Sun N1 Service Provisioning System User's Guide for BEA WebLogic 8 Plug-In 3.0

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Preface

This book explains how to use the N1™ Service Provisioning System software to perform the following tasks.

- Install WebLogic 8 software and configure infrastructure components
- Deploy applications to WebLogic
- Configure the WebLogic environment

Who Should Use This Book

The main audience for the Sun N1 Service Provisioning System User's Guide for BEA WebLogic 8 Plug-In 3.0 includes system administrators and operators of Sun N1 Service Provisioning System software who want to be able to incorporate BEA WebLogic 8 functionality with Sun N1 Service Provisioning System software. These users are expected to be familiar with the following:

- The Sun N1 Service Provisioning System product
- Standard UNIX® and Windows commands and utilities
- The general concepts and management features available in the BEA WebLogic 8 product

Before You Read This Book

If you are not already familiar with using the Sun N1 Service Provisioning System software, read the following books:

- *Sun N1 Service Provisioning System 5.2 System Administration Guide*
- *Sun N1 Service Provisioning System 5.2 Operation and Provisioning Guide*

How This Book Is Organized

Chapter 1 provides an overview of the plug-in solution.

Chapter 2 describes installation and runtime issues.

Chapter 3 explains how to install and configure the plug-in.

Chapter 4 explains how to capture and deploy applications and files through the plug-in and describes the specific component types that are provided with the plug-in.

Related Third-Party Web Site References

Third-party URLs are referenced in this document and provide additional, related information.

The BEA WebLogic 8 product documentation can be found at
`http://e-docs.bea.com/platform/docs81/`.

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Documentation, Support, and Training

The Sun web site provides information about the following additional resources:

- Documentation (`http://www.sun.com/documentation/`)
- Support (`http://www.sun.com/support/`)
- Training (`http://www.sun.com/training/`)

Typographic Conventions

The following table describes the typographic conventions that are used in this book.

TABLE P–1 Typographic Conventions

Typeface	Meaning	Example
`AaBbCc123`	The names of commands, files, and directories, and onscreen computer output	Edit your `.login` file. Use `ls -a` to list all files. `machine_name% you have mail.`
`AaBbCc123`	What you type, contrasted with onscreen computer output	`machine_name%` **`su`** `Password:`
aabbcc123	Placeholder: replace with a real name or value	The command to remove a file is `rm` *filename*.

TABLE P–1 Typographic Conventions   *(Continued)*

Typeface	Meaning	Example
AaBbCc123	Book titles, new terms, and terms to be emphasized	Read Chapter 6 in the *User's Guide*.
		A *cache* is a copy that is stored locally.
		Do *not* save the file.
		Note: Some emphasized items appear bold online.

Shell Prompts in Command Examples

The following table shows the default UNIX system prompt and superuser prompt for the C shell, Bourne shell, and Korn shell.

TABLE P–2 Shell Prompts

Shell	Prompt
C shell	`machine_name%`
C shell for superuser	`machine_name#`
Bourne shell and Korn shell	`$`
Bourne shell and Korn shell for superuser	`#`

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Overview of the WebLogic 8 Plug-In

This chapter explains general information about using Sun N1 Service Provisioning System to provision BEA WebLogic 8 applications. This chapter includes the following information:

Purpose of the WebLogic 8 Plug-In

The Sun N1 Service Provisioning System software provides enhanced capabilities in support for BEA WebLogic 8 applications. You can provision the WebLogic 8 infrastructure by installing domains, managed servers, and clusters with the provisioning software. Once installed, you can manage your WebLogic environment by starting and stopping managed servers and domains. You can also browse existing applications to capture previously installed applications and deploy those applications throughout your enterprise.

What the WebLogic 8 Plug-In Includes

The WebLogic 8 Plug-In includes several WebLogic-specific component types, along with pre-defined components and resource files that enable you to easily capture, configure and deploy WebLogic Enterprise, Enterprise JavaBeans™ (EJB™) technology, and Web Applications. These component types can be grouped into three families:

- A component to install the WebLogic software

- Components to support the WebLogic services:
    - WebLogic Administration Server
    - WebLogic Managed Server
    - WebLogic Cluster

- Plans for installing enterprise applications, web applications, and Java archive files.

- Special components to deploy and capture applications for deployment on the WebLogic 8 application servers
- Special component types to configure the WebLogic 8 services.
    - License – Enables you to deploy your WebLogic license.
    - Thread Pool – Enables you to edit and deploy thread-pool configurations.
    - Data Source – Enables you to capture, edit, and deploy data sources.
    - Transaction Data Source – Enables you to capture, edit, and deploy data sources.
    - JMS Server – Enables you to capture, edit, and deploy Java Messaging Service (JMS) servers.
    - JMS Queue – Enables you to capture, edit, and deploy JMS Queues.
    - JMS Topic – Enables you to capture, edit, and deploy JMS Topics.
    - JMS File Store – Enables you to capture, edit, and deploy JMS File Stores.
    - JMS JDBC Store – Enables you to capture, edit, and deploy JMS JDBC Stores
    - JMS Connection Factory – Enables you to capture, edit, and deploy a JMS Connection Factory.
    - JMS Destination Key – Enables you to capture, edit, and deploy a JMS Destination Key.
    - Mail Session – Enables you to capture, edit, and deploy Mail Sessions.
    - Connection Pool – Enables you to capture, edit, and deploy connection pools.
    - Multi Pool – Enables you to capture, edit, and deploy multi pools.
    - Transaction Service – Enables you to edit the transaction service.
    - WLScript – Enables you to run WebLogic commands through the provisioning system's interface.

The WebLogic 8 Plug-In also includes several plans that install and remove the WebLogic Administration Servers, Managed Servers, and Clusters.

Requirements for Using the WebLogic 8 Plug-In

The WebLogic 8 plug-in supports the WebLogic Server Version 8.1 on the following platforms.

- Solaris 8 for SPARC
- Solaris 9 for SPARC and x86
- Solaris 10 for SPARC and x86
- RedHat Linux AS 2.1
- RedHat Linux AS 3.0
- SuSE Linux 8.0
- SuSE Linux 9.0
- AIX 5.1 and 5.2
- Windows 2000
- Windows 2000 Advanced Server

- Windows 2003
- Windows Server 2003 Standard Edition (32- and 64-bit)
- Windows Server 2003 Enterprise Edition (32- and 64-bit)
- Windows Server 2003 Web Edition

Any host on which you intend to deploy the WebLogic 8 plug-in must meet the following requirements. These requirements represent minimum prerequisites for installation.

Disk space	On UNIX systems, approximately 375 Mbytes free storage space for the installed product.
	Approximately 1 Gbyte of temporary storage space is required by the installer in the /var/tmp directory. If no space exists in the /var/tmp folder, use the altTempDir component variable to create an alternate temporary directory. See "How to Install the WebLogic Software" on page 24 for more information.
RAM	512 Mbytes (minimum); 1 Gbyte (recommended)
Java run-time environment (JRE)	The WebLogic Server installation program requires a JRE to run. The following requirements are summarized from the BEA's list of supported configurations. You can find the complete list on BEA's WebLogic 8.1 product documentation website.

