meshIQ Platform Core Services Installation Guide

Version 11

Document Title: meshIQ Platform Core Services Installation Guide
Document Release Date: May 2024
Document Number: CS-INS11.000
Product Release: 11.0.1 (JRE 11)

Published by:

Research & Development
meshIQ
88 Sunnyside Blvd, Suite 101
Plainview, NY 11803

Acknowledgements: The following terms are trademarks of meshIQ in the United States or other countries or both: AutoPilot, AutoPilot M6, M6 Web Server, M6 Web Console, M6 for WMQ, MQControl, Navigator, XRay.

The following terms are trademarks of the IBM Corporation in the United States or other countries or both: IBM, MQ, WebSphere MQ, WIN-OS/2, AS/400, OS/2, DB2, Informix, AIX, and z/OS.

InstallAnywhere is a trademark or registered trademark of Flexera Software, Inc.

This product includes software developed by the Apache Software Foundation (*http://www.apache.org/*), including Derby Database Server. The Jakarta Project" and "Tomcat" and the associated logos are registered trademarks of the Apache Software Foundation.

Intel, Pentium and Intel486 are trademarks or registered trademarks of Intel Corporation in the United States, or other countries, or both.

Microsoft, Windows, Windows 10, the Windows logos, Microsoft SQL Server, and Microsoft Visual SourceSafe are registered trademarks of the Microsoft Corporation.

UNIX is a registered trademark in the United States and other countries licensed exclusively through X/Open Company Limited.

Mac, Mac OS, and Macintosh are trademarks of Apple Computer, Inc., registered in the U.S. and other countries.

"Linux" and the Linux Logos are registered trademarks of Linus Torvalds, the original author of the Linux kernel. All other titles, applications, products, and so forth are copyrighted and/or trademarked by their respective authors.

Oracle®, Java, MySQL, and NetSuite are registered trademarks of Oracle and/or its affiliates.

Other company, product, and service names may be trademarks or service marks of others.

Table of Contents

Figures

Tables

Chapter 1: Introduction

Welcome to the meshIQ Platform Core Services Installation Guide. This guide describes installation options, steps, and procedures for meshIQ Platform Core Services. Please review this guide carefully before installing the product. meshIQ Platform Core Services will hereinafter be identified as Core Services.

1.1 How This Guide is Organized

Chapter 1: Identifies the users and history of the document, as well as additional and alternate documents. System requirements are outlined in addition to supplying support and reference information.

Chapter 2: Provides instructions for new installations of Core Services. In addition, there is a section for upgrading your installation. Installation instructions as they apply to all supported platforms and operating systems are provided.

Chapter 3: Provides any post installation set-up or customization information along with verifying and starting Core Services. In addition, there is a section for stopping Core Services.

Chapter 4: Outlines the uninstall procedures for Windows. Procedures for all operating systems and platforms are similar.

Appendix A: Provides a detailed list of all reference information required for the installation of Core Services.

Appendix B: Contains conventions used in this document.

1.2 History of This Document

Table 1-1. Document History

Release Date	Document Number	Product Version	Summary
January 2022	APM6-INS 632.001	6.0 with SU 32	Added section 3.2.4 Encrypting Communication between the Domain Server, the CEP, and Enterprise Manager
May 2022	APM6-INS 632.002	6.0 with SU 32	Added Internet Explorer caveat to System Requirements.
May 2024	CS-INS11.000	AP11 with SU 01	New format; version 11 updates.

1.2.1 User Feedback

meshIQ encourages all Users and Administrators of Core Services to submit comments, suggestions, corrections, and recommendations for improvement for all Core Services documentation. Please send your comments via email to *support@meshiq.com*. You will receive a response, along with the status of any proposed change, update, or correction.

1.3 Related Documents

The complete listing of related and referenced documents is listed in *Appendix A* of this guide.

1.4 Release Notes

See the *meshIQ Platform release notes page* in the meshIQ Resource Center.

1.5 Intended Audience

This document is intended for personnel installing and customizing Core Services. The installer should be familiar with:

Java versions 11 and 14.

Target operating system environment.

The installer may need administrative privileges for the target platform.

Procedures for installing software on the target platform such as Windows, AIX, Linux.

Basic understanding of TCP/IP.

1.6 System Requirements for Supported Platforms

This section identifies system and platform compatibilities for Core Services. These represent estimates for typical systems and exact requirements will vary depending on the size of the environment.

All references in this document to Internet Explorer are subject to Internet Explorer being available. Customers who plan to move away from this older functionality are encouraged to consider using the equivalent functionality that is available within the meshIQ Platform tracking application. Sensors can provide metrics about message processing and point to backlogs in the processing pipeline by showing lag times in message streaming and indexing.

	Windows	UNIX
Domain Server	X	X
CEP Server	X	X
Console	X	X
Web Server	X	X

Refer to the meshIQ Resource Center for supported application plug-ins.

1.6.1 Windows Hardware and Software Requirements


NOTE

Recommended configuration depends on size of network and number of managed applications. Listed recommended configurations are good for up to 50 servers.

1.6.1.1 Hardware Configuration

meshIQ Domain Server

Minimum: 1 GHz 512 MB RAM; 200 MB disk space.
Recommended: 2 GHz 1G RAM; 1GB disk space.

meshIQ CEP Server

Minimum: 2 GHz 1 GB RAM; 200 MB disk space.
Recommended: 3 GHz 3G RAM (4-core CPU); 1GB disk space.

meshIQ Enterprise Manager

Minimum: 1 GHz 512 MB RAM; 200 MB disk space.
Recommended: 1 GHz 1G RAM; 500 MB disk space.

1.6.1.2 Software Configuration

Windows 10 or higher.

Java version 11, 14, or higher with latest patches applied. Prior to Service Update 34, JRE 8 or higher is supported. For Service Updates 34 and later, JRE 11 and later are supported.

Apache Tomcat (included with Domain Server installation).

Microsoft SQL, Oracle, and DB2.

1.6.2 Linux Hardware and Software Requirements

Minimum Hardware Configuration:

A minimum of 16 GB of available RAM

A minimum of 20 GB in the file system used to copy the install package

A minimum of 40 GB in the target file system where the product is installed (for example: /opt).

A minimum of 1 GB in /tmp for use during the installation (or in alternate directory pointed to by IATEMPDIR).

Minimum Software Configuration:

Linux RedHat RHEL 7-9

Java version: Prior to Service Update 34, JRE 8 and later are supported. For Service Updates 34 and later, JRE 11 and later are supported.

1.6.3 AIX Hardware and Software Requirements

Minimum Hardware Configuration:

A minimum of 6 GB of available RAM

A minimum of 4 GB in the file system used to copy the install package

A minimum of 10 GB in the target file system where the product is installed (for example: /opt).

A minimum of 512 MB in /tmp for use during the installation (or in alternate directory pointed to by IATEMPDIR).

Minimum Software Configuration:

AIX 7.1, 7.2, 7.3, or higher

Java version: Prior to Service Update 34, JRE 8 and later are supported. For Service Updates 34 and later, JRE 11 and later are supported.

1.6.4 UNIX Hardware and Software Requirements

Minimum Hardware Configuration:

A minimum of 6 GB of available RAM

A minimum of 4 GB in the file system used to copy the install package

A minimum of 10 GB in the target file system where the product is installed (for example: /opt).

A minimum of 512MB in /tmp for use during the installation (or in alternate directory pointed to by IATEMPDIR).

Minimum Software Configuration:

Java version: Prior to Service Update 34, JRE 8 and later are supported. For Service Updates 34 and later, JRE 11 and later are supported.

1.6.5 Other Platforms, Hardware and Software Requirements

Minimum Hardware Configuration:

A minimum of 8 GB of available RAM

A minimum of 10 GB in the file system used to copy the install package

A minimum of 40 GB in the target file system where the product is installed (for example: /opt).

A minimum of 512 MB in /tmp for use during the installation (or in alternate directory pointed to by IATEMPDIR).

Minimum Software Configuration:

Java version: Prior to Service Update 34, JRE 8 and later are supported. For Service Updates 34 and later, JRE 11 and later are supported.

1.7 Technical Support

If you need technical support, you can contact meshIQ by telephone or by email. To contact technical support by telephone, call **800-963-9822 ext. 1.** If you are calling from outside the United States, dial **001-516-801-2100.** To contact mySupport by email, send a message to *mysupport@meshiq.com*. To access the meshIQ automated mySupport system (user id and password required), go to: *https://mysupport.meshiq.com/*. Contact your local meshIQ Platform Administrator for further information.

1.8 Conventions

Refer to *Appendix B* for typographical and naming conventions used in all Core Services documentation.

Chapter 2: meshIQ Platform Core Services Installation

This section provides detailed instructions for new installations of meshIQ Platform Core Services. The distribution includes several installation options. The Core Services Installation Guide (this document) is available in PDF format and can be downloaded from the *meshIQ Resource Center*. Examples that show how to extend and customize the run-time environment can also be found in the Resource Center.

