Sun Java™ System

Identity Manager 2005Q4M3 Upgrade

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Preface

This guide provides detailed information and instructions to help you upgrade Sun Java Systems Identity Manager from version 4.1 to 6.0.

Note If your current Identity Manager installation has a large amount of custom work you should contact Sun Professional Services to assist in determining and executing your upgrade.

How to Find Information in this Guide

- Chapter 1 Upgrade Overview — Provides an overview of the Upgrade process.
- Chapter 2 Upgrade Preparation — Aids in listing your goals and gathering information in preparation for upgrading.
- Chapter 3 Develop the Upgrade Plans — Provides procedures for documenting your current installation, creating and upgrading a test environment, testing, and production rollout.
- Appendix A. Assessment Worksheets — Provides worksheets to aid in upgrade preparation.

Related Documentation and Help

Sun provides additional printed and online documentation and information to help you install, use, and configure Identity Manager:

- *Identity Install Pack Installation*

  Step-by-step instructions and reference information to help you install and configure Identity Management products and associated software.
- *Identity Manager Administration*

  Procedures, tutorials, and examples that describe how to use Identity Manager to provide secure user access to your enterprise information systems.
- *Identity Manager Administration*

  Procedures, tutorials, and examples that describe how to use Identity Manager to provide secure user access to your enterprise information systems.
- *Identity Manager Technical Deployment Overview*

  Conceptual overview of the Identity Manager product (including object architectures) with an introduction to basic product components.

- *Identity Manager Workflows, Forms, and Views*

  Reference and procedural information that describe how to use the Identity Manager workflows, forms, and views — including information about the tools you need to customize these objects.

- *Identity Manager Deployment Tools*

  Reference and procedural information that describe how to use different Identity Manager deployment tools; including rules and rules libraries, common tasks and processes, dictionary support, and the SOAP-based Web service interface provided by the Identity Manager server.

- *Identity Manager Audit and System Logging*

  Reference and procedural information that describe how to load and synchronize account information from a resource into Sun Java™ System Identity Manager.

- *Identity Manager Troubleshooting and Error Messages*

  Reference and procedural information that describe Identity Manager error messages and exceptions, and provide instructions for tracing and troubleshooting problems you might encounter as you work.

- *Identity Manager Help*

  Online guidance and information that offers complete procedural, reference, and terminology information about Identity Manager. You can access help by clicking the Help link. Guidance (field-specific information) is available on key fields.

Product Support

If you have problems with your software, contact customer support using one of the following mechanisms:

- The online support web site at http://www.sun.com/service/online/us
- The telephone dispatch number associated with your maintenance contract

We'd Like to Hear from You!

We would like to know what you think of this guide and other documentation. If you have feedback - positive or negative - about your experiences using this product and documentation, please send us a note:

Sun Microsystems.
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Austin, TX 78727
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1 Upgrade Overview

The following sections contain an overview of the Identity Manager upgrade process:

- *Why Upgrade?*
- *Upgrade Phases*
- *Example Upgrade*

Why Upgrade?

Upgrading to the later releases of Identity Manager provides you with many advantages. These include:

- Take advantage of advanced features and functionality
- Provide a more secure environment for your servers
- Continue to enjoy full support and services

When upgrading Identity Manager you should be aware of the impact on software components. These include:

- JAVA or JSP source files
- Deployment descriptors (XML files)
- Custom Forms
- Custom Workflows
- Installed Hotfixes
- Custom Repository items
- Configuration files (for example, `waveset.properties`)

A good understanding of your current Identity Manager installation and the latest Identity Manager version helps you define and determine an appropriate upgrade method and strategy.