TABLE 1–1 JRE Requirements

	Java SDK already installed	Included in Installation
AIX	IBM SDK 1.4.2	
RedHat Linux		WebLogic JRockit 1.4.2_04 SDK
Solaris x86	Sun Java 2 SDK 1.4.2_04	
Solaris SPARC		Sun Java SDK 1.4.2_04

TABLE 1–2 WebLogic Install Media Requirements

	Binary Installer	JAR Installer	Supplemental JAR file
AIX		X	
RedHat Linux	X		
Solaris x86		X	X
Solaris SPARC	X		

Your configurations might require additional resources depending on the applications that are installed. For BEA's WebLogic requirements, see the WebLogic Platform 8.1 Supported Configurations web page.
(`http://e-docs.bea.com/platform/suppconfigs/configs81/81_over/`)

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Release Notes for the WebLogic 8 Plug-In

This chapter describes late-breaking news and known issues with the WebLogic 8 plug-in. The chapter contains the following information:

Installation Issues

This section describes installation issues with the WebLogic 8 Plug-In.

WebLogic 8.0 Installation Plan Fails on Windows Systems With Insufficient Disk Space (6370453)

If you run the Weblogic Software Installation Install Plan on a Windows system with insufficient disk space, the installation fails, but the failure is not reported in the N1 SPS interface. This failure occurs on Remote Agents that are running the following OS versions.

- Microsoft Windows 2000
- Microsoft Windows 2000 Advanced Server
- Microsoft Windows Server 2003 Standard Edition
- Microsoft Windows Server 2003 Enterprise Edition
- Microsoft Windows Server 2003 Web Edition

While the N1 SPS interface indicates that the Install plan succeeded, the WebLogic software is not installed on the remote agent. This problem occurs because the Temp directory on the Remote Agent does not have enough free disk space for the WebLogic installer.

Workaround: Increase the disk space in the Windows Temp directory on the Remote Agent, then run the Install plan. Follow these steps.

1. On the Remote Agent, launch the MS-DOS command line program.

2. Type the following command in the MS-DOS window to determine the location of the Temp directory.

```
prompt>echo %temp%
```

The disk and directory location of the Temp directory is displayed.

3. Delete any unneeded files from the disk that contains the Temp directory to increase the available disk space for the WebLogic installer.

Runtime Issues

This section describes runtime issues with the WebLogic 8 Plug-In.

Domain and Administration Server Installation Fails When Enabling SSL

If you install a WebLogic domain and Administration server component with the secureConnect variable set to true, the installation fails. The error message for this failure indicates that the server cannot be started, or that the server is already running.

Workaround: Choose the appropriate workaround from the following list.

- To install a WebLogic 8.1.4 domain and Administration server on an IBM AIX Remote Agent, set the weblogicJARPath for the domain and Administration server component to the following value.

```
:[wlHomeDir]:[/]server:[/]lib:[/]weblogic.jar;:[wlHomeDir]:[/]server:
[/]lib:[/]webserviceclient+ssl_pj.jar
```

Ensure that the javaHome variable value points to JDK 1.4.2, or compatible version.

- To install a WebLogic 8.1.3 domain and Administration server on an IBM AIX Remote Agent, set the weblogicJARPath for the domain and Administration server component to the following value.

```
:[wlHomeDir]:[/]server:[/]lib:[/]weblogic.jar;:[wlHomeDir]:[/]server:
[/]lib:[/]wlcipher.jar;:[wlHomeDir]:[/]server:[/]lib:[/]webserviceclient+ssl_pj.jar
```

Ensure that the javaHome variable value points to JDK 1.4.2, or compatible version.

- To install a WebLogic 8.1.3 domain and Administration server on a Solaris 9 x86 Remote Agent, set the weblogicJARPath for the domain and Administration server component to the following value.

```
:[wlHomeDir]:[/]server:[/]lib:[/]weblogic.jar;:[wlHomeDir]:[/]server:
[/]lib:[/]wlcipher.jar;:[wlHomeDir]:[/]server:[/]lib:[/]webserviceclient+ssl_pj.jar
```

Ensure that the javaHome variable value points to JDK 1.4.2, or compatible version.

- To install a WebLogic 8.1.3 domain and Administration server on a Solaris 9 SPARC Or Linux Remote Agent, you need to acquire the `weblogic.jar` file for the WebLogic 8.1.4 release. Set the`weblogicJARPath` variable for the domain and Administration server component to the location of the WebLogic 8.1.4 `weblogic.jar` file.

  To acquire the `weblogic.jar` file for the WebLogic 8.1.4 release, see the BEA home page (`http://www.bea.com`).

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Installing and Configuring the WebLogic 8 Plug-In

This chapter explains how to install and configure the WebLogic 8 plug-in. The chapter contains the following information:

- "Acquiring the WebLogic 8 Plug-In" on page 21
- "Adding the WebLogic 8 Plug-In to the Sun N1 Service Provisioning System" on page 23
- "Upgrading Considerations" on page 27
- "Patching the WebLogic 8 Plug-In" on page 28

Acquiring the WebLogic 8 Plug-In

Acquiring the BEA WebLogic 8 plug-in is a two-step process. First, you must add the package file that contains the BEA WebLogic 8 plug-in JAR file to your system. Then you must import the BEA WebLogic 8 plug-in JAR file.

The BEA WebLogic 8 plug-in is packaged as a *plug-in* to the Sun N1 Service Provisioning System software. The plug-in files for the BEA WebLogic 8 plug-in are available from the Sun N1 Service Provisioning System Supplement CD or from the Sun Download Center.

Once the package file is added to your system, the WebLogic 8 Plug-In is available for import from two different JAR files. Choose the correct file depending on your situation.

- If you are importing the WebLogic 8 Plug-In for the first time, acquire the `com.sun.weblogic8_3.0.jar` file.
- If you have already imported the previous version of the WebLogic 8 Plug-In, acquire the `com.sun.weblogic8_2.0_3.0.jar` file.

1. Add the file containing the JAR file:
   - "Adding the WebLogic 8 Plug-In for Solaris" on page 22
   - "Adding the WebLogic 8 Plug-In for Linux" on page 22
   - "Adding the WebLogic 8 Plug-In for Windows" on page 22

2. Import the JAR file - "Adding the WebLogic 8 Plug-In to the Sun N1 Service Provisioning System" on page 23.

Adding the WebLogic 8 Plug-In for Solaris

The BEA WebLogic 8 plug-in is contained in the SUNWspswl8 package.

▼ To Add the WebLogic 8 Plug-In Package for Solaris

1   In a terminal window, become superuser.

2   Move to the directory containing the plug-in package.

3   Type the following command and press Return.

   # pkgadd -d *package_directory* **SUNWspswl8**

   The standalone JAR file is in the /opt/SUNWn1sps/plugins/com.sun.weblogic8/ directory. The upgrade JAR file is in the /opt/SUNWn1sps/plugins/com.sun.weblogic8/Upgradedirectory.

Adding the WebLogic 8 Plug-In for Linux

The BEA WebLogic 8 plug-in is contained in the sun-spswl8-3.0-1.noarch.rpm file.

▼ To Add the WebLogic 8 Plug-In Package for Linux

1   In a terminal window, become superuser.

2   Move to the directory containing the sun-spswl8-3.0-1.noarch.rpm **file.**

3   Type the following command and press Return.

   # rpm -i *package_directory* **sun-spswl8-3.0-1.noarch.rpm**

   The standalone JAR file is in the /opt/SUNWn1sps/plugins/com.sun.weblogic8/ directory. The upgrade JAR file is in the /opt/SUNWn1sps/plugins/com.sun.weblogic8/Upgradedirectory.