2.1 Distribution Contents

Core Services distribution contains the following folders:

- Domain Server (domain folder): includes Domain Server, CEP Server, Enterprise Manager, Web Console, Tomcat, and the Web Reporter. There must be at least one instance of the Domain Server within your network for Core Services to function. The Domain Server provides directory and security services shared by all services within the meshIQ Platform domain. (Serial Number required.) Select this option if you do not have Core Services already installed and you want to install the Domain Server, CEP Server, Enterprise Manager, and Web Console.
- CEP Server (cserver folder): includes CEP Server only. To be installed on every machine to be managed or monitored. Required plug-ins can be installed under the plugins folder.

  Select this option if you do not have Core Services already installed and you want to only install the CEP Server.
- Administration (admin folder): includes Enterprise Manager only. To be installed on every machine that will be used to manage, deploy, or develop Business Views and manage Core Services. Local administrators determine user group access and privileges. Custom console installations are not required.

  Select this option if you do not have Core Services already installed and you want to only install Enterprise Manager.
- Apache Web Server (apache-web folder): Open-Source Apache Web Server (for Windows only).
- Core Services plug-ins (plugins folder): Plug-ins for different technologies.

2.2 Technical Documents

Prior to installing meshIQ Platform Core Services, you should review all text files and installation procedures provided on the installation media. You should print all of the installation related materials to give yourself quick access to any required information during the installation procedures. A Core_Services_11.0.x.htm file is included in the software repository.

(Sets of printed documents are available from your meshIQ representative or meshIQ Support.)

2.2.1 Licensing Information

meshIQ has introduced a new licensing model for versions 11 and later that is based on the number of Total Instances and the User Count. The standard evaluation license is issued for 15 days and includes five users and three servers. It will run the domain server, CEP server and web server. After 15 days, a new license key must be installed. Refer to the *Installing meshIQ platform licenses when upgrading to version 11* article in the Resource Center for information on obtaining a license.

2.3 Installing Core Services in Windows

To install Core Services in Windows, do the following:

1. If the meshIQ Platform is previously installed, stop all services and components including the Domain Server, CEP Server, and Web Server.
2. Your Core Services distribution will contain an mpdomain.exe file. Click **Run** to run this file.
3. Read the installation Introduction screen, and click **Next**.

NOTE

The installation is scripted, and default values should be used when possible.

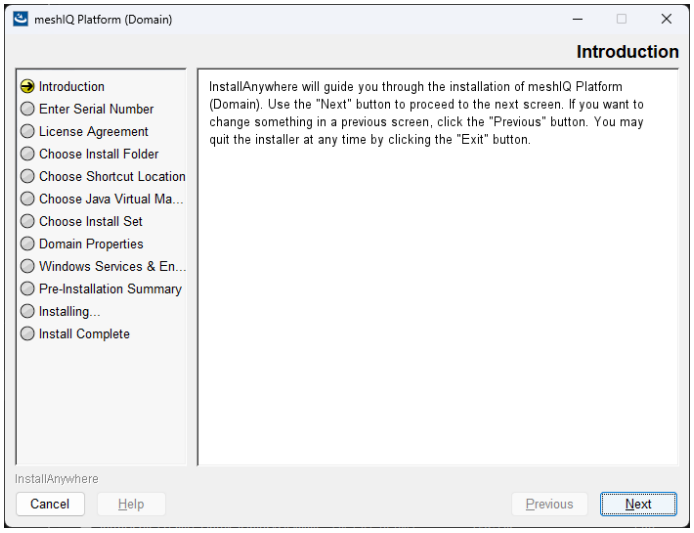


Figure 2-1. Installation Introduction Screen

3. Enter the **Serial Number** and click **Next**.

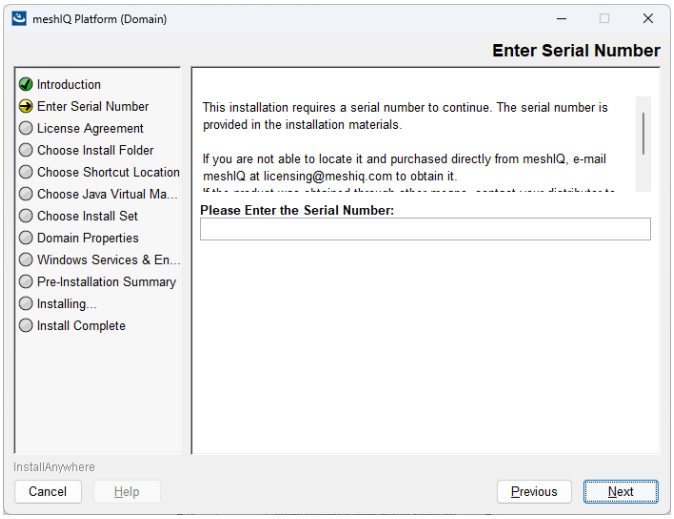


Figure 2-2. Enter Serial Number Screen

4. Review the license agreement prior to accepting. Select **I accept the terms of the license agreement.** If you select **I do not accept the terms of the license agreement**, the installation is terminated, and a license warning screen is displayed. Click **Next**.

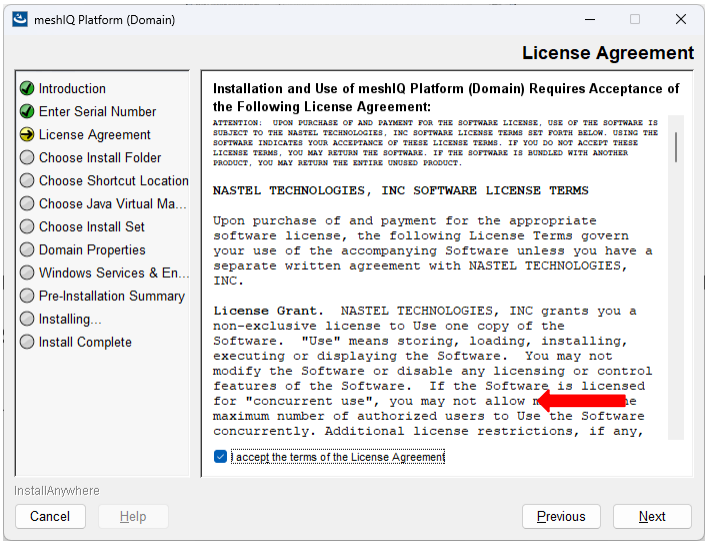


Figure 2-3. License Agreement Screen

5. Choose a folder or keep the default location and click **Next**.

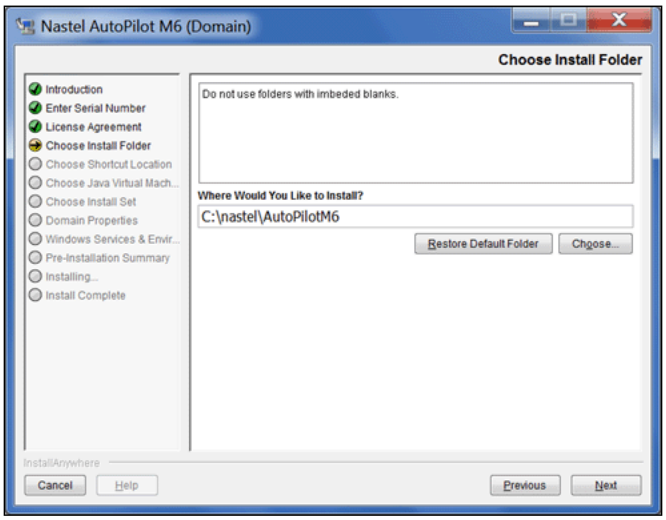


Figure 2-4. Choose Install Folder Screen

6. Choose a location for the shortcut icons and click **Next**.

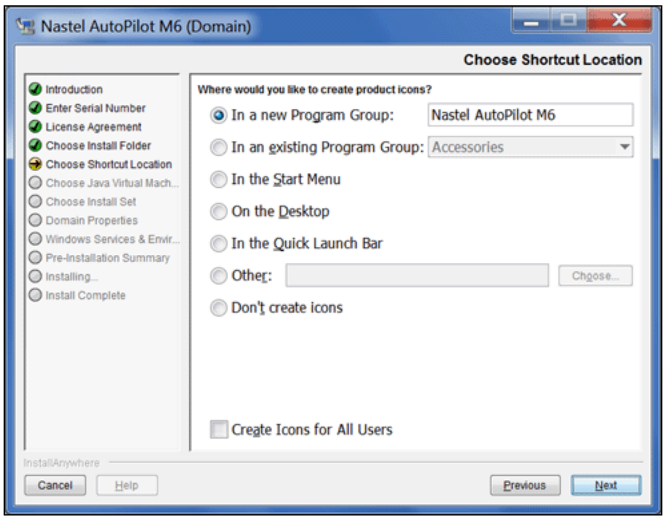


Figure 2-5. Choose Shortcut Location Screen

There are seven available options:

- **In a new Program Group –** Creates a program group to install the icons.
- **In an existing Program Group –** Installs the icons in an existing program group. Selecting this group will expand the drop-down menu. Select from the existing program groups.
- **In the Start Menu –** Installs the icons in the Start Menu program.
- **On the Desktop –** Installs the icons on the desktop.
- **In the Quick Launch Bar –** Installs the icons in the quick launch bar.
- **Other –** Allows selection of locations not available in the previous options. Click **Choose** to open the drop-down menu and select a location from the directory tree.
- **Don't create icons –** Installs Core Services without shortcut icons.