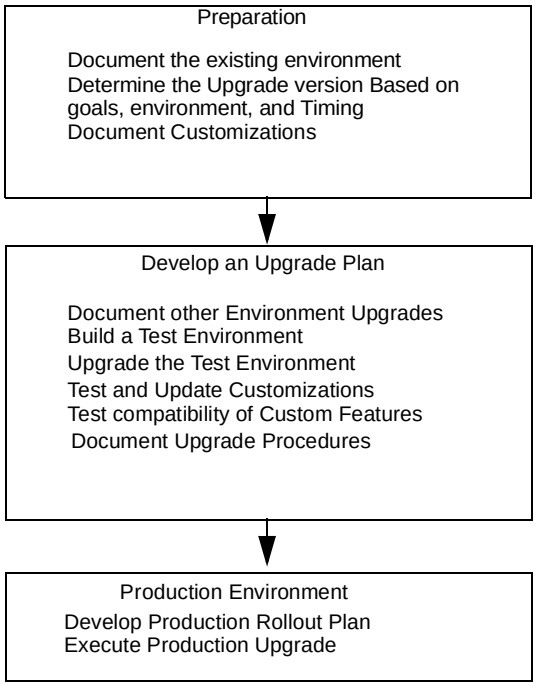
Upgrade Phases

The following figure shows the major phases you should plan for when upgrading Identity Manager.

The following paragraphs provide an overview of each phase and provide references for additional information.

- *Prepare for Upgrade*
- *Create the Test Environment*
- *Production Environment Deployment*

Figure 1. Upgrade Phases



Prepare for Upgrade

Careful preparation allows for a smoother upgrade path. To properly prepare for the upgrade keep in mind the following.

List Goals for the Upgrade

You should list your goals for the upgrade in order to make a decision in line with your companies desired performance. *Document the Existing Environment* on page 2-1 has some tips for managing expectations based on expected results.

Document the Existing Environment

It is important that you have a complete assessment of your platform, Identity Manager installation, and custom work. Based on this information, you determine what is the best path and extent of complexity for your upgrade. *Document the Existing Environment* on page 2-1 contains procedures for determining what is currently present in your systems, such as:

- Platform information
  - Operating Systems
  - Application Servers
  - Database Servers
  - Java Runtime Environment
  - Sun Identity Manager Gateway
  - Supported Resources
  - Web Servers
- Identity Manager installation information
  - Installed Hotfixes
  - Installed Service Packs
  - Gateways
  - PasswordSync
- Customized Identity Manager objects, such as:
  - Resource Adapters
  - JSPs
  - Java classes
  - Forms
  - Workflows
  - Rules
  - Email templates
  - Portals
  - Changes to configuration files
  - Style sheet changes or private branding

Determine the Upgrade Version

Based on the assessment, release notes, and known defects determine the Identity Manager version that most likely fulfills your requirements. Often this is the latest version but some feel more comfortable with a version that already has a couple of service packs.

Note If your current Identity Manager installation has a large amount of custom work you should contact Sun Professional Services to assist in determining and executing your upgrade.

Determine the upgrade using information in *Determine the Upgrade Version* on page 2-5.

Examples

If your current deployment is Lighthouse 4.1 and you determined that Identity Manager 5.0 SP4 is the desired version, then the upgrade path includes upgrading to Identity Manager 5.0 first and then Identity Manager 5.0 SP4.

The following table list possible upgrade paths depending on your current version with end of life information.

Existing Version	Upgrade Path	EOL Date
3.0 SPx	4.1 -> 5.0 -> 5.0 SPx	September 2005
4.0 SP1	5.0 -> 5.0 SPx	September 2004
4.1 SPx	5.0 -> 5.0 SPx	March 2006
5.0 SPx	5.0 SPx+n -> 6.0	September 2007

Create the Test Environment

For a successful upgrade, detail planning is required for major phases as described below. Find further development information in *Create a Test Environment* on page 3-1.

Develop the Test Environment

Create a test environment that mimics the production environment as best as possible. This is a *function test* with simulated systems.

- Your environment should have the same Identity Manager version as the production environment
- If real test resources do not exist create simulated resources for function test
- Update the test environment to match the production environment
- Only extract production environment configuration objects to avoid getting the user data base

Upgrade the Test Environment

Upgrade the test environment following procedures in *Upgrade the Environment*.

Test the Upgrade Package

Testing is vital prior to deploying to the production environment. Major steps include:

- Develop a test plan
- Allocate test resources
- Execute the test plan
  - Functional test - For functionality and stability tests, deploy all updated custom code to the upgraded test environment.
  - Upgrade plan test - Test the upgrading approach from the current version to desired version as well as the roll back plan.
- Find further development information in *Test and Resolve Issues* on page 3-10.

Develop the Production Deployment Package

- Use the package to deploy and any update XML files from the development to test the for deployment phase.
- Test all business processes, etc.
- Document the procedure

Find further development information in *Develop a Production Rollout Plan* on page 3-11.