Adding the WebLogic 8 Plug-In for Windows

The BEA WebLogic 8 plug-in is contained in the sun-spswl8-3.0.msi Microsoft Installer (MSI) package file.

▼ **To Add the WebLogic 8 Plug-In MSI File for Windows**

1   Move to the directory containing the `sun-spswl8-3.0.msi` **file.**

2   Double-click the `sun-spswl8-3.0.msi` **file.**

The Installer GUI starts. The JAR file is copied to the `c:\Program Files\N1 Service Provisioning System\plugins\com.sun.weblogic8` directory.

Adding the WebLogic 8 Plug-In to the Sun N1 Service Provisioning System

To make a given plug-in known to the Sun N1 Service Provisioning System product, you need to import the plug-in to the Master Server. To import a plug-in, follow these steps as explained in detail in Chapter 5, "Plug-In Administration," in *Sun N1 Service Provisioning System 5.2 System Administration Guide*.

▼ ## How to Import the WebLogic 8 Plug-In Using the Browser Interface

To import or upgrade a plug-in, follow these steps as explained in detail in Chapter 5, "Plug-In Administration," in *Sun N1 Service Provisioning System 5.2 System Administration Guide*

1   In the Administrative section of the browser interface main window, click Plug-ins.

2   In the Action column of the Plug-ins page, click Import.

3   Browse to the location of the JAR file.

- If you are importing the WebLogic 8 Plug-In for the first time, select the `com.sun.weblogic8_3.0.jar` file.

- If you have already imported a previous version of the WebLogic 8 Plug-In, select the `com.sun.weblogic8_2.0_3.0.jar` file.

4   Click the Continue to Import button.

When the import complete successfully, a plug-in details page appears and shows you the objects that the plug-in provides.

▼ How to Import the WebLogic 8 Plug-In using the CLI

You can also import a plug-in by using the command line.

◗ **To import a plug-in file from the CLI, type:**

% `cr_cli -cmd plg.p.add -path` *plugin-filename* `-u` *username* `-p` *password*

- If you are importing the WebLogic 8 Plug-In for the first time, *plugin-filename* is com.sun.weblogic8_3.0.jar.

- If you have already imported the previous version of the WebLogic 8 Plug-In, *plugin-filename* is com.sun.weblogic82.0_3.0.jar.

▼ How to Install the WebLogic Software

You need to install the WebLogic software before you create WebLogic domains, Administration Servers, or Managed Servers. When you install the WebLogic software, a virtual host that represents the software installation is created. You use this virtual host later as the target host for WebLogic Administration Servers and Managed Servers.

Managed Servers and Administration Servers use the same Install component, which installs the WebLogic 8 software on the Remote Agent. After you have installed the Install component on a Remote Agent, you do not have to reinstall that component again.

You can use this procedure to install the WebLogic software or you can use this procedure to register existing software within the provisioning system by selecting the markOnly option.

Before You Begin   Review the Process Overview

1   Set the WebLogic session variables: WL_DEFAULT_PASSWORD **and** WL_DEFAULT_USER**.**

See Chapter 5, "Session Variables," in *Sun N1 Service Provisioning System 5.2 Plan and Component Developer's Guide*.

2   Prepare all hosts.

The WebLogic 8 plug-in contains a new system service that must be distributed to all hosts in the provisioning system. See "Preparing a Physical Host" in *Sun N1 Service Provisioning System 5.2 System Administration Guide*.

3   In the Common Tasks section in the browser interface, click WebLogic 8.

4   Click the WebLogic Software Installation: Install link.

The plan's Details page displays.

5   Click Run.

The Run page displays.

6 **In the Plan Parameters area, select the variable settings for the** `Install` **component that you plan to deploy.**

- **If the variable settings have been established for this component, select the appropriate settings from the menu.**

- **If the settings are not available from the menu, click Select From List.**

  The Select Variable Settings From List window displays.

  - **To create a new set of variable settings, select Create Set.**

    The following list provides commonly updated variables for the `Install` component.

    variable set name   Required. A name for the new variable set you create

    beaHome   Required. The WebLogic BEAHOME directory. The default value for
                         `beaHome` is `/usr/local/bea`. You need to update this value if you plan
                         to have multiple installations of the WebLogic software on one
                         machine.

    Note – This directory or link must exist or be able to be created by the
    `weblogicUser`. If the directory or link exists, the `weblogicUser` must
    have write access to the directory.

    ---

    sourceImage   Required for all non-`markOnly` installations. The absolute path to
                         the WebLogic binary package installer or JAR file.

    x86supplementalJAR   Required only for Solaris x86 installations. The absolute path to
                         the WebLogic Solaris x86 Supplemental JAR file.

    sdkJavaHome   Required only for AIX and Solaris x86 JAR file installers.
                         JAVA_HOME for SDK version 1.4.2, or compatible version.

    componentPaths   Optional. Sets the WebLogic components to be installed. The
                         WebLogic 8 Plug-In only supports the installation and
                         configuration of `WebLogic Server`.

                         By default, the software required to run WebLogic domains and
                         application servers is installed. If additional components are
                         selected, more space (beyond the 350 Mbytes) is required.

    altTempDir   Optional. An alternative directory to expand the install image. The
                         default value is the `/var/tmp` directory. If the `/var/tmp/` directory
                         does not contain 1 Gbyte of available space, set `altTempDir` to
                         another directory.

    webLogicUser   Required. The UNIX user to run the WebLogic installation. This
                         user must exist on the host to be installed and must have write

<table>
<tr><td></td><td>permission on the beaHome directory. You can change the default value from weblogic to this to root if you do not want to create a new user.</td></tr>
<tr><td>targetRefName</td><td>Required. The unique virtual hostname for this installation. This value is used as the target host during domain and Managed Server creation. You need to provide a unique value for this variable for each installation of WebLogic.</td></tr>
</table>

> **Note –** If you install the WebLogic software multiple times on the same host, you need to change this variable to a new value. beaHome must also be different for each installation.

a. **In the text field at the top of the table, type the name of the new variable settings set.**

b. **To change the path to where you plan to install WebLogic, select the** installPath **row and type the correct path.**

The installPath variable, beaHome variable, and the WebLogic BEAHome of installation plan variable must contain the same value .

The default value for these three variables is /usr/local/bea.

> **Note –** The value for the installPath variable is treated as a relative path to the default Remote Agent directory, unless you specify an absolute path, such as /opt or c:\mydir. For example, for a Windows Remote Agent, if you set the installPath variable to c\mydir and deploy the file to an Agent with a default home directory of c:\Program Files\N1 Service Provisioning System\agent, the file is deployed to c:\Program Files\N1 Service Provisioning System\agent\c\mydir.

c. **To change the location of the WebLogic installer, select the** sourceImage **row and type the new location.**

d. **To include additional WebLogic components in this installation, select the** componentPaths **row and type the additional components.**

Additional components can be specified in a pipe-separated list. For example, WebLogic Server|WebLogic Workshop|WebLogic Integration|WebLogic Portal.

e. **Click Save.**

The new variable settings display in the table.

f. **Click Select.**

- **To use variable components from another component, click Import Set.**

  For more information about importing variable sets, see "How to Run a Plan" in *Sun N1 Service Provisioning System 5.2 Operation and Provisioning Guide.*

7   Select the target host.

Install the WebLogic software on the Remote Agent that you plan to use as an Administration Server or a Managed Server.