- **Create Icons for All Users –** Makes Core Services available to all users on a given machine. Not checking this option makes Core Services available only to a specific user.

7. Choose to use the Java VM installed with the product or one already installed on the system. It is recommended that you use the Java VM installed with the product. Click **Next**.

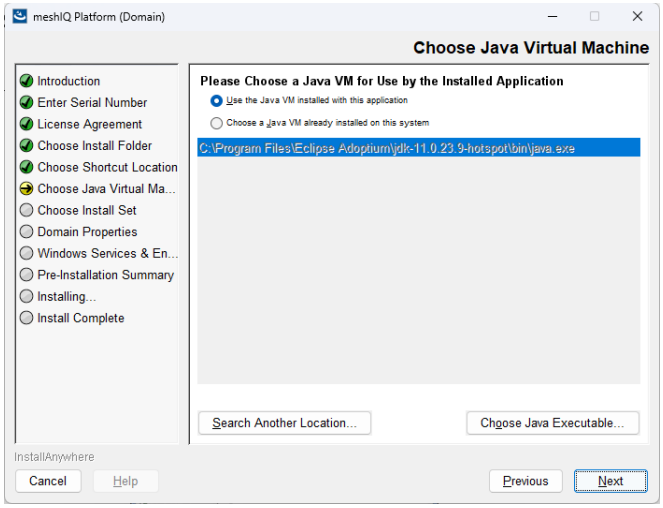


Figure 2-6. Choose Java Virtual Machine Screen

8. Choose the components to install. In this example it is all components. Click **Next**.

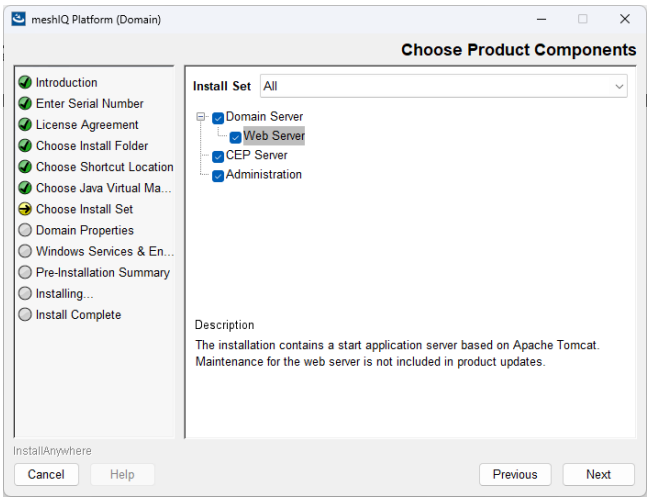


Figure 2-7. Choose Product Components Screen

9. Specify the domain properties or leave the defaults. Click **Next**.

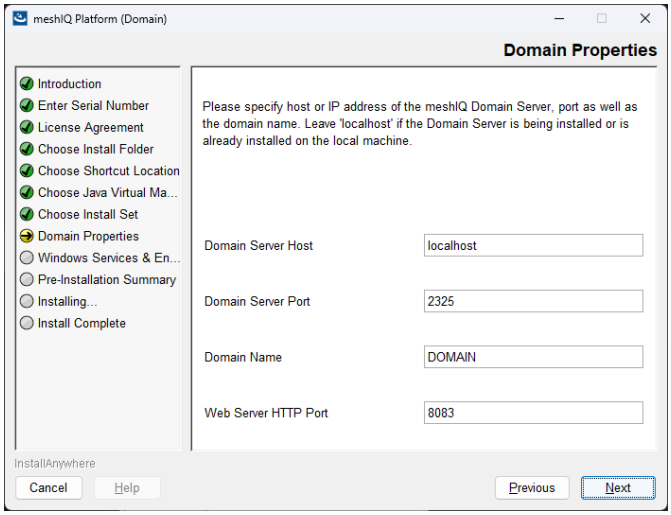


Figure 2-8. Domain Properties Screen

10. Specify whether server components should be registered as Windows services and indicate whether to update system environmental variables. It is recommended that you select both options. Click **Next**.

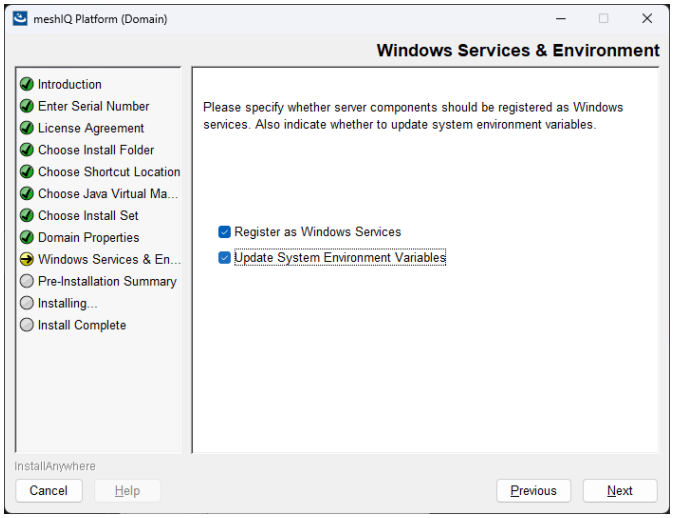


Figure 2-9. Windows Services & Environment Screen

11. Review your settings. If anything needs to be changed, click **Previous** to go to the dialog box that requires changes. When the settings are correct, click **Install**.

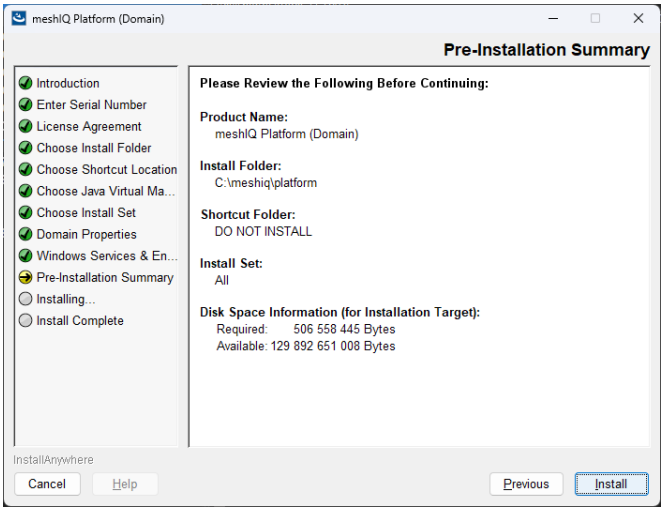


Figure 2-10. Pre-Installation Summary Screen

12. The following screen is displayed while the program is being installed.

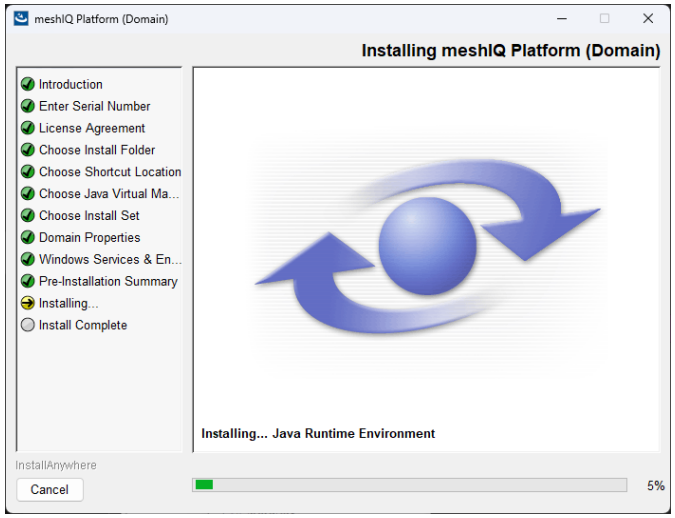


Figure 2-11. Installing Core Services (Domain) Screen

13. The following screen is displayed when the installation is complete. It is recommended that you review the `README.htm` file before proceeding. The location is provided on the *Install Complete* screen.

