run the migration tool, you can include additional, optional parameters.

-force Use this parameter after you run the -resp command, and receive a message that says only the -restart command can be used. The force parameter can be specified to remove the previous export or import operations' checkpoints and work files. The force command starts the migration tool from the beginning.

-validateonly Use this parameter to verify that the environment meets the requirements for the export or import operation. The command also verifies that the values in the response file are appropriate for the environment and the command that you specify.
Note: This parameter uses additional resources, which might slow down your computer.

Response command example for an import operation

Starting an import operation:

```
/IBM/InformationServer/migration/bin/ismigration.sh -resp /opt/IBM/
InformationServer/Migration/migration_import.xml
```

Response command example for an export operation

Starting an export:

```
/IBM/InformationServer/migration/bin/ismigration.sh -resp /opt/IBM/
InformationServer/Migration/migration_export.xml
```

Response command example for an export operation with the force option

Starting an export operation with the force option:

```
/IBM/InformationServer/migration/bin/ismigration.sh -resp /opt/IBM/
InformationServer/Migration/migration_export.xml -force
```

Response command example for an export operation with the validate only option

Starting an export with the validate only option:

```
/IBM/InformationServer/migration/bin/ismigration.sh -resp /opt/IBM/
InformationServer/Migration/migration_export.xml -validateonly
```

Restart command

The migration tool automatically creates checkpoint files throughout the migration. The `-restart` command restarts the import process or the export process from the last saved checkpoint.

The restart command

You use the `-restart` command after export or import fails and you want to resolve the errors. You also use the command after you migrate the metadata repository manually and after you generate and review the scripts that configure IBM WebSphere Application Server.

The `-restart` command:

```
install_dir\Migration\bin\ismigration.sh -restart
install_dir\migration\bin\ismigration.bat -restart
```

Important: If an import process or export process fails, view the console log and the error logs in the logs directory to determine whether you can resolve the errors. The log files are in this directory:

- `install_dir/Migration/logs`
- `install_dir\Migration\logs`

Restart command example

You might see the following error:
Export side validation failed. DB2 user db2inst1 doesn't have authority to backup database.

Connection authorization failure occurred.
Reason: Password expired.

After you see this error and fix the problem, run the **-restart** command to resume the import process or the export process from the last saved checkpoint:

```
install_dir/Migration/bin/ismigration.sh -restart
```

**Restart command example**

The migration resumes the import process or the export process from the last saved checkpoint.

```
install_dir\Migration\bin\ismigration.bat -restart
```

**Version command**

The migration tool **-version** command shows the current version of the migration tool.

**The version command**

The **-version** command:

```
install_dir/Migration/bin/ismigration.sh -version
install_dir\Migration\bin\ismigration.bat -version
```

**Version command usage example**

The version number of the migration tool is displayed.

```
/migration/bin/ismigration.sh -version
C:\IBM\InformationServer\migration\bin\ismigration.bat -version
```

The version number is displayed. For example, information similar to the following is displayed for version number 9.1.0.0.125:

*Information Server Migration Tool version 9.1.0.0.125 2012-12-12*

**Encryption tool**

Use the encryption tool to encrypt passwords and other data that you specify in the response file. This tool is an alternative to using IBM Support Assistant Lite for InfoSphere Information Server to generate encrypted passwords.

The encryption tool requires only one parameter, which is the value that you want to encrypt. To run the encryption tool, you enter this command at the command line:

```
install_dir/Migration/bin/encrypt.sh value_to_encrypt
install_dir\Migration\bin\encrypt.bat value_to_encrypt
```

**Encryption tool usage**

The following sample command generates the encrypted value {iisenc}wFFjdkpR7NgbbD93AUC2Ag== for user dsadm:

```
/migration/bin/encrypt.sh dsadm
C:\IBM\InformationServer\migration\bin\encrypt.bat dsadm
```
In the response file, use the encrypted value `{iisenc}wFFjdkpR7NGbbD93AUC2Ag==` instead of the clear text password `dsadm`.
Appendix A. Product accessibility

You can get information about the accessibility status of IBM products.

The IBM InfoSphere Information Server product modules and user interfaces are not fully accessible. The installation program installs the following product modules and components:

- IBM InfoSphere Business Glossary
- IBM InfoSphere Business Glossary Anywhere
- IBM InfoSphere DataStage
- IBM InfoSphere FastTrack
- IBM InfoSphere Information Analyzer
- IBM InfoSphere Information Services Director
- IBM InfoSphere Metadata Workbench
- IBM InfoSphere QualityStage

For information about the accessibility status of IBM products, see the IBM product accessibility information at [http://www.ibm.com/able/product_accessibility/index.html](http://www.ibm.com/able/product_accessibility/index.html).