8   If you are capturing an existing WebLogic domain within the provisioning system, select the markOnly **option.**

9   Click Run Plan (Includes Preflight).

Upgrading Considerations

This section describes issues that you might need to consider after upgrading to a new plug-in version.

▼ How to Access Previous Versions of a Component

When you upgrade to a new version of a plug-in, the Common Tasks page for the plug-in is updated to provide links to components that are installed with the new plug-in version. This feature enables you to easily view components that contain the most current features and improvements. Components that rely on old functionality are not linked to from the Common Tasks page.

If you have trouble finding a component that you previously installed, the component was likely created from the previous version of the plug-in.

Follow these steps to view or work with a previous version of the component:

1   Click the appropriate component procedure on the Common Tasks page.

The Component Detail page appears.

2   On the Component Details page, click Version History.

A list of components and versions appears.

3   Click the appropriate link.

- To perform a task with a component, click the version number or the Details link that applies to the component that you want to use.
- To view where a component is installed, click Where Installed.

Patching the WebLogic 8 Plug-In

Check the SunSolve (`http://sunsolve.sun.com`) site for available patches for the WebLogic 8 Plug-In. To apply the patch, follow the instructions in the patch `README` file.

4

Using the WebLogic 8 Plug-In

The WebLogic 8 plug-in provides several specific component types and provides easy access to functions that are useful for working with BEA WebLogic 8 applications. This chapter describes the following information:

Installing and Using the WebLogic 8 Environment with the Sun N1 Service Provisioning System

Plug-In Conventions

The provisioning system enables you to provision and manage applications.

Plans and Component Procedures

The WebLogic 8 plug-in provides both plans and component procedures as tools for you to perform tasks. By using plans, you link directly to the functionality you desire. Using component procedures, you have a greater number of tasks that you can perform.

Task Names

The WebLogic 8 plug-in organizes tasks in four categories: application tasks, infrastructure tasks, configuration tasks, and advanced tasks. These task categories follow the same convention for describing the task that you need to perform.

TABLE 4–1 Common Task Names

Task Name	Description
View Installations, View Configurations, View Clusters, View Cluster Members	View a list of where all components of a particular type are installed.
View All	View all components of a particular type within a specified folder.
Create	Links to the component Details page where you can add a new component of this type to the provisioning system. You can create new components by importing them from an existing WebLogic Admin Server or by browsing the file system.
Start or Stop	Links to the component Details page to run the Start or Stop component procedure.
Install, Uninstall, Remove, Join, Leave	Represents a plan that produces the described functionality.

Global Prerequisites

Two prerequisites exist for each task documented in this book.

- The WebLogic Administration Server is used to perform or verify many operations. Therefore, to perform any task that alters the WebLogic 8 environment, the Administration Server must be configured within the provisioning system with the correct connection information and running.

  Note – The Administration Server does not need to be online when installing the WebLogic software, creating the WebLogic Domain, or when creating the enterprise application (EAR), web application (WAR), and Java archive (JAR) files.

- All tasks within the provisioning system require that you have specific permissions. To perform tasks with the WebLogic plug-in, you must belong to a user group that has the Run Component Procedures permission on the folder that contains the component. You must also have the Allow on Host Set permission for the host set on which you plan to deploy the component.

  For more information about permissions, see Chapter 3, "Controlling Access Using Permissions," in *Sun N1 Service Provisioning System 5.2 System Administration Guide*.

  For information about how to update your group membership, see "How to Change a User's Group Membership" in *Sun N1 Service Provisioning System 5.2 System Administration Guide*.

Process Overview

Creating a WebLogic 8 environment within the provisioning system is similar to the process of creating the environment without the provisioning system.

1. (Optional) Install WebLogic 8 application on a reference server.

   By installing and configuring a reference server, you can verify that the configuration works as desired and then replicate the configuration across multiple hosts.

2. Import the WebLogic 8 plug-in.

   See "Importing Plug-Ins" in *Sun N1 Service Provisioning System 5.2 System Administration Guide*.

3. Set the WebLogic session variables: WL_DEFAULT_PASSWORD and WL_DEFAULT_USER.

   See Chapter 5, "Session Variables," in *Sun N1 Service Provisioning System 5.2 Plan and Component Developer's Guide*.

4. Prepare all hosts.

   The WebLogic 8 plug-in contains a new system service that must be distributed to all hosts in the provisioning system. See "Preparing a Physical Host" in *Sun N1 Service Provisioning System 5.2 System Administration Guide*.

5. Install the WebLogic software.

   See "How to Install the WebLogic Software" on page 24

6. Create a WebLogic domain by installing an Administrative Server.

   See "How to Create a WebLogic 8 Domain and Administration Server" on page 32.

7. Create a Managed Server in the new WebLogic domain.

   See "How to Create a WebLogic Managed Server" on page 36.

8. Create and Install the WebLogic license component.

   See "How to Create a License Component" on page 39 and "How to Install a License Component" on page 40.

9. (Optional) Create a WebLogic 8 cluster.

   See "How to Create a WebLogic Cluster" on page 40.

10. (Optional) Add a cluster member by assigning existing Managed Servers to the cluster.

    See "How to Create Cluster Members" on page 43.

11. If necessary, configure the application's connection to the database.

    a. Configure a connection pool.

       See "Connection Pool Component Type" on page 58.

    b. (Optional) Configure a Multi Pool.

       See "Multi Pool Component Type" on page 60.

    c. Configure a data source or transactional data source.

       See "Data Source and Transaction Data Source Component Types" on page 59.

12. If the application uses Java Messaging Service, configure the JMS server.

    See "JMS Server Component Type" on page 61.

13. Capture application files (EARs, JARs, and WARs).

    See "Capturing and Editing WebLogic Applications" on page 51.

14. Deploy applications to targets hosts, host sets, or clusters.

    An application can target either a cluster or a Managed Server.

    See "Installing an Enterprise Application" on page 55, "Installing a Web Application" on page 56, or "Installing a JAR or EJB File" on page 57.

Creating the WebLogic Infrastructure

Use the WebLogic 8 Common Tasks page as a starting point to create and manage WebLogic servers and clusters.

▼ How to Create a WebLogic 8 Domain and Administration Server

You need to create a domain and Administration Server before you can set up Managed Servers to host your applications. A domain is a set of WebLogic servers that is managed by an Administration Server. All information about the domain is contained in a configuration file that is stored on the Administration Server.

When you create a new domain by installing the AdminServer component, you also:

- Configure the domain
- Create the Admin Server virtual host

You can use this procedure to create a new domain or you can use this procedure to register an existing domain within the provisioning system by selecting the markOnly option.

Note – In this document, two similar terms are used: AdminServer and Administration Server. The prepackaged Sun N1 Service Provisioning System WebLogic 8 component is called the AdminServer component. AdminServer represents the provisioning system component and Administration Server represents the installed application running in the WebLogic 8 environment.

Before You Begin To create a WebLogic 8 domain, you must belong to a user group that has the Run Component Procedures permission on the folder that contains the component. You must also have the Allow on Host Set permission for the host set on which you plan to deploy the component.

1 **Verify that your WebLogic session variables,** WL_DEFAULT_USER **and** WL_DEFAULT_PASSWORD**, are set.**

WebLogic session variables must be seven characters long and include a number.