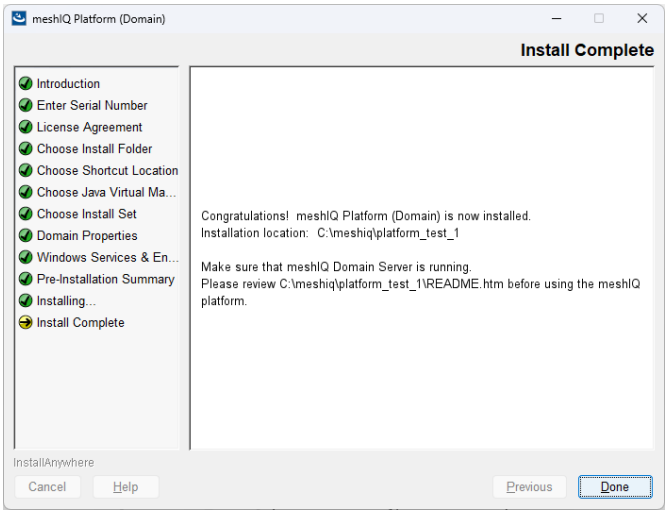


Figure 2-12. Installation Complete Screen

14. Restart all meshIQ Platform services and components.

> NOTE
>
> If the Domain option was installed, refer to Web Services at the end of this chapter to deploy meshIQ Platform Web Services.

Refer to *Chapter 3* for post-installation and startup procedures.

2.4 Installing Core Services Using Domain Server Option in UNIX

This chapter explains how to install Core Services in a UNIX environment. Please see the *Administrator's Guide*, available in PDF format with your installation, for additional important information about configuration. meshIQ Platform Core Services can be installed on AIX and LINUX.

2.4.1 Install Core Services Domain Server in UNIX Environment


NOTE

A Java Virtual Machine is included with all downloads. It will run automatically when you run the shell script.

For each environment:

1. Select the 'domain' distribution option to download the appropriate installer for a full installation of Domain Server, CEP Server, Web, and Console components as a single package. See section *2.3*, *Installing Core Services in Windows*, steps 2-9 for details.
2. Open a shell and cd to the directory where you downloaded the installer.
3. At the prompt, type: `sh ./mpdomain.bin`

2.4.2 Starting Core Services in UNIX Environments

Starting the Domain Server


IMPORTANT!

TCP ports *must not* be shared among meshIQ Platform services and any other TCP server/application on the same machine.

1. From the prompt, type cd [*AUTOPILOT_HOME*]
2. From the [*AUTOPILOT_HOME*] directory, type: cd naming
3. From [*AUTOPILOT_HOME*]/naming, type: nohup ./ ATPNAMES & to start Domain Server.

Starting CEP Servers


NOTE

1. Domain Server (ATPNAMES) must be running and highly available.
2. The following procedure is typical of starting meshIQ Platform Core Services in a Unix environment; however, it is typical of start procedures on all supported platforms.

1. From the prompt, type cd [*AUTOPILOT_HOME*]
2. From the [*AUTOPILOT_HOME*] directory, type: cd localhost
3. From [*AUTOPILOT_HOME*]/localhost, type: nohup ./ATPNODE & to start the CEP Servers.

Starting the Web Server


NOTE

1. Domain Server (ATPNAMES) must be running and highly available.
2. The following procedure is typical of starting meshIQ Platform Core Services in a Unix environment; however, it is typical of start procedures on all supported platforms.

1. From the prompt, type: cd [*AUTOPILOT_HOME*]
2. From the [*AUTOPILOT_HOME*] directory, type: cd apache-tomcat
3. From the [*AUTOPILOT_HOME*]/ apache-tomcat directory, type: cd bin
4. From [*AUTOPILOT_HOME*]/apache-tomcat/bin, type: ./catalina.sh run to start Web Server.

2.4.3 Stopping Core Services in UNIX Environments

Stopping the Domain Server

1. From the Command Prompt, cd [*AUTOPILOT_HOME*]
2. From the [*AUTOPILOT_HOME*] directory, type: cd bin
3. From [*AUTOPILOT_HOME*]/bin, type: apnet –domain localhost stop DOMAIN_SERVER_SYSTEM, to stop the Domain Server component.

Stopping CEP Servers

1. From Command Prompt, cd [*AUTOPILOT_HOME*]
2. From the [*AUTOPILOT_HOME*] directory, type: cd bin
3. From [*AUTOPILOT_HOME*]/bin, type: apnet –domain localhost stop <NODENAME>_SYSTEM, to stop the CEP Servers.

Stopping the Web Server

1. Edit $CATALINA_HOME/bin/catalina.sh and add the following line:

CATALINA_PID=$CATALINA_HOME/tomcat.pid

2. From [*AUTOPILOT_HOME*]/apache-tomcat/bin, type: catalina.sh stop –force

2.4.4 Installer Properties File


IMPORTANT!

1. The properties file may be named in the following two ways with an installer saved as: `<installername.exe>; installer.properties` or `installername.properties`.
2. Ensure that the properties file ends in .properties, not .txt.

An installer properties file is an ASCII text file that defines certain parameters for the installation. This may be useful if there is a complex project being installed both internally and externally. The internal end-users do not need to see panels such as the License Agreement panel. The properties file is an ideal way to turn panels on or off depending on your specific needs. In addition, the properties file can define the type of installation you want to run, such as console or silent.

If the properties file is in the same directory as the installer, it will be invoked automatically. However, if it is in a different directory, you may use the following command line option to direct it to the relative path: `C:\ <path to the installer> -f <path to the properties file>`

An example of **`installer.properties`** file contents:

```
USER_INSTALL_DIR=/opt/meshiq/platform
INSTALLER_UI=Swing
USER_INPUT_RESULTS=localhost
AP_DOMAIN_SERVER_HOST=localhost
```

Where: properties file variable is **INSTALLER_UI=<*mode*>**

2.4.5 Command Line Parameter

To trigger a particular mode from the command line, type the following command:

```
installername -i <gui/console/silent>
```

The properties file may also be called from the command line:

```
installername -f <properties file>
```

The direct or relative path to the properties file may be used.


NOTE

1. File separators should be denoted by the "$/$" variable or be escaped.
2. Values may ignore case.
3. In any mode on Windows systems, installers and uninstallers will always display the very last: "Cleaning-up" dialog box, as well as the "Preparing to install" panel.

InstallAnywhere variables may be incorporated in these values, and they will be resolved at install time.

2.5 Console Mode Installation Option


NOTE

This section applies only to non-Windows installation.

The Console mode mimics the default GUI steps provided by InstallAnywhere and uses standard input and output. The most significant advantage to console mode is that UNIX developers no longer need X-windows (X11) to run the installers.

Console mode allows text to be output to the console line by line. Console Mode does not allow for any formatting, clearing of the screen, or positioning of the cursor. A sample interactive console wizard step may resemble the following (typical) example:

```
+-------------------------------------------------------------+
|  CHOOSE ALIAS, LINK, SHORTCUT FOLDER                        |
|  Where would you like to create application shortcuts?      |
|   1) In the Start Menu                                      |
|   2) On the Desktop                                         |
|   3) Don't create shortcuts                                 |
|-------------------------------------------------------------|
|  Please make a selection [1, 2, or 3], and then             |
|  press ENTER.                                               |
|-------------------------------------------------------------|
```


2.5.1 Using Console Mode

IMPORTANT!

If both a properties file and a command line parameter exist, the properties file will override any command line settings.

Call up console mode using one of the following options:

- ***Installer properties*** file.
- ***Command Line*** parameter (-i console)

To move back a step in the installation type: **back**, at the prompt.

2.5.2 Setting InstallAnywhere Variables from the Command Line (Unix Platforms Only)

InstallAnywhere variables can be set for an installer when it is launched from the command line by passing in an argument using the **"-D"** option and a key (variable) value pair similar to the way in which Java properties are set from the command line for a Java application. For example, to override the default installation directory for a run of the installer, insert the following argument:

```
%> install -DUSER_INSTALL_DIR="/opt/meshiq/platform"
```

Arguments with spaces must be wrapped in quotes.

2.6 Deploy meshIQ Platform Web Services

meshIQ Platform Web Services is a Java Platform Enterprise Edition (J2EE) application used for interfacing with core meshIQ components. It can be installed on the following application servers:

- WebSphere Application Server 6.0 and 6.1 *(section 2.6.1)*
- WebLogic Application Server 9.2 *(section 2.6.2)*
- JBoss Application Server 4.X *(section 2.6.3)*

NOTE

Users installing *the Web Services* application must be familiar with application deployment and JDBC/JMS configuration for the desired application server. The application requires a database and, optionally, a JMS Server; see sections below for details. Refer to your application server administration manuals for more details on JDBC, JMS and web application deployment and configuration.

2.6.1 WebSphere Application Server 6.0 and 6.1

1. From the WebSphere Console, navigate to **Applications > Install New Application**.
2. Select Local Path and click **Browse**, select apws.war located in [*AUTOPILOT_HOME*]/webservices.
3. Enter apws as Context Root and click **Next**.
4. Continue to click **Next** to accept the default settings on the next three screens.
5. Click **Finish** to deploy the application.
6. Click **Save** to save the Master Configuration.
7. From the WebSphere Console, navigate to **Applications > Enterprise Applications** and start the apws_war application.