Production Environment Deployment

A thoroughly tested and debugged upgrade package can now be deployed to the production environment. Major steps include:

- Develop a production rollout plan
- Notify user community of downtime
- Should include a roll back procedure
- Shutdown all long running processes
- Prevent End user client access
- Backup environment (define this process)
- Upgrade environment
- Deploy upgraded customizations
- Test major features
- Re enable production environment

Find further development information in *Develop a Production Rollout Plan* on page 3-11.

Example Upgrade

The following example situation describes steps and notes to upgrade from 3.1 to the latest 5.x/6.0 release.

Always go with the latest available 5.x or 6.x service pack for your final release target.

1. Review the following documentation prior to upgrading:
   - 5.0 *Release Notes*
   - 5.0 *Installation* (Updating Identity Manager)
   - Target 6.x service pack *Release Notes*.

   A lot of product functionality has been added since 4.1 and some user interface pages have been relocated as well.
2. As always, back up your existing database and lighthouse file structure. Then if the upgrade causes you issues, you can always restore the database and file structure under `lighthouse/` to get back to your working 3.x environment.
3. Ensure you have a test environment install that mimics your production install functionality.
4. Develop a comprehensive test scenario to ensure all currently utilized product functionality still functions after the upgrade and before moving into production.

5. Examine your supporting infrastructure (operating systems, JDK, application server, database, etc.) versions as well as the resource versions to ensure that the 5.x/6.0 product supports what you are currently running (supported versions can be found at the start of the installation guide).

Note The product has been re-branded as Identity Manager in 5.0.

6. Rebuild any custom java classes against the target product libraries for example, new JAR files, new JDK, and Application Server libraries.
7. Document and make any necessary changes in Xpress, and Workflow and Form utility calls.
8. Remove any hotfix class files from your WEB-INF/classes directory, if any exist.
9. Upgrade any individual gateway or PasswordSync installations at the same time.
10. Complete the entire upgrade before attempting to start the application server and performing any activity.
11. You may also wish to set to manual start any active sync processes as well as disable any scheduled reconciliations (if this applies) until your upgrade is complete and appears to have gone well.
12. The jump from 5.x to 6.x requires a database schema upgrade. See the Identity Install Pack 6.0 Release Notes for more details.
13. If you have modified any of the jsp files or stylesheets, the changes you made will need to be merged into the new jsp files or stylesheets.
14. If you modified any default Identity Manager objects, like the Default User Form these will be moved into the savedObjects directory upon upgrade. If this is the case, take the time to rename these custom objects to a custom name and reference that name in the SystemConfiguration object for ease of future upgrades.
15. If you have extracted WPMessages.properties to `/config` and customized the messages, you will need to re-extract and re-apply their customizations. In 5.x the preferred way of customizing messages is to use a configuration object. Please refer to page 11-2 of *Identity Manager* 5.0 *Installation* and page 4-114 of 5.0 SP3 *Identity Manager Technical Deployment*.

2 Upgrade Preparation

This section describes how to prepare to upgrade Identity Manager.

- *Document the Existing Environment*
- *Determine the Upgrade Version*
- *Document your Custom Components*

Document the Existing Environment

In order to determine the upgrade path for your situation, you should first assess the various components of your current platform. Later Identity Manager releases may affect the makeup of your environment. You may print out inventory worksheets from Appendix A *Assessment Worksheets* to assist gathering this data.

This section lists software and environments to be inventoried:

- Operating Systems
- Application Servers
- Database Servers
- Java Runtime Environment
- Sun Identity Manager Gateway
- Supported Resources
- Web Servers
- Identity Manager Installation

Note For each of the following check the supported versions listed in the installation and release notes provided with the version to be upgraded to.

Operating Systems

Record the operation system release with any additional service packs.

Refer to the latest release notes and installation guide for more up-to-date information.

Application Servers

Record the application server release with any additional service packs noted. Record the JDK version required by your application server

Refer to the latest release notes and installation guide for more up-to-date information.

Java Runtime Environment

Record the currently installed JDK release required by the lh console.

Database Servers and Directories

Record the database server release with any additional service packs.

Refer to the latest release notes and installation guide for more up-to-date information.

Supported Resources

Record any supported resources with any additional service packs. Identity Manager is compatible with the following:

Web Servers

Record the web server release with any additional service packs noted.