For more information about session variables, see Chapter 5, "Session Variables," in *Sun N1 Service Provisioning System 5.2 Plan and Component Developer's Guide*.

2   In the Common Tasks section in the browser interface, click WebLogic 8.

3   Click the Domain Management: Create link.

The plan's Details page displays.

4   Click Run.

The Run page displays.

5   In the Plan Parameters area, select the variable settings for the AdminServer **component that you plan to deploy.**

- **If the variable settings have been established for this component, select the appropriate settings from the menu.**

- **If the settings are not available from the menu, click Select From List.**

    The Select Variable Settings From List window displays.

    - **To create a new set of variable settings, select Create Set.**

        The following list provides commonly updated variables for the AdminServer component.

domainName	Required. The WebLogic domain name.
adminPort	Required. The default TCP port for the AdminServer virtual host to use.
	Before the domain is created, a check is performed to verify that this port is available. To fix this error, free the port and run the startAdminServer component procedure found on the AdminServer component Details page.
secureConnect	Optional. True specifies that the SSL port can be used to connect the Administration Server.
startScriptWindows	Required for Windows systems. This variable specifies the name of the domain start script for Windows Systems. The value of this variable must be a .cmd file.
production	Required. This variable determines whether the managed server is run in production mode. The default value of production is false. This variable can be set to true or false.

        Variables that are updated less often include configuration variables such as the following:

adminManagedServer	Required. The name of the managed server that hosts the domain administration console. The default value is myserver. If

performing a markOnly install, set the variable to the server name used during the WebLogic install.

adminHost	Required. The hostname or IP address that managed servers use to connect to the Admin Server. The default value is the hostname of the Remote Agent on which the Admin Server resides.
targetRefName	Required. This variable becomes the name of the domain's virtual host. The substitution variable is based on the values for the host name and for the domain name. This variable follows the format :[*target:sys.hostName*]_weblogic_admin_ :[*domainName*]. For example, sqa-420_weblogic_admin_wls.

The Select Variable Settings From List window displays.

a. In the text field at the top of the table, type the name of the new variable settings set.

b. To change the WebLogic Domain name, select the domainName **row and type the new domain name.**

c. To change the port number for the Administration Server from the default value of 7001, select the adminPort **row and type the new port number.**

d. To specify that secure HTTP be used to connect to the Administration Server, select the secureConnect **row and type** True **in the text field.**

e. To change the path to where WebLogic is installed, select the beaHome **row and type the correct path.**

The installPath variable, beaHome variable, and the WebLogic BEAHome of installation plan variable must contain the same value .

The default value for these three variables is /usr/local/bea.

Note – The value for the installPath variable is treated as a relative path to the default Remote Agent directory, unless you specify an absolute path, such as /opt or c:\mydir. For example, for a Windows Remote Agent, if you set the installPath variable to c\mydir and deploy the file to an Agent with a default home directory of c:\Program Files\N1 Service Provisioning System\agent, the file is deployed to c:\Program Files\N1 Service Provisioning System\agent\c\mydir.

---

f. If necessary, modify the value of the remaining predefined variable.

The targetRefName is pre-defined for you, although you can modify it if necessary. The targetRefName is created based on the values for the host name and for the domain name. This variable follows the format :[*target:sys.hostName*]_admin_ :[*domainName*]

■ **To use variable components from another component, click Import Set.**

For more information about importing variable sets, see "How to Run a Plan" in *Sun N1 Service Provisioning System 5.2 Operation and Provisioning Guide*.

The Import Variable Settings window displays.

a. **If necessary, go to the folder that contains the component with the variable settings to import.**

b. **Select the component's version.**

Note – Variable settings can vary between component versions.

---

c. **Click Import Variable Settings.**

The imported variable settings display in the table.

d. **Click Select.**

6 **Select the target host.**

Target the virtual host that was created when you installed the WebLogic software. See "How to Install the WebLogic Software" on page 24 procedure.

Note – The target host must be a member of the com.sun.weblogic#InstallHS host set.

---

7 **If you are capturing an existing WebLogic domain within the provisioning system, select the** markOnly **option.**

8 **Click Run Plan (Includes Preflight).**

▼ How to Create Multiple Domains with Different Passwords

You can create multiple domains using the same user and password. However, if you prefer to have separate passwords for each of your domains, you need to update your WebLogic user and password session variables after each domain installation.

The plan that creates new domains always uses the default session variable names, WL_DEFAULT_USER and WL_DEFAULT_PASSWORD.

1 Install the new domain and AdminServer using the default WebLogic session variables, WL_DEFAULT_USER and WL_DEFAULT_PASSWORD.

See "How to Create a WebLogic 8 Domain and Administration Server" on page 32.

2 Go to the Session Variables page by clicking Session Variables at the top of the browser interface.

3 Create new session variables for the newly installed AdminServer.

These new session variables have the same value as the default variables with which you installed the AdminServer.

Attribute Name	Default Session Variable Names	New Session Variable Names
adminUser	WL_DEFAULT_USER	WL_TEST_USR
adminPassword	WL_DEFAULT_PASSWORD	WL_TEST_PWD

4 Go to the host Details page for the AdminServer you created in step 1 and click Edit.

5 Update the AdminServer's host type attributes.

For example, replace the adminUser value with :[session:WL_TEST_USR].

6 If you have another domain to install, return to the Session Variables page and update the default WebLogic session variables with the new values to be used for the next domain you plan to install.

▼ How to Create a WebLogic Managed Server

You can run multiple Managed Servers in each domain to host your applications. WebLogic Managed Servers are captured and represented in the provisioning system by Server components. Throughout this book, Server refers to the provisioning system component, while Managed Server refers to the installed instance of the Managed Server running in the WebLogic 8 environment.

You can use this procedure to create a new Managed Server or you can use this procedure to register an existing Managed Server within the provisioning system by selecting the markOnly option.

Note – If you plan to create a cluster, you need to create the Managed Servers that belong to that cluster *before* you create the cluster.

Before You Begin Before you can create a WebLogic Managed Server, the following criteria must be met.

■ A domain to contain the Managed Server must exist.

For more information, see "How to Create a WebLogic 8 Domain and Administration Server" on page 32.

- The domain's AdminServer must be running.

  To manually start an AdminServer, run the startAdminServer component procedure from the AdminServer component Details page.

- The WebLogic software must be installed on the host on which you plan to install a Managed Server.

  See "How to Install the WebLogic Software" on page 24.

- You must belong to a user group that has the Run Component Procedures permission on the folder that contains the component. You must also have the Allow on Host Set permission for the host set on which you plan to deploy the component.

1   In the Common Tasks section in the browser interface, click WebLogic 8.

2   Click the Application Server Management: Create link.
The plan's Details page displays.

3   Click Run.
The Run page displays.

4   In the Plan Parameters area, select the variable settings for the ManagedServer **component that you plan to deploy.**
The Server component represents the Managed Server instance within the WebLogic 8 environment.

- **If the variable settings have been established for this component, select the appropriate settings from the menu.**

- **If the settings are not available from the menu, click Select From List.**
  The Select Variable Settings From List window displays.