2.6.2 WebLogic Application Server 9.2

1. From the WebLogic Console, navigate to [domain] > Deployments > Install.
2. Locate apws.war which is located in [*AUTOPILOT_HOME*]/webservices and click Next.
3. Click **Next** to accept default settings on the next screen.
4. Click **Finish** to deploy the application.
5. Click Save and Activate Changes.
6. From the WebLogic Console, navigate to Deployments and start the apws application.

2.6.3 JBoss Application Server 4.X

Copy apws.war located in [*AUTOPILOT_HOME*]/webservices to:

<jboss_root>/server/<server_name>/deploy.

JBoss will automatically detect and deploy the web application.

2.7 Installing Service Updates

Service Updates (SUs) are non-cumulative service packs. Core Services and all preceding service updates must have already been installed prior to installing the latest service update.

1. Stop all meshIQ services and applications.
2. Copy the package into [*AUTOPILOT_HOME*]/updates
3. Using the GUI or from the command prompt, install the latest package

   [*AUTOPILOT_HOME*]/bin/pkgman ../updates/AP11.x_SU<#>.pkg

   where # represents the service update version.
4. If running using the GUI package manager, exit it before continuing.
5. You must start one of the core services (Domain Server, CEP or Enterprise Manager) to finalize installation BEFORE installing any other packages or running package manager again.
6. The first time you restart after updating, the system updates jar files. But to load the jar files correctly requires more than one restart. The easiest way to restart initially is to just run the help option, which will update all jars, display help and then exit.

   For the domain server:

   [*AUTOPILOT_HOME*]/naming/ATPNAMES -h

   For the CEP server:

   [*AUTOPILOT_HOME*]/localhost/ATPNODE -h

2.7.1 Next Steps

Using the same procedure as above, install the updated versions of Application Implementation (AIM) and Scheduler (if previously installed).

[*AUTOPILOT_HOME*]/bin/pkgman ../updates/AP_AIM-11.x.x.pkg

[*AUTOPILOT_HOME*]/bin/pkgman ../updates/JOB_SCHEDULER-11.x.x.pkg

If you have other modules to update, you can proceed to them at this point. However, if you have completed your installation, restart the meshIQ services.

2.8 Uninstall Service Update

1. Click the Installation Manager icon to display the Installation Manage screen.
2. Expand the CEP Server that contains the Service Update to be deleted.
3. Right-click ServiceUpdate and select **Uninstall selected package**. The latest Service Update will be uninstalled, and the Version number will change to the previous Service

Update number on all CEP Servers and the Web Server where the Service Update was installed.

4. To verify uninstall, right-click ServiceUpdate and select **Verify selected package**.

Chapter 3: meshIQ Core Services Post-Installation

NOTE

The installer automatically performs steps described below if the correct Domain Server location is specified during the installation process. You will need to perform these steps only if the Domain Server location has changed.

3.1 Registering with Domain Server

To register the CEP Server with the Domain Server:

1. Open node.properties file in `[AUTOPILOT_HOME]\localhost` with a word processor.
2. Change the `domain.server.url` property to the host name and port number of the meshIQ domain server. Both properties are equivalent (`java.naming.provider.url` has been deprecated and should be replaced with `domain.server.url`).

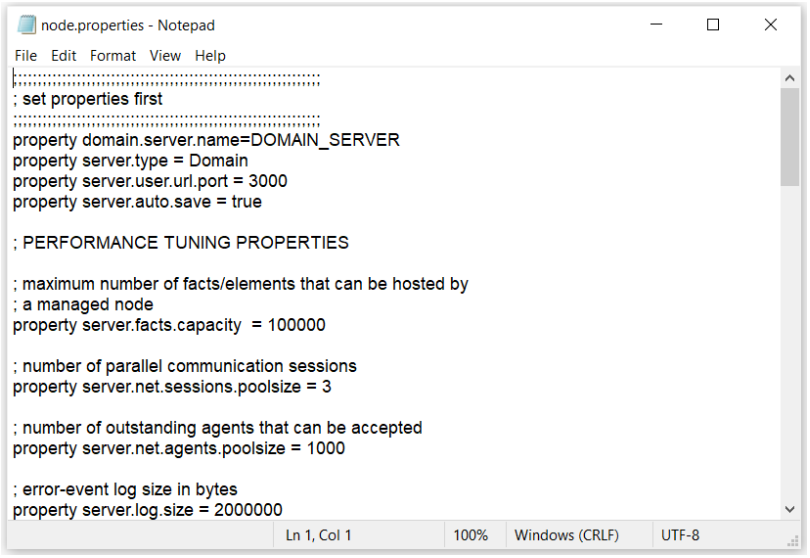


Figure 3-1. Typical node.properties File

3.2 Verifying the Core Services Installation

3.2.1 Starting Core Services in Windows Environments

1. Click Start > meshIQ Platform > meshIQ Enterprise Manager to open the Enterprise Manager program menu.

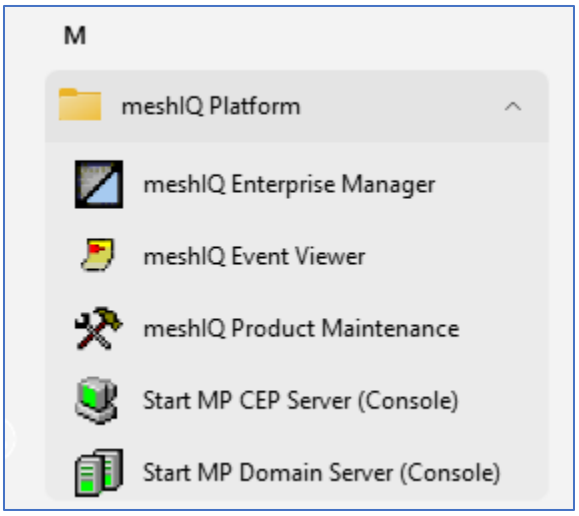


Figure 3-2. Windows Program Group for meshIQ Platform Core Services

2. The meshIQ Platform About dialog is displayed. Click **OK**.

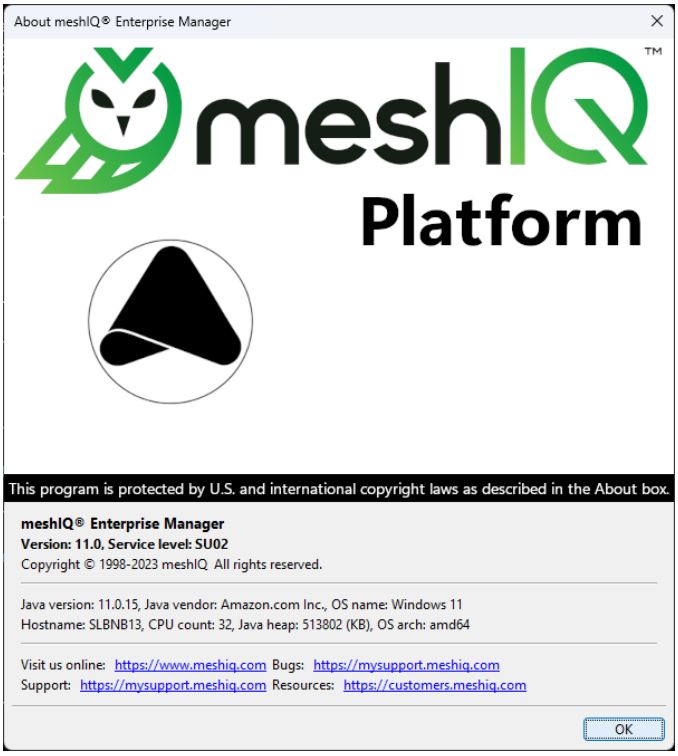


Figure 3-3. meshIQ Platform Enterprise Manager Screen

3. When the Logon screen is displayed:

    a. If you are a first-time user, go to step 3.

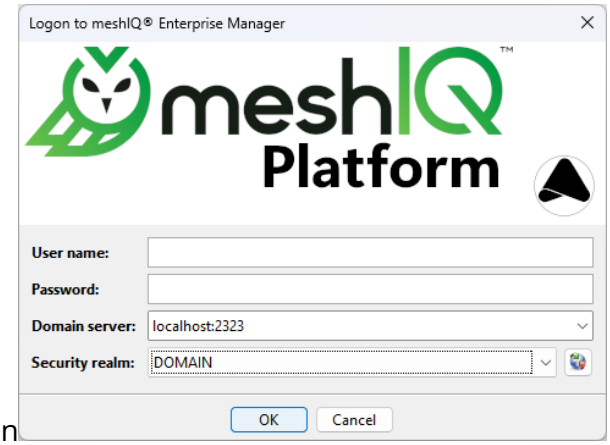
    b Click the refresh icon to obtain the Native domain.

    c. Select the Security realm you will be using to log in by clicking the down arrow in Security Realm field to display the pull-down menu. The default is *DOMAIN*.

4. If you are a first-time user, enter User name **Admin** and Password **admin**. You will be prompted to change your password.
5. Enter Domain server hostname and port.