Refer to the latest release notes and installation guide for more up-to-date information.

Gateways

1. Execute the following command on the gateway servers.

```
gateway -v
```

2. Record the results.
3. Record the operating system version of the gateway server.

Note On gateway servers the version should always be the same as that of the server where Identity Manager is installed.

Identity Manager Installation

In order to determine the upgrade path for your situation, you should first inventory the various components of your current Identity Manager Installation. You may print out inventory worksheets from Appendix A *Assessment Worksheets* to assist gathering this data.

Identity Manager Version

For LIGHTHOUSE versions 3.x & 4.x look in the `config/Waveset.properties` file. For later versions of Identity Manager look up the version using the console.

Installed Service Packs

To determine the service packs on your system perform the following:

1. Change directory to the Identity Manager patches directory.
2. List the contents of the patch directory. These include the manifest files associated with all service packs. For example:

```
Lighthouse_4_1_20040315.manefest
```

3. Record each manifest file.

Installed Hotfixes

To determine the hotfixes on your system perform the following:

1. Change directory to the Identity Manager `WEB-INF/class` directory.
2. List the contents of the class directory. These include the remnant files associated with all hotfixes.

3. Record each file name.

Note There is no way to determine the hot fixes installed without contacting support or engineering. Zip up the entire WEB-INF/classes folder and send it to support if you do not know for sure.

This record of hotfixes is used to debug the upgrade situation. It is possible that a service pack release may not have included the most recent hotfix immediately previous to its release.

Using Assessment Tools

In Identity Manager version 5.5 two new utilities were introduced to list and record your installation information:

inventory

installed

Both commands are accessed by entering:

```
lh assessment
```

Note These commands work only for releases, services packs, and hotfixes greater than 5.0 SP4.

inventory

The **inventory** command inspects the file system for files that were added or deleted to the system based on the files packaged in the release. It is only able to determine which files are changed based on the manifest shipped with Identity Manager.

Usage

```
inventory [option] [options]...
```

Options

Option	Function	Description
-h	help	Display usage.
-a	added	Display only added files.
-d	deleted	Display only deleted files.
-m	modified	Display only modified files.
-u	unchanged	Display only unchanged files.

installed

The **installed** command searches the patches directory for manifests and displays versions from those filenames.

Usage

```
installed [option] [option]...
```

Options

Option	Function	Description
-h	help	Display usage.
-r	releases	Display only installed releases.
-s	service packs	Display only installed service packs.
-h	hotfixes	Display only installed hotfixes.

Determine the Upgrade Version

In general, you should upgrade to the most recent Identity Manager release available that fits with your testing time frame. For example:

The projected start of your test cycle is July 15th and the next new Identity Manager release is scheduled for July 10th and the current Identity Manager release available is 5.0 SP6. You should start with 5.0 SP6 in development and initial test, then switch to the current release before starting their formal test cycle.

Once you have determined the target Identity Manager version you need to determine if your current platform is supported at the upgrade level:

- Read the Release Notes for the target Identity Manager release.
- Read the 'Known Issues' to determine if is best to upgrade the operating system, JDK, application server, or any resources.

The following table lists suggested upgrade paths depending on your current release.

Target Upgrade Version	Your Current Version	Upgrade Path
Identity Manager 5.0 SPx	Lighthouse 4.1 SPx	Identity Manager 5.0, then upgrade to desired service pack
Identity Manager Installation Pack 2005Q4M3		Identity Manager 5.0, then 2005Q4M3
Identity Manager Installation Pack 2005Q3M1	Identity Manager 5.0 SPx	2005Q3M1
Identity Manager Installation Pack 2005Q4M3		200Q4M3
Identity Manager Installation Pack 2005Q3M1	Identity Manager Installation Pack 2005Q1M3 (Identity Auditor 1.0, Identity Manager 5.1)	2005Q3M1
Identity Manager Installation Pack 2005Q4M3		2005Q4M3
Identity Manager Installation Pack 2005Q4M3	Identity Manager Installation Pack 2005Q3M1 (Identity Manger 5.5, Identity Auditor 1.5)	2005Q4M3
Identity Manager Installation Pack 2005Q4M3	Identity Manager Installation Pack 2005Q3M3 (Identity Manager Service Provider Edition 1.0, Identity Manager 5.6, Id Auditor 1.6)	2005Q4M3
	Identity Manager Installation Pack 2005Q4M3 (Identity Manager 6.0, Identity Auditor 1.6, Identity Manager Service Provider Edition 1.2)	

Note Identity Manager Installation Pack 2005Q4M3 is a major release for all products. If you are upgrading from earlier versions of Identity Manager, Identity Auditor, Identity Manager Service Provider Edition you must upgrade to this release before advancing to future later releases.