  - **To create a new set of variable settings, select Create Set.**
    The following list provides commonly updated variables for the ManagedServer component.

variable set name	Required. A name for the new variable set you create
adminServerHostName	Required. Name of the AdminServer virtual host that hosts the new Managed Server. This value will be in the format *remoteAgentName*_weblogic_admin_*domainName*.
	You can find the virtual host on the Hosts page. The virtual host will be of type com.sun.weblogic8#AdminServerHS.
targetName	Required. The new Managed Server's name. This name is used in the targetRefName variable to create the Managed Server virtual host.

startupScriptName	Required. The name of the Managed Server's startup script.
	The default location of the startup script is /usr/local/bea/user_projects/servers/ *domainName*/*targetName*. This location can be changed by setting the altServerRoot component variable.
startupScriptNameWindows	Required for Windows systems. This variable specifies the name of the domain start script for Windows Systems. The value of this variable must be a .cmd file.
serverPort	Required if not using SSL. The default value for this variable is 7010. If this port is not available, the Managed Server does not start and an error message displays. After you free the port, you can start the Managed Server by running the Start component procedure on the Managed Server's component Details page.
serverSslPort	Required if using SSL. The default value for this variable is 7020. This port must be available, otherwise the Managed Server does not start and an error message displays. After you free the port, you can start the Managed Server by running the Start component procedure on the Managed Server's component Details page.
production	Required. This variable determines whether the managed server is run in production mode. The default value of production is false. This variable can be set to true or false.
webLogicUser	Required. The UNIX user to run the WebLogic installation. This user must exist on the host to be installed and must have write permission on the beaHome directory. The default value for this variable is taken from the WebLogic software installation component.
listenAddress	Required. The IP address the Managed Server uses to listen.
serverRoot	Required. The directory used for the Managed Server.

- **To use variable components from another component, click Import Set.**

  For more information about importing variable sets, see "How to Run a Plan" in *Sun N1 Service Provisioning System 5.2 Operation and Provisioning Guide.*

5 **Select the target host or target host set.**

The Managed Server resides on the Remote Agent that you target.

Note – The target host must be a member of the com.sun.weblogic#AdminServer host set.

Target the virtual host that was created when you installed the WebLogic software. See "How to Install the WebLogic Software" on page 24 procedure.

Note – The target host must be a member of the com.sun.weblogic#InstallHS host set.

6 **If you are capturing an existing WebLogic Managed Server within the provisioning system, select the** markOnly **option.**

7 **Click Run Plan (Includes Preflight).**

▼ How to Create a License Component

This procedure provides the steps on how to create a license component. After the license component is created, see "How to Install a License Component" on page 40 to install the license.

1 **In the Common Tasks section in the browser interface, click WebLogic 8.**

2 **Click the License Management: Create link.**
The component's Edit page displays.

3 **Type the name of the new license component.**

4 **(Optional) Type the components label and description.**

5 **Select a host that has a copy of the BEA license on its file system.**

6 **Navigate through the host's file system and select the license file.**

7 **Click Check In Selected Item.**
The component's Check In page displays.

8 **Choose a folder on which you have edit permissions.**

9 **Click Continue to Check In.**

▼ How to Install a License Component

Before You Begin   Before you can install a license component, one must exist within the provisioning system. See "How to Create a License Component" on page 39.

1   In the Common Tasks section in the browser interface, click WebLogic 8.

2   Click the License Management: View All link.

The Components page displays.

3   In the row of the license component that you plan to install, click Details.

The component's Details page displays.

4   In the Component Procedures table, select the Default: Install procedure and click Run.

The plan's Run page displays.

5   Select the target host.

You target the AdminServer virtual host.

Note – You do not need to modify the component variables for license installation.

---

6   (Optional) If you want to replace an existing license, in the Plan Variables section, select the Replace Rather Than Merge With Existing License option.

Note – If you choose to replace an existing license, you need to restart the WebLogic domain for the new license to take effect.

---

7   Click Run Plan (Includes Preflight).

▼ How to Create a WebLogic Cluster

You might need to create a cluster for the following reasons:

- To increase application availability with the server's failover capabilities
- To increase throughput by scaling applications across multiple servers

A cluster appears to clients as a single WebLogic Managed Server instance. The server instances that constitute a cluster can run on the same machine, or can be located on different machines. Each cluster member in a cluster must run the same version of WebLogic.

You can use this procedure to create a new cluster or you can use this procedure to register an existing cluster within the provisioning system by selecting the markOnly option.

Before You Begin   Before you create a WebLogic cluster, you must create a WebLogic domain, an Administration Server, and the Managed Servers that you plan to use in the cluster.

To create a WebLogic cluster, you must belong to a user group that has the Run Component Procedures permission on the folder that contains the component. You must also have the Allow on Host Set permission for the host set on which you plan to deploy the component.

1   In the Common Tasks section in the browser interface, click WebLogic 8.

2   Click the Cluster Management: Create link.
The plan's Details page displays.

3   Click Run.
The Run page displays.

4   In the Plan Parameters area, select the variable settings for the Cluster component that you plan to deploy.

- **If the variable settings have been established for this component, select the appropriate settings from the menu.**

- **If the settings are not available from the menu, click Select From List.**
    The Select Variable Settings From List window displays.

    - **To create a new set of variable settings, select Create Set.**
        The following list provides commonly updated variables for the ManagedServer component.

variable set name	Required. A name for the new variable set you create
targetName	Required. The name of the new cluster.
clusterAddress	Optional. This variable can be a DNS host name that maps to multiple IP addresses or a comma-separated list of single address host names or IP addresses. No value is necessary for this variable.
multicastAddress	This variable provides the address that cluster members can use to communicate with each other.
multicastPort	This variable provides the port number that cluster members can use to communicate with each other.

        The Select Variable Settings From List window displays.

        a.   In the text field at the top of the table, type the name of the new variable settings set.

    b. To change the name of the new cluster, select the `targetName` **row and type the new name.**

    c. To specify the address for the cluster instance, select the `clusterAddress` **row and type the address.**

    This variable can be a DNS host name that maps to multiple IP addresses or a comma-separated list of single address host names or IP addresses. No value is necessary for this variable.

    d. To change the cluster's multicast port, select the `multicastAddress` **row and type the new address.**

    This variable provides the address that cluster members can use to communicate with each other. The default value is 237.0.0.1.

    e. To change the cluster's multicast address, select the `multicastPort` **row and type the new port number.**

    This variable provides the aport number that cluster members can use to communicate with each other. The default value is 7001.

    f. If necessary, modify the value of the remaining predefined variables.

      - The `installPath` is created based on the value for the AdminServer virtual host name, the domain name, and the cluster name.

      - The `targetRefName` is created based on the values for the host name and for the domain name. This variable follows the format
:[*target:sys.hostName*]_admin_:[*domainName*]

    g. Click Save.

    The new variable settings display in the table.

    h. Click Select.

  - **To use variable components from another component, click Import Set.**

    For more information about importing variable sets, see "How to Run a Plan" in *Sun N1 Service Provisioning System 5.2 Operation and Provisioning Guide.*

5 Select the target host.

Because you can only install a cluster on an Administrative Server, the target host is the AdminServer virtual host.

6 If you are capturing an existing WebLogic cluster within the provisioning system, select the `markOnly` **option.**

7   Click Run Plan (Includes Preflight).

▼ How to Create Cluster Members

Cluster nodes are Managed Servers assigned to a cluster. You will want to create cluster members to make your applications highly available and scalable.

When a Managed Server joins the cluster, the applications that are currently targeted to the Managed Server continue to target that server, the application deployment state is preserved. The plan that creates the cluster members automatically stops the Managed Server to add it to the cluster. After the Managed Server is added, the plan restarts the Managed Server.