**Accessible documentation**

Accessible documentation for InfoSphere Information Server products is provided in an information center. The information center presents the documentation in XHTML 1.0 format, which is viewable in most Web browsers. XHTML allows you to set display preferences in your browser. It also allows you to use screen readers and other assistive technologies to access the documentation.

The documentation that is in the information center is also provided in PDF files, which are not fully accessible.

**IBM and accessibility**

See the [IBM Human Ability and Accessibility Center](http://www.ibm.com/able/) for more information about the commitment that IBM has to accessibility.
Appendix B. Contacting IBM

You can contact IBM for customer support, software services, product information, and general information. You also can provide feedback to IBM about products and documentation.

The following table lists resources for customer support, software services, training, and product and solutions information.

Table 23. IBM resources

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<tr>
<td>Software services</td>
<td>You can find information about software, IT, and business consulting services, on the solutions site at <a href="http://www.ibm.com/businesssolutions/">www.ibm.com/businesssolutions/</a></td>
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<tr>
<td>My IBM</td>
<td>You can manage links to IBM Web sites and information that meet your specific technical support needs by creating an account on the My IBM site at <a href="http://www.ibm.com/account/">www.ibm.com/account/</a></td>
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<tr>
<td>Training and certification</td>
<td>You can learn about technical training and education services designed for individuals, companies, and public organizations to acquire, maintain, and optimize their IT skills at <a href="http://www.ibm.com/software/sw-training/">http://www.ibm.com/software/sw-training/</a></td>
</tr>
<tr>
<td>IBM representatives</td>
<td>You can contact an IBM representative to learn about solutions at <a href="http://www.ibm.com/connect/ibm/us/en/">www.ibm.com/connect/ibm/us/en/</a></td>
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Appendix C. Accessing and providing feedback on the product documentation

Documentation is provided in a variety of locations and formats, including in help that is opened directly from the product client interfaces, in a suite-wide information center, and in PDF file books.

The information center is installed as a common service with IBM InfoSphere Information Server. The information center contains help for most of the product interfaces, as well as complete documentation for all the product modules in the suite. You can open the information center from the installed product or from a Web browser.

Accessing the information center

You can use the following methods to open the installed information center.

• Click the Help link in the upper right of the client interface.

  Note: From IBM InfoSphere FastTrack and IBM InfoSphere Information Server Manager, the main Help item opens a local help system. Choose Help > Open Info Center to open the full suite information center.

• Press the F1 key. The F1 key typically opens the topic that describes the current context of the client interface.

  Note: The F1 key does not work in Web clients.

• Use a Web browser to access the installed information center even when you are not logged in to the product. Enter the following address in a Web browser: http://host_name:port_number/infocenter/topic/com.ibm.swg.im.iis.productization.iisinfsv.home.doc/ic-homepage.html. The host_name is the name of the services tier computer where the information center is installed, and port_number is the port number for InfoSphere Information Server. The default port number is 9080. For example, on a Microsoft® Windows® Server computer named iisdocs2, the Web address is in the following format: http://iisdocs2:9080/infocenter/topic/com.ibm.swg.im.iis.productization.iisinfsv.nav.doc/dochome/iisinfsrv_home.html.

A subset of the information center is also available on the IBM Web site and periodically refreshed at http://publib.boulder.ibm.com/infocenter/iisinfsv/v8r7/index.jsp.

Obtaining PDF and hardcopy documentation

• A subset of the PDF file books are available through the InfoSphere Information Server software installer and the distribution media. The other PDF file books are available online and can be accessed from this support document: https://www.ibm.com/support/docview.wss?uid=swg27008803&wv=1

• You can also order IBM publications in hardcopy format online or through your local IBM representative. To order publications online, go to the IBM Publications Center at http://www.ibm.com/e-business/linkweb/publications/servlet/pbi.wss.

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Providing comments on the documentation

Your feedback helps IBM to provide quality information. You can use any of the following methods to provide comments:

- To comment on the information center, click the Feedback link on the top right side of any topic in the information center.
- Send your comments by using the online readers' comment form at www.ibm.com/software/awdtools/rcf/
- Send your comments by e-mail to comments@us.ibm.com. Include the name of the product, the version number of the product, and the name and part number of the information (if applicable). If you are commenting on specific text, include the location of the text (for example, a title, a table number, or a page number).
- You can provide general product feedback through the Consumability Survey at www.ibm.com/software/data/info/consumability-survey
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