Document your Custom Components

In order to determine the upgrade path for your situation, you should first assess the various components of your current custom work. You may print out inventory worksheets from Appendix A *Custom Components* to assist gathering this data.

Note If your current Identity Manager installation has a large amount of custom work you should contact Sun Professional Services to assist in determining and executing your upgrade.

Custom File System Objects

Customized file system objects may need updating to function properly with later Identity Manager releases. Record any customized file system objects in your environment.

Modified JSPs

Later Identity Manager versions may have API changes. If you have modified JSPs in your installation you may have to update them when upgrading. Any JSP that was shipped with the product and changed during a deployment or a custom JSP that utilizes Identity Manager APIs needs to be updated to work with the new JSP structure and API changes for the target release.

waveset.properties File

Record any changes you have made to the default `waveset.properties` file.

wpmessages.properites File

Record any changes you have made to the default `wpmessages.properties` file.

Custom Adapters

Customized adapters may require a recompile depending on final Identity Manager version. All custom JAVA which utilizes Identity Manager APIs including custom Resource Adapters require a recompile when upgrading. Also consider other Java classes the utilize the Identity Manager library.

Style Sheets

Record any changes made to Identity Manager style sheets.

Custom Repository Objects

Customized repository objects may need sustaining to function properly with later Identity Manager releases. Record any customized repository objects in your environment.

Forms

Customized forms may need updating to take advantage of current product enhancements.

Workflows

Customized forms may need updating to take advantage of current product enhancements.

Email Templates

Customized email templates may need to be exported to take advantage of current product enhancements.

Custom Repository Schema

A schema change occurred with Identity Manager 4.1. If you are upgrading from versions earlier than 6.0, your schema requires an update.

Other Repository Objects

Record any other custom repository objects you have created or updated. You may have to export these to the later version after upgrading.

- Admin Role
- Admin Group
- Configuration
- Provisioning Task
- Policy

- Remedy Configuration
- Resource Form
- Resource Action
- Role
- Rule
- Task Definition
- Task Template
- User Form

3 Develop the Upgrade Plan

This section contains upgrade planning information in the following sections:

- *Create a Test Environment*
- *Upgrade the Environment*
- *Test and Resolve Issues*
- *Develop a Production Rollout Plan*
- *Upgrade Production*

Create a Test Environment

Create a test environment that mimics the production environment as best as possible. Here are some guidelines:

Ensure Duplication of the Production Environment

Use the same hardware and software Versions for the following systems:

- Application Server
- Database Server
- Gateway Server
- Web Server (Optional Component)
- Resource Systems & Integrated Applications
- Common Client Machine with Corporate image and same browser

Resources and other integrated Applications

Resources and other integrated Applications should have the same general configuration as production:

- Resources should have the same general configuration as production. For example Active Directory Domains, Organizations, Groups, Number and the format of users should be replicated from production to the test environment.
- Integrated Applications should be configured the same and contain either a copy of production data or very similar data.

Identity Manager Configuration

Use the same Identity Manager version and configuration.

If no test environment already exists create simulated resources for functional test. Take a complete extract of the production files and database. Then copy this extract to your new test environment.

- Assuming all the users and resource configurations are different, remove all the users.
- Reconfigure the resources to point to test systems, remove duplicates if needed.
- Load all users into the system using the method used during the production rollout.

If real test resources do not exist, create simulated resources for function test.

Extract Configuration objects only from production and load into development.

Prepare to Upgrade the Test Environment

Before upgrading your Identity Manager installation, you should perform these tasks:

- Back up your current Identity Manager installation
- Rename customized Identity Manager database objects

Back Up the Current Identity Manager Installation

Before updating, it is important to back up both the directory in which Identity Manager is installed and the database that Identity Manager is using. We recommend that you use third-party backup software or a backup utility supplied with your system to back up the directory Identity Manager files. To back up the database, refer to your database documentation for recommended backup procedures.