    - The Domain server field includes the domain server name and port in the format <host:port>. The default Domain Server is localhost; If running on the same server as the domain server, specify **localhost:2323**. If you want to access other domains within the meshIQ network, select the Domain Server from the menu or enter the host or IP (for example, **mpserver:2323**).
    - The Domain Port is set during installation either by the installer or by default. If you want to change it to another, enter a new port or select the domain port from the pull-down menu.

6. Click **OK**.



n

Figure 3-4. Logon to meshIQ Domain

3.2.2 Starting Core Services from the Command Prompt

Starting Domain Server


IMPORTANT!

TCP ports *must not* be shared among meshIQ Platform services and any other TCP server/application on the same machine.

1. From Command Prompt, type cd [*AUTOPILOT_HOME*]
2. From the [*AUTOPILOT_HOME*] directory, type: cd naming
3. From [*AUTOPILOT_HOME*]\naming, type: ATPNAMES to start the domain server component.
4. Interrupt the argument, then type: ATPNAMES –console to flag the Domain server. All relevant data about the server and its host will be displayed. The "meshIQ Domain IS READY!" statement will be posted along with information and status display options.

Starting CEP Servers


NOTE

1. The Domain Server (ATPNAMES) must be running and highly available.
2. The following procedure is typical of starting meshIQ Platform Core Services in a Windows environment; however, it is typical of start procedures on all supported platforms.

1. From the Command Prompt, type: cd [*AUTOPILOT_HOME*]
2. From [*AUTOPILOT_HOME*] directory, type: cd localhost
3. From [*AUTOPILOT_HOME*]\localhost, type: ATPNODE -console, then press **Enter**.

Starting the Web Server


NOTE

1. The Domain Server (ATPNAMES) must be running and highly available.
2. The following procedure is typical of starting meshIQ Platform Core Services in a Windows environment; however, it is typical of start procedures on all supported platforms.

1. From the Command Prompt type: cd [*AUTOPILOT_HOME*]
2. From [*AUTOPILOT_HOME*] directory, type: cd apache-tomcat
3. From the [*AUTOPILOT_HOME*]\apache-tomcat directory, type: cd bin
4. From [*AUTOPILOT_HOME*]\apache-tomcat\bin, type: Catalina.sh run
   (UNIX systems: sh ./catalina.sh run)

Starting the Enterprise Manager

1. From [*AUTOPILOT_HOME*]\mconsole type: ATPCONS. The About meshIQ Platform Enterprise Manager screen is displayed. Click **OK**.

Figure 3-5. About meshIQ Platform Enterprise Manager Screen

NOTE

1. This procedure is typical of starting meshIQ Platform Core Services in a Windows environment; however, it is typical of start procedures on all supported platforms.
2. Your local meshIQ Administrator assigns Usernames and Passwords. See the System Administrator for Username and Password assignments.

2. When the Logon screen is displayed:
   a. If you are a first-time user, go to step 3.
   b. Click the refresh icon to obtain the Native domain.
   c. Select the Security Realm you will be using to log in by selecting it from the menu.
3. If you are a first-time user, enter User name **Admin** and Password **admin**. You will be prompted to change your password.

4. Enter the Domain server hostname and port.
   - The Domain server field includes the domain server name and port in the format <host:port>. The default Domain Server is localhost; If running on the same server as the domain server, specify **localhost:2323**. If you want to access other domains within the meshIQ network, select the Domain Server from the menu or enter the host or IP (for example, **mpserver:2323**).
   - The Domain Port is set during installation either by the installer or by default. If you want to change it to another, enter a new port or select the domain port from the pull-down menu.
5. Click **OK**.

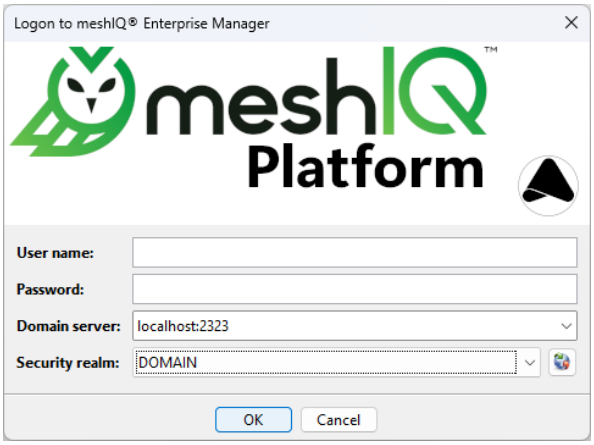


Figure 3-6. Logon to meshIQ Domain

6. When the Management Console is displayed, Enterprise Manager is running.

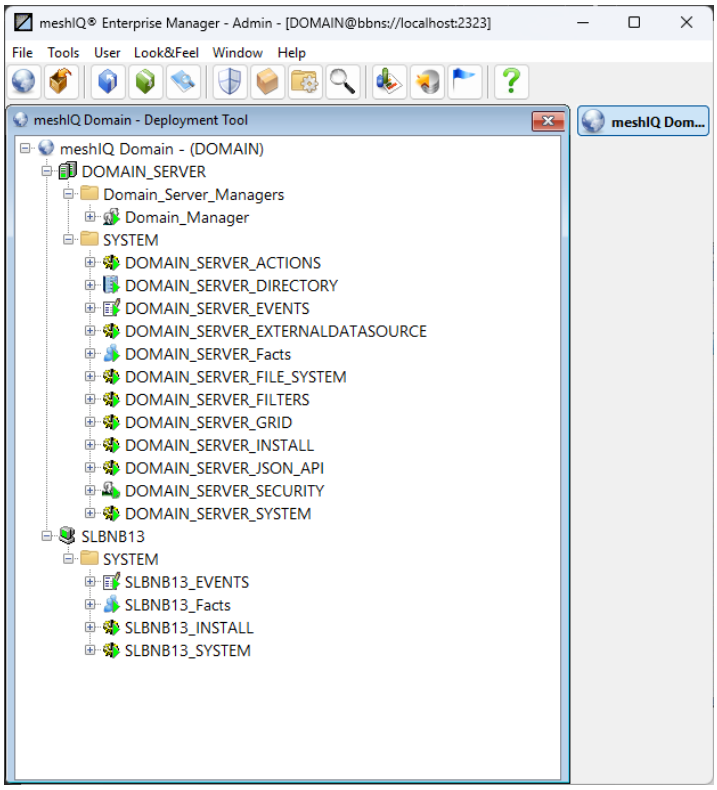


Figure 3-7. Enterprise Manager

3.2.3 Stopping Core Services

NOTE

There are no specific logoff procedures required in Core Services. The following is a typical example.

1. From the Deployment Tool screen, right click on the Domain Server or the Node you want to stop. Click Stop Node on the sub-menu. The stopped Node icon and name will switch to grey (for example: AUTOPILOT_WEB_EVENTS in grey color) when the screen is refreshed.

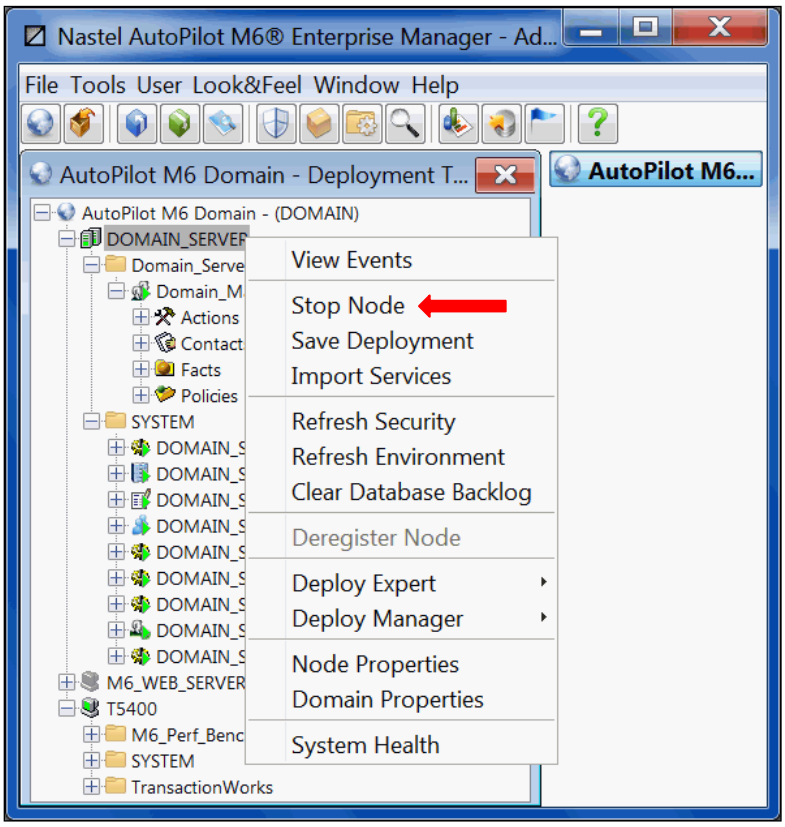


Figure 3-8. Stopping Domain Server or CEP Server (Typical)

2. Exit Consoles by selecting **File > Exit**. The screen will close; you will be logged off. Services will continue to run.