You can use this procedure to create a new cluster member or you can use this procedure to register an existing cluster member within the provisioning system by selecting the markOnly option.

Before You Begin   Before you can create cluster members, the following requirements must be met.

■   Managed Servers that you plan to convert to cluster members must exist.

For more information, see "How to Create a WebLogic Managed Server" on page 36.

■   The cluster that you plan to add nodes to must exist.

For more information, see "How to Create a WebLogic Cluster" on page 40.

To create a cluster member, you must belong to a user group that has the Run Component Procedures permission on the folder that contains the component. You must also have the Allow on Host Set permission for the host set on which you plan to deploy the component.

1   In the Common Tasks section in the browser interface, click WebLogic 8.

2   Click the Cluster Member Management: Join link.
The plan's Details page displays.

3   Click Run.
The plan's Run page displays.

4   Choose the Managed Server that you want to add to the cluster.

■   Select the Target Host by typing the Managed Server's name or selecting it from a list.

■   Select the Target Host Set from the menu.

5   Verify that the plan variable WebLogic Cluster Name contains the correct cluster name.

6   **To specify how long the provisioning system waits before verifying that the server was restarted, type the number of seconds in the Seconds to Wait Before Failing Verify Step field.**

7   **If you are capturing an existing WebLogic cluster member within the provisioning system, select the** `markOnly` **option.**

8   **Click Run Plan (Includes Preflight).**

Managing WebLogic Domains, Servers, and Clusters

This section describes the tasks that are commonly performed with WebLogic servers and clusters after they have been installed.

Domains and Administrative Servers

- "How to Remove a WebLogic Domain and Administration Server" on page 45

Clusters

- "How to Start or Stop Clusters" on page 47
- "How to Remove a WebLogic Cluster" on page 47
- "How to Remove a WebLogic Cluster Member" on page 48

Managed Servers

- "How to Start a Managed Server" on page 49
- "How to Stop a Managed Server" on page 49
- "How to Remove a Managed Server" on page 50
- "How to Add Additional `CLASSPATH` Elements to a Managed Server" on page 51

Managing WebLogic Domains and Administration Servers

This section contains procedures for managing WebLogic Domains and Administration Servers.

▼ How to Remove a WebLogic Domain and Administration Server

By removing a WebLogic domain through the provisioning system, you automatically perform the following tasks.

- Uninstall the WebLogic AdminServer component and virtual host.

  This task removes the Administration Server. If you select the markOnly option, only AdminServer virtual host is removed.

- Uninstall all Managed Servers components and virtual hosts that belonged in the domain.

  This action also removes the Managed Server within the WebLogic environment unless you select the markOnly option.

- Uninstall all cluster components and virtual hosts that belonged in the domain.

  This action also removes clusters within the WebLogic environment unless you select the markOnly option.

- Remove application components, license configurations, and applications.

Note – The WebLogic virtual hosts cannot contain components that do not belong to the plug-in. To successfully remove the WebLogic domain, all components that do not belong to the plug-in must be removed before running the domain uninstall plan.

Before You Begin   To remove a WebLogic domain, you must belong to a user group that has the Run Component Procedures permission on the folder that contains the component. You must also have the Allow on Host Set permission for the host set on which you plan to deploy the component.

1   **In the Common Tasks section in the browser interface, click WebLogic 8.**

2   **Click the Domain Management: Remove link.**

The plan's Details page displays.

3   **Click Run.**

The plan's Run page displays.

4   **Select the target host.**

Target the virtual host that was created when you installed the WebLogic software. See "How to Install the WebLogic Software" on page 24 procedure.

Note – The target host must be a member of the com.sun.weblogic#InstallHS host set.

---

5   **Type the name of the WebLogic domain, in the WebLogic Domain Name field.**

6   If you want to remove the WebLogic domain, Administration Server, clusters, and Managed Server from the provisioning system and plan to keep the domain running in the WebLogic environment, select the markOnly option.

7   Click Run Plan (Includes Preflight).

▼ How to Start a WebLogic Domain or Administration Server

1   In the Common Tasks section in the browser interface, click WebLogic 8.

2   Click the Domain Management: Start link.
The component Details page displays.

3   In the Component Procedures list, select the row containing the StartAdminServer procedure and click Run.
The plan's Run page displays.

4   Select the Admin Server that you need to start.
Managed Servers follow the format *host (install-path)*, where *host* represents the name of the physical host and domain name and *install-path* represents the name of the . The Admin server name displays as server_wls_*managedServerName*, for example, server_weblogic (admin_wls)

5   Click Run Selected Installations.
The plan's Run page displays.

6   Set the Plan Variables.

   a.   (Optional) To override the standard memory arguments passed to Java, type the name in the VmArgs field.
   The format used for the vmArgs field is –*virtualMachineName*. For example, -Xms32m -Xmx200m.

   b.   To specify how long the provisioning system waits before verifying that the server started, type the number of seconds in the Seconds to Wait Before Failing Verify Step field.

7   Click Run Plan (Includes Preflight).

Managing WebLogic Clusters

The following section describes how to start, stop, and remove clusters.

▼ How to Start or Stop Clusters

When you start or stop a cluster, you start or stop all cluster members within the cluster.

1   In the Common Tasks section in the browser interface, click WebLogic 8.

2   Click the Cluster Management: Start or Stop link.
The component Details page displays.

3   In the Component Procedures list, select the row containing the Start or Stop procedure and click Run.
The plan's Run page displays.

4   Select the cluster that you plan to start or stop.
The cluster name is a part of the installPath.

5   Click Run Selected Installations.
The plan's Run page displays.

6   Click Run Plan (Includes Preflight).

▼ How to Remove a WebLogic Cluster

When you remove a cluster, all cluster members associated with that cluster are also removed. .

For more information about the behavior of cluster members returning to the role of Managed Servers, see "How to Remove a WebLogic Cluster Member" on page 48.

Note – When the Managed Servers are removed from the cluster, they are stopped. If you plan to continue using the Managed Server, you must restart it. See "How to Start a Managed Server" on page 49

Before You Begin   To remove a cluster, you must belong to a user group that has the Run Component Procedures permission on the folder that contains the component. You must also have the Allow on Host Set permission for the host set on which you plan to deploy the component.

1   In the Common Tasks section in the browser interface, click WebLogic 8.

2   Click the Cluster Management: Remove link.
The plan's Details page displays.

3 Click Run.

The plan's Run page displays.

4 In the Target Host field, select the domain that hosts the cluster.

5 In the WebLogic Cluster Name field of the Plan Variables section, type the cluster name that would display in the WebLogic interface.

6 Select the markOnly **option if you want to remove the WebLogic Cluster from the provisioning system but plan to keep the cluster running in the WebLogic environment.**

7 Click Run Plan (Includes Preflight).

▼ How to Remove a WebLogic Cluster Member

When you remove a cluster member, the cluster member component is removed from the Managed Server and the Managed Server that acted as the cluster member returns to its original state. Applications that were targeted to the cluster, and therefore cluster members, are no longer hosted by the Managed Server after it is restarted. Applications targeted directly to the Managed Server continue to target the Managed Server.

When a Managed Server is removed from a cluster, the Managed Server is left in a stopped state. If you plan to continue using the Managed Server, you must restart it. See "How to Start a Managed Server" on page 49.