Rename Customized Identity Manager Repository Objects

Identity Manager provides a set of database objects, such as user forms and workflow task definitions, that are often tailored to your environment. The update process replaces some of these objects in the database after saving them in the file system.

If you are not currently using the System Configuration object, you should start using it prior to upgrade. The System Configuration object allows you to point at these custom object instead of standard product defaults. If you choose not to do so, you must import your customized objects after performing the update.

Note You should rename objects if they are to be customized in the future.

About the System Configuration Object

The System Configuration object allows you to customize user forms and workflow task definition objects without having to tailor the default objects provided with Identity Manager. Identity Manager references the customized objects listed in the System Configuration object instead of the default objects. Refer to *Identity Manager Administration* for more details.

Upgrade the Environment

Use the following procedures to prepare for and update your current Identity Manager installation. Information is organized in these sections:

Step 5: Verify Functionality

Prior to upgrading to Identity Manager 5.x versions:

- Verify that all servers are present on the network
- Verify that the schema is successfully updated

Step 6: Update to Identity Manager 5.x

Proceed to *Upgrade from Identity Manager 4.x to 5.x* to upgrade to the Identity Manager 5.x level.

Upgrade from Identity Manager 4.x to 5.x

Use the following information and procedures to update Identity Manager.

Note In some environments, you may prefer to follow the manual update procedures. If so, refer to the section titled Installing Identity Manager Manually in *Identity Install Pack Installation*.

Step 1: Upgrade the Identity Manager Software

Use the following procedures to upgrade the Identity Manager software.

Notes:

- During upgrade, you need to know the location where your application is installed.
- Commands shown in the following steps are specific to a Windows installation and Tomcat application server. The commands you use may differ depending on your specific environment.

To upgrade Identity Manager:

1. Shut down the application server.
2. If you are running the Sun Identity Manager Gateway on the Identity Manager server, stop the gateway service with this command:

   ```
   net stop "Sun Identity Manager Gateway"
   ```

3. You may install the software using one of two methods:

   - *Using the installer GUI*

   Run the `install.bat` (for Windows) or `install` (for UNIX) command to launch the installation process.

   The installer displays the Welcome panel.

   - *Using the nodisplay option*

   Change directory to the software location. Enter the following command to activate the installer in nodisplay mode:

```
install -nodisplay
```

   The installer displays the Welcome text. The installer then presents a list of questions to gather installation information in the same order as the GUI installer in these procedures.

Note

   - If no display is present, the installer defaults to the nodisplay option.
   - The installer does not install an older version of the software over a newer version. An error message appears in this case, and the installer exits.

4. Click **Next**. The installer displays the Install or Upgrade? panel.
5. Select **Upgrade**, and then click **Next**.

   The installer displays the Select Installation Directory panel.

6. Select the directory where the earlier Identity Manager version of is located
7. Click **Next**.

   The installer displays progress bars for the pre and post-update processes.

   The installer displays the Installation Summary panel.

   For detailed information about the installation, click **Details**. Depending on the amount of information captured during the installation process, not all messages may not be displayed here. View the log file (identified in details) for more information. When finished, click **Close** to exit the installer.

8. Remove all of the compiled Identity Manager files from the application server work directory.

Step 2: Update the Sun Identity Manager Gateway

If you are running the Sun Identity Manager Gateway on a remote system, update it by using the following steps.

1. Log in to the Windows system where the Sun Identity Manager Gateway is installed.
2. Change to the directory where the gateway is installed.
3. Stop the gateway service by running the command:

   ```
   gateway -k
   ```
4. If using Windows 2000 or later, exit all instances of the Services MMC plug-in.
5. Remove the gateway service by running the command:

   ```
   gateway -r
   ```
6. Backup and delete the existing gateway files.
7. Extract the new gateway files. If the newly updated gateway is installed on a system that is not the Identity Manager server, then copy the `gateway.zip` file from the Identity Manager Installation CD.
8. Unpack the `gateway.zip` file into the directory where the gateway was installed.
9. Install the gateway service by running the command:

   ```
   gateway -i
   ```
10. Run the following command to start the gateway service:

    ```
    gateway -s
    ```

Step 3: Verify Functionality

Prior to upgrading to Identity Manager 6.x versions:

- Verify that all servers are present on the network
- Verify that the schema is successfully updated

Upgrade From Identity Manager 5.x to 6.x

Use the following information and procedures to update Identity Manager.