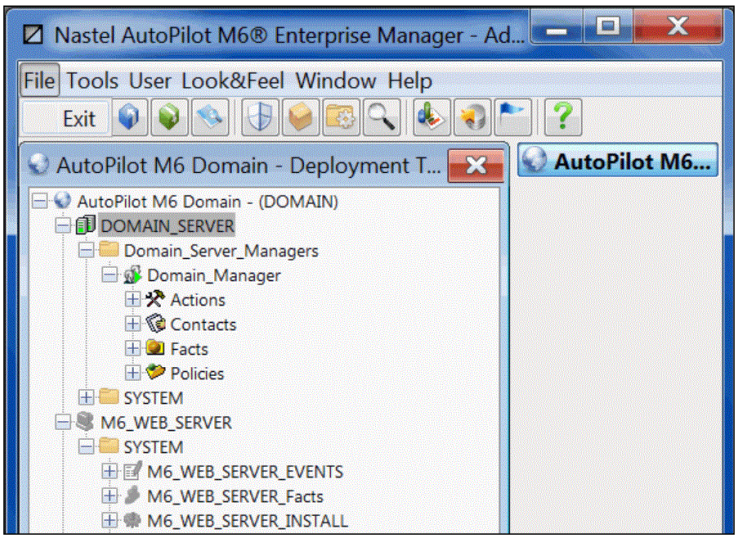


Figure 3-9. Exiting Console, User Logoff

> NOTE
> When exiting from the Console, the domain server, CEP Servers and Web servers remain running in the background. If it is necessary to stop these components, they must be shut down manually or using apnet utility.

3. Shut down the domain server and CEP Servers in Command Prompt or similar platform by typing: "q" from: `[AUTOPILOT_HOME]\naming` and `[AUTOPILOT_HOME]\localhost`. This is valid only if components are running in foreground "-console" mode.
4. From `[AUTOPILOT_HOME]\apache-tomcat\bin`, type: `shutdown.bat`. (UNIX systems: `-sh ./shutdown.sh`)

3.2.4 Encrypting Communication between the Domain Server, CEP, and Enterprise Manager

SSL can be used to encrypt communication between the domain server, the CEP, and Enterprise Manager. The instructions below explain how to create the certificates for enabling SSL in Core Services.

> NOTE
> These instructions assume that the certificates are self-signed.

A keystore file must be created with appropriate settings (for example, password, alias, and organization information).

A certificate must be created from this keystore.

The certificate must be added to the Java truststore (cacerts). At this time, we do not support adding the certificate to another truststore.

The global.properties file must be updated.

3.2.4.1 Examples

Example commands for each step are shown below:

1. Create the keystore file. This can be done using the keytool utility. For example:

   keytool -genkey -alias domainssl -keyalg RSA -keystore "D:\sslkeys\domainssl.jks"

The D:\sslkeys\domainssl.jks is just an example file. We typically like to use the jks extension for this, but you can choose any extension. After running this command, follow the prompts.

2. Create the certificate file, using the password and alias that you used in step 1. For example:

   keytool -export -alias domainssl -storepass abc123 -file "D:\sslkeys\domainssl_public_cert.crt" -keystore "D:\sslkeys\domainssl.jks"

In this example, domainssl_public_cert.crt is the cert file and abc123 is the password.

3. Import the cert to the java truststore, cacerts:

   keytool -import -v -trustcacerts -alias domainssl -file "D:\sslkeys\domainssl_public_cert.crt" -keystore cacerts -keypass changeit -storepass changeit

The -keystore is the location of cacerts. This must be the complete path to the java cacerts (usually {java_home)\lib\security\cacerts or similar). Unless an administrator has changed the -storepass, it is changeit by default.

4. Lastly, you must specify the location of the keystore file and the encrypted password in the global.properties file. To do this, place the following in the global.properties file:

   ;SSL properties
   property com.nastel.nfc.net.connectionSSLEnable=true
   property com.nastel.nfc.net.keystorepathandfile=c:\\SSL\\testabc.jks
   property com.nastel.nfc.net.encryptedkeystorepassword=J/n2uHF62EI=


NOTE

If connectionSSLEnable is missing, SSL will be turned off by default.

Chapter 4: Uninstall meshIQ Platform Core Services

This chapter provides the information required to uninstall meshIQ Platform Core Services.

NOTE

1 Uninstaller will only remove those files installed by meshIQ Platform Core Services. Files and directories that were User installed, created, or renamed (for example: experts or business views) will require manual removal.

2 Uninstall procedures outlined in this chapter are similar across all operating systems/platforms.

4.1 Uninstalling meshIQ Platform Core Services

1. Copy all user-defined business views into a Temp directory.
2. Exit Consoles by selecting **File > Exit**. The screen will close, and you will be logged off.

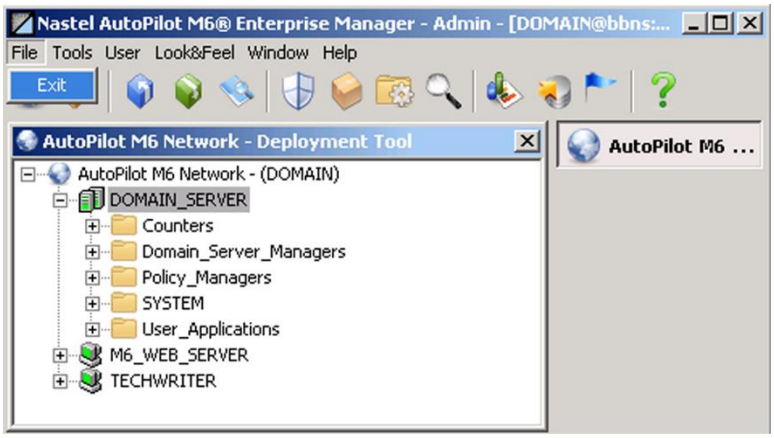


Figure 4-1. Exiting Consoles, User Logoff

3. Stop all core services via Windows Services by accessing Services through the Windows Control panel. Highlight and stop each service.
4. Click Start > meshIQ Platform > Uninstall meshIQ Platform (folder_name)

   where:

   folder_name is Domain, mnode, cserver or admin.

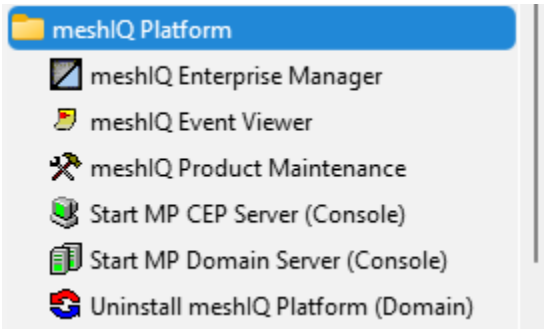


Figure 4-2. Uninstall meshIQ Platform Core Services

5. The InstallAnywhere Uninstaller screen will be displayed. Click Next.

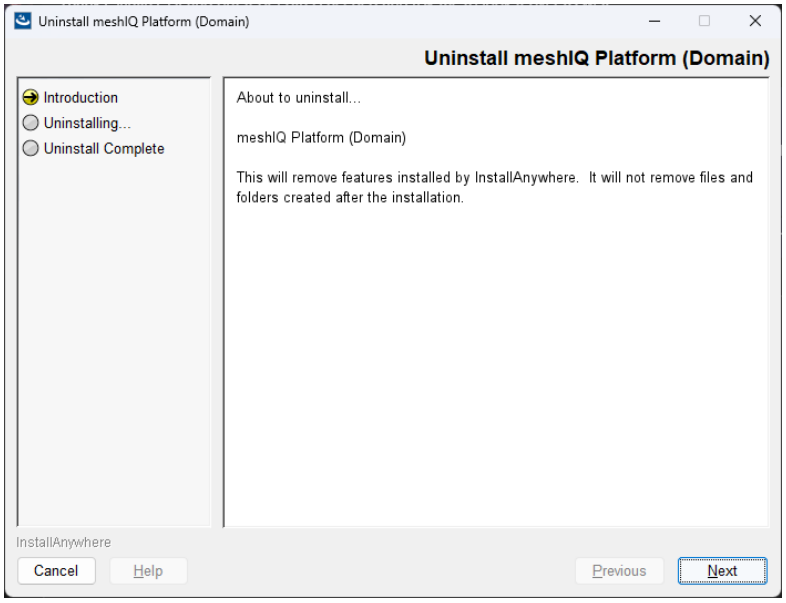


Figure 4-3. InstallAnywhere Uninstaller

6. The Uninstall Options screen will be displayed. The options for uninstalling are:
   - **Complete Uninstall:** Uninstalls all features and components of Core Services that were previously installed by InstallAnywhere. All files and databases that were created after installation will remain unchanged.
   - **Uninstall Specific Features:** Ability to select any features of Core Services that were previously installed by InstallAnywhere for deletion.
7. Click **Next**. Proceed to step 9 if Complete Uninstall was selected.

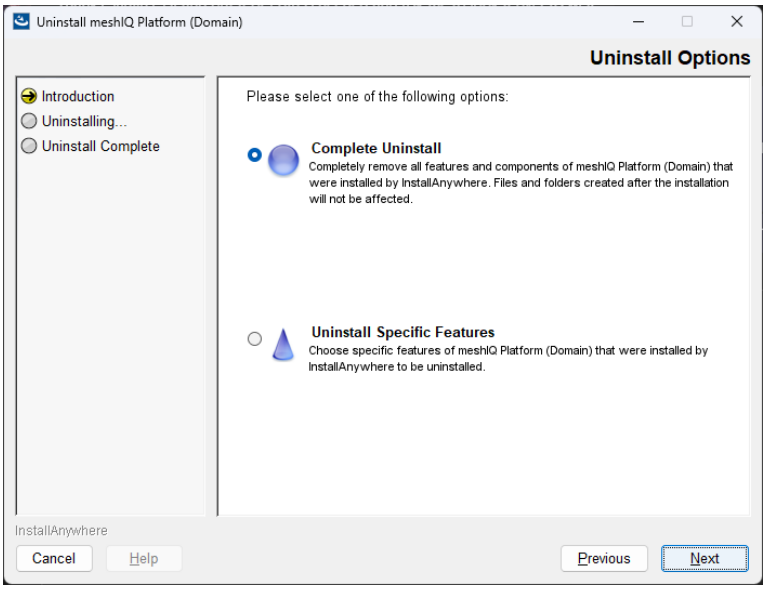


Figure 4-4. Uninstall Options

8. If Uninstall Specific Features was selected, uncheck the features that will be uninstalled. Click **Uninstall**.

> NOTE
> The Uninstall process can be stopped at any time by clicking the Cancel button. The Installation Termination Warning screen is displayed and provides the ability to resume if terminated inadvertently.

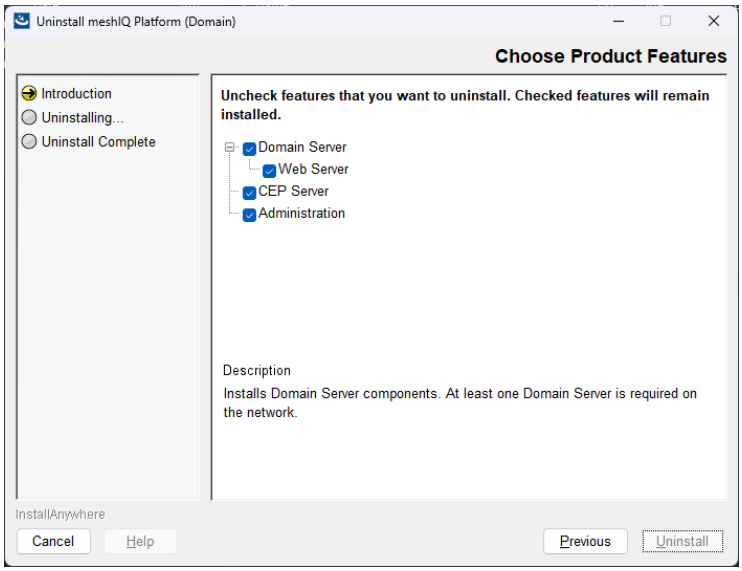


Figure 4-5. Selecting Uninstall Features

9. The Uninstalling Progress screen is displayed. Click **Cancel** to abort the uninstall process.
10. When the Uninstall Complete screen is displayed, click **Done**.

Uninstall is complete. All items have been uninstalled and pre-installation settings restored. Any file which could not be removed in the uninstall process will be listed in the Uninstall Complete screen. Manually remove any remaining files and restart your system.

4.2 Package Manager

Package Manager allows you to install, verify, repair, view libraries, or uninstall a program.

1. From the meshIQ Platform menu, select **meshIQ Product Maintenance** to open the *Product Maintenance* dialog box.

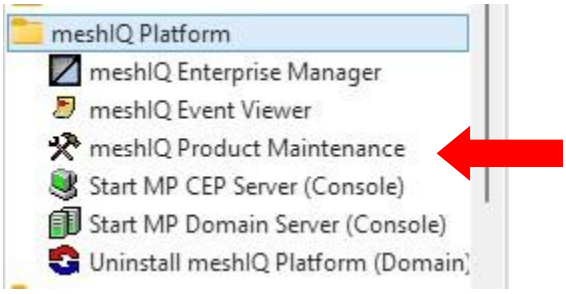


Figure 4-6. Product Maintenance

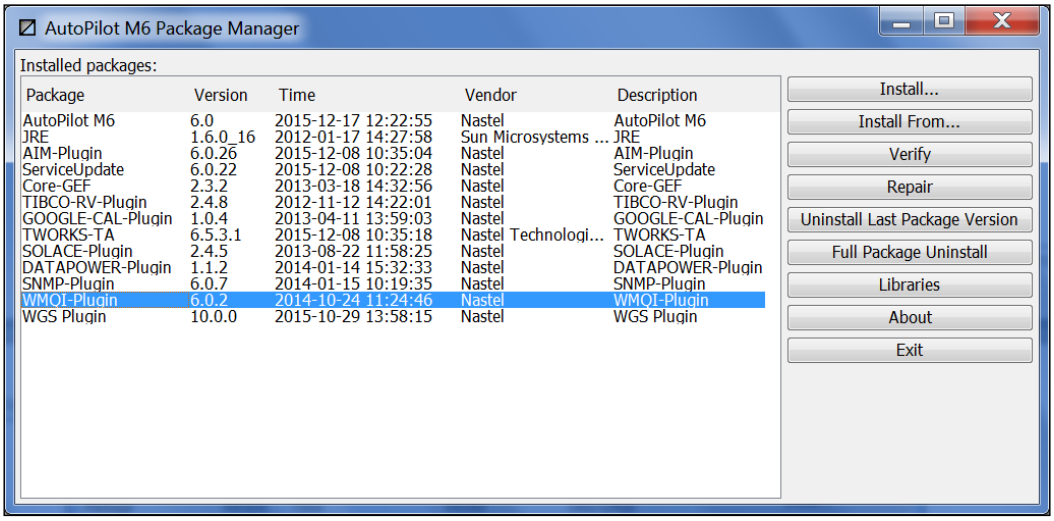


Figure 4-7. Package Manager

2. Select a package and click the button for the option you want to perform.

Table 4-1. Package Manager Options

Option	Description
Install	Allows you to install the software package from a file on your computer.
Install from	Allows you to install the software package from an URL.
Verify	Allows you to verify the installation.
Repair	Allows you to repair the installation.
Uninstall Last Package Version	Allows you to uninstall the last package version.
Full Package Uninstall	Allows you to uninstall all versions of the software package.
Libraries	Allows you to view a list of the installed libraries.

Table 4-1. Package Manager Options	
Option	**Description**
About	Displays the current version of Core Services.
Exit	Closed the dialog box.

Appendix A: References

A.1 meshIQ Documentation

Table A-1. meshIQ Documentation	
Document Number (or higher)	**Title**
M6/USR 623.001	*AutoPilot M6 User's Guide*
M6/WMQ 600.002	*AutoPilot M6 Plug-in for WebSphere MQ*

A.2 IBM Documentation

SC33-1872 *WebSphere MQ Intercommunications*

SC33-1369 *WebSphere MQ MQSC Command Reference*

SC34-5456 *WebSphere MQ Using Java*

http://www-106.ibm.com/developerworks/views/websphere/library.jsp - main

A.3 Apache Tomcat Documentation References

https://tomcat.apache.org/tomcat-10.1-doc/index.html

A.4 Oracle Online Documentation

http://otn.oracle.com/documentation/content.html

A.5 AIX JRE Resources

https://www.ibm.com/support/pages/java-sdk-aix

Appendix B: Conventions

B.1 Typographical Conventions

Table B-1. Typographical Conventions	
Convention	**Description**
Blue/Underlined	Used to identify links to referenced material or websites. Example: *support@meshiq.com*
Bold Print	Used to identify topical headings, toggles and buttons used in procedural steps. Example: Click **EXIT**.
Italic Print	Used to place emphasis on a title, menu, screen name, or other category.
`Monospaced Bold`	Used to identify keystrokes/data entries, file names, directory names, etc.
`Monospaced Italic`	Used to identify variables in an address location. Example: `[`*`AUTOPILOT_HOME`*`]\documents`. Where the portion of the address in brackets [ ] is variable.
`Monospaced Text`	Used to identify addresses, commands, scripts, etc.
Normal Text:	Typically used for general text throughout the document.
Table Text	Table text is generally a smaller size to conserve space. 10-, 9-, and 8-point type is used in tables throughout the meshIQ family of documents.