Note In some environments, you may prefer to follow the manual update procedures. If so, refer to the section titled Installing Identity Manager Manually in *Identity Install Pack Installation*.

Step 1: Upgrade the Identity Manager Software

Use the following procedures to upgrade the Identity Manager software.

Notes:

- During upgrade, you need to know the location where your application is installed.
- Commands shown in the following steps are specific to a Windows installation and Tomcat application server. The commands you use may differ depending on your specific environment.

To upgrade Identity Manager:

1. Shut down the application server.
2. If you are running the Sun Identity Manager Gateway on the Identity Manager server, stop the gateway service with this command:

   ```
   net stop "Sun Identity Manager Gateway"
   ```

3. You may install the software using one of two methods:

   - *Using the installer GUI*

   Run the `install.bat` (for Windows) or `install` (for UNIX) command to launch the installation process.

   The installer displays the Welcome panel.

   - *Using the nodisplay option*

   Change directory to the software location. Enter the following command to activate the installer in nodisplay mode:

```
install -nodisplay
```

   The installer displays the Welcome text. The installer then presents a list of questions to gather installation information in the same order as the GUI installer in these procedures.

Note

- If no display is present, the installer defaults to the nodisplay option.

- The installer does not install an older version of the software over a newer version. An error message appears in this case, and the installer exits.

4. Click **Next**. The installer displays the Install or Upgrade? panel.
5. Select **Upgrade**, and then click **Next**.

   The installer displays the Select Installation Directory panel.
6. Select the directory where the earlier Identity Manager version of is located
7. Click **Next**.

   The installer displays progress bars for the pre and post-update processes.

   The installer displays the Installation Summary panel.

   For detailed information about the installation, click **Details**. Depending on the amount of information captured during the installation process, not all messages may not be displayed here. View the log file (identified in details) for more information. When finished, click **Close** to exit the installer.
8. Remove all of the compiled Identity Manager files from the application server work directory.

Step 2: Update the Sun Identity Manager Gateway

If you are running the Sun Identity Manager Gateway on a remote system, update it by using the following steps.

1. Log in to the Windows system where the Sun Identity Manager Gateway is installed.
2. Change to the directory where the gateway is installed.
3. Stop the gateway service by running the command:

   ```
   gateway -k
   ```
4. If using Windows 2000 or later, exit all instances of the Services MMC plug-in.
5. Remove the gateway service by running the command:

   ```
   gateway -r
   ```
6. Backup and delete the existing gateway files.
7. Extract the new gateway files. If the newly updated gateway is installed on a system that is not the Identity Manager server, then copy the `gateway.zip` file from the Identity Manager Installation CD.
8. Unpack the `gateway.zip` file into the directory where the gateway was installed.
9. Install the gateway service by running the command:

   ```
   gateway -i
   ```

10. Run the following command to start the gateway service:

```
gateway -s
```

Restoring Customizations After Upgrade

After upgrading, restore customized files and objects.

File Customizations

During upgrade, files are created that contain your customizations. Some of these customizations are reapplied automatically. Others require that you reapply the changes manually (meaning that you must edit the new file to incorporate changes from the previous file version, and then save the file).

Any customized files (such as JSP and HTML) are copied into the `$WSHOME/patches/Sun_Java_System_Identity_Manager_Version_Date_/savedFiles` directory. The `changedFileList` file in this directory contains the list of all of the customized files that were saved.

Most of the files in the `changedFileList` are restored during the upgrade process. However, some of these files are not restored. The list of files that are not restored can be found in the `$WSHOME/patches/Sun_Java_System_Identity_Manager_Version_Date_/savedFiles/notRestoredFileList` file.

Those files that are restored replace newer versions of the files that were installed with the upgrade. The newer version of the files can be found in the `$WSHOME/patches/Sun_Java_System_Identity_Manager_Version_Date_/filesNotInstalled` directory. The `notInstalledFileList` file in this directory contains this list of files.

In addition, files may have been added to the current installation of Identity Manager that were not part of the original installation. Some or all of these may be overwritten by the upgrade. Before they are overwritten, they are saved in the `savedFiles` directory. The `savedFileList` contains the list of these files.

Object Customizations

If you set up your system configuration before performing the upgrade, you do not need to do anything to restore your object customizations unless you customized objects that are not listed in the System Configuration. You need to restore these objects by manually importing the XML for these objects.

As a safety measure, many of the commonly customized objects are saved to files during the import of `update.xml`. These can be found in the WEB-INF/`savedObjects` directory in sub-directories whose names are the timestamp of the time at which the import was done. An import of `update.xml` can lead to the creation of up to three subdirectories in the `savedObjects` directory. The object XML files can be imported manually to restore object customizations.

Troubleshooting Update

- If you encounter problems during the upgrade, consult the update log files located in the `$WSHOME/patches/logs` directory. The file names for the logs are based on a timestamp and the stage of the update.

Test and Resolve Issues

Testing is crucial prior to deploying the development upgrade image to your production environment.

Develop and Execute the Test Plan

Create and execute an effective test plan for the development package. A generic test plan includes:

1. Introduction
   - Description of this Document
   - Related Documents
   - Schedule and Milestones
2. Resource Requirements
   - Hardware
   - Software
     - Test Tools
   - Staffing
     - Responsibilities
     - Training
3. Features To Be Tested / Test Approach
   - New Features Testing
   - Regression Testing
4. Features Not To Be Tested

5. Test Deliverables
6. Dependencies/Risks
7. Entrance/Exit Criteria

Document all Changes

To aid in this process:

- You should have some sort of Version Control system
- Make sure all the existing customizations are stored in the CVS system and tagged
- Check in all new customizations after the upgrade test cycle is complete
  - Changed Objects
  - Changed Files such as JSPs, images, etc.
- The image that is deployed into Production from QA should be all of these changed objects that were stored in the versioning system. This should occur after production has been through the upgrade process

Develop a Production Rollout Plan

Create a Deployment Image

Import any updated objects and files not the entire environment from the test environment. Create a deployment image compatible with your development process. If needed, contact Professional Services.

Generally there are two parts making up a deployment image:

- File system - This can be built in the form of zip files from the testing environment and be deployed over the production environment after upgrading.
- Repository objects - These can be done the same way as `upgrade.xml` or `init.xml` files.

Create Updated Forms, Workflows, And Email Templates

These updates can be imported over the current version.

Document the Procedure

This is important to do during the upgrade of the test environment so that it can be replicated in production.

Upgrade Production

1. Prior to upgrading you should capture production data in a series of backups.

Note Stop all processes and client access prior to backing up.

   - Repository Backup - Snapshots of the database where the repository is stored is the best option.
   - Web application backup - Full backups of the web application directory are the best option.

2. Take a baseline snapshot of your file system objects, operating system, JDK, etc.
3. Clean up unnecessary files and hotfixes.
4. Deploy from packaged development environment
5. Import any modification based on differences between test and product environments

A Assessment Worksheets

This appendix contains a series of worksheets that you can print out and record important configuration data. Use this data help prepare for and choose an upgrade path.

- *Platform Inventory*
- *Identity Manager Installation*
- *Custom Components*

Platform Inventory

Record inventory information in the following table.

Platform component	Your Information
Application Server	Version _____ Operating System _____ JDK _____
Database Server	Version _____
Gateway Server	Version _____

Record resource information in the following table.

Resource	Name	Version
Resource A	_____	_____
Resource B	_____	_____
Resource C	_____	_____
Resource D	_____	_____
Resource E	_____	_____
Resource F	_____	_____
Resource G	_____	_____
Resource H	_____	_____
Resource I	_____	_____
Resource J	_____	_____

Identity Manager Installation

Record Identity Manager Installation information in the following table.

Identity Manager	Your Information
Installed Release	_____
Service Packs	_____ _____ _____ _____ _____
Installed Hotfixes	_____ _____ _____ _____ _____ _____ _____

Custom Components

Record custom work information in the following table. Custom work consists of any component that has been modified for your installation.

Component	Your Information
JSPs	
Custom Java Code	
waveset.properties File	
wpmessages.properties File	
Custom Resource Adapters	

Custom Java	
Customized Property Files	
Customized Style Sheets	
Repository Objects Forms	
Workflows	
Rules	

Task Definition	_____ _____ _____ _____
Task Template	_____ _____ _____ _____
User Form	_____ _____ _____ _____

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