Before You Begin To remove a cluster member, you must belong to a user group that has the Run Component Procedures permission on the folder that contains the component. You must also have the Allow on Host Set permission for the host set on which you plan to deploy the component.

1 In the Common Tasks section in the browser interface, click WebLogic 8.

2 Click the Clusters Member Management: Leave link.

The plan's Details page displays.

3 Click Run.

The plan's Run page displays.

4 Choose the Managed Server that you plan to remove.

5 If you want to remove the WebLogic cluster member from the provisioning system but plan to keep the cluster member running in the WebLogic environment, select the markOnly **option.**

6 Click Run Plan (Includes Preflight).

Managing WebLogic Managed Servers

▼ How to Start a Managed Server

Before You Begin   To start a Managed Server, you must belong to a user group that has the Run Component Procedures permission on the folder that contains the component. You must also have the Allow on Host Set permission for the host set on which you plan to deploy the component.

1   **In the Common Tasks section in the browser interface, click WebLogic 8.**

2   **Click the Application Server Management: Start link.**

The component Details page displays.

3   **In the Component Procedures list, select the row containing the Start procedure and click Run.**

The plan's Run page displays.

4   **Select the Managed Server that you need to start.**

Managed Servers follow the format *host (install-path)*, where *host* represents the name of the physical host and *install-path* represents the name of the managed server. The managed server name displays as server_wls_*managedServerName*, for example, server_wls_Server-One

5   **Click Run Selected Installations.**

The plan's Run page displays.

6   **Set the Plan Variables.**

a.   **(Optional) To override the standard memory arguments passed to Java, type the name in the VmArgs field.**

The format used for the vmArgs field is –*virtualMachineName*. For example, -Xms32m -Xmx200m.

b.   **To specify how long the provisioning system waits before verifying that the server started, type the number of seconds in the Seconds to Wait Before Failing Verify Step field.**

7   **Click Run Plan (Includes Preflight).**

▼ How to Stop a Managed Server

Before You Begin   To stop a Managed Server, you must belong to a user group that has the Run Component Procedures permission on the folder that contains the component. You must also have the Allow on Host Set permission for the host set on which you plan to deploy the component.

1   **In the Common Tasks section in the browser interface, click WebLogic 8.**

2   Click the Application Server Management: Stop link.

The component Details page displays.

3   In the Component Procedures list, select row containing the Stop procedure and click Run.

The plan's Run page displays.

4   Select the Managed Server that you need to start.

Managed Servers follow the format *host (install path)*, where *host* represents the name of the physical host and *install path* represents the name of the managed server. The managed server name displays as server_*domainName_managedServerName*. For example, server_wls_Server-One.

5   Click Run Selected Installations.

The plan's Run page displays.

6   Click Run Plan (Includes Preflight).

▼ How to Remove a Managed Server

1   In the Common Tasks section in the browser interface, click WebLogic 8.

2   Click the Application Server Management: Remove link.

The plan's Details page displays.

3   Click Run.

The plan's Run page displays.

4   Select the Managed Server that you plan to remove.

5   Modify the plan variables if necessary.

    a.   Type the name of the WebLogic Managed Server.

    b.   Type the name of the WebLogic domain that the Managed Server is registered with.

    c.   If you want to remove the WebLogic Managed Server from the provisioning system but want to keep the Managed Server running in the WebLogic environment, select the markOnly **option.**

6   Click Run Plan (Includes Preflight).

▼ How to Add Additional `CLASSPATH` Elements to a Managed Server

1 **In the Common Tasks section in the browser interface, click WebLogic 8.**

2 **Click the Application Server Management: Start link.**

The component Details page displays.

3 **In the Component Procedures list, select the row containing the setAdditionalClasspath procedure and click Run.**

The plan's Run page displays.

4 **Select the Managed Server that you plan to update.**

Managed Servers follow the format *host (install path)*, where *host* represents the name of the physical host and *install path* represents the name of the managed server. The managed server name displays as server_*domainName_managedServerName*. For example, server_wls_Server-One.

5 **Click Run Selected Installations.**

The plan's Run page displays.

6 **Type the additional `CLASSPATH` elements.**

The additional `CLASSPATH` elements will be added to the default `CLASSPATH`, which is defined in the WebLogic Managed Server startup script. This startup script was defined when the Managed Server was created. See .

For Windows systems, use a semicolon (;) to separate additional `CLASSPATH` elements, and use the backslash character (/) as a file separator. For example,
`c:/files/a1.jar;c:/files/a2.jar;c:/files/b1.jar`

7 **(Optional) If you want the new `classpath` elements to take effect immediately, select Restart Server.**

8 **Click Run Plan (Includes Preflight).**

Capturing and Editing WebLogic Applications

The WebLogic Common Tasks page enables you to capture, configure, and deploy WebLogic Enterprise, EJB technology, and Web Applications.

You can perform several specific tasks, as described in the following sections:

-
-
-

Note – Do not deploy or manage your WebLogic applications outside of the Sun N1 Service Provisioning System. If you use the provisioning software, you must manage your WebLogic applications exclusively with the provisioning software.

▼ How to Capture a WebLogic Enterprise Application or EAR File

1 In the Common Tasks section in the browser interface, click WebLogic.

2 Click the Enterprise Applications (EAR): Create link.

3 (Optional) Type a label for this component.

4 (Optional) Type a description for this component.

5 Choose how you plan to import the application.
For more information, see "Browsing for an Enterprise Application" on page 55.

- If you are importing from the AdminServer, select WebLogic Admin Server and choose the WebLogic Admin Server from which you plan to import the EAR file.

- If you are importing from a file system, select File System and choose the host from which you plan to import the EAR file.

6 Navigate through the hierarchy to find the enterprise application to capture.

7 Click Check-in Selected Item.

8 Confirm the information on the check-in page, then click Continue to Check-in.

▼ How to Capture a WebLogic Web Application or WAR File

1 In the Common Tasks section in the browser interface, click WebLogic.

2 Click Create in the Web Applications (WAR) section of the WebLogic Common Tasks page.

3 (Optional) Type a label for this component.

4   (Optional) Type a description for this component.

5   Choose how you plan to import the application.

For more information, see "Browsing for a Web Application" on page 56.

- **If you are importing from the AdminServer, select WebLogic Admin Server and choose the WebLogic Admin Server from which you plan to import the WAR file.**

- **If you are importing from a file system, select File System and choose the host from which you plan to import the WAR file.**

6   Navigate through the hierarchy to find the web application to capture.

7   Click Check-in Selected Item.

8   Confirm the information on the check-in page, then click Continue to Check-in.

▼ **How to Capture a WebLogic JAR File**

1   In the Common Tasks section in the browser interface, click WebLogic.

2   Click Create in the Java Archives Containing EJBs (JAR) section of the WebLogic Common Tasks page.

3   Type a label for this component.

4   Type a description for this component.

5   Choose how you plan to import the JAR file.

For more information, see "Browsing for a JAR or EJB File" on page 57.

- **If you are importing from the AdminServer, select WebLogic Admin Server and choose the WebLogic Admin Server from which you plan to import the JAR file.**

- **If you are importing from a file system, select File System and choose the host from which you plan to import the JAR file.**

6   Navigate through the hierarchy to find the JAR file to capture.

7   Click Check-in Selected Item.

8   Confirm the information on the check-in page, then click Continue to Check-in.

Using Component Types to Deploy WebLogic Applications

The WebLogic 8 Plug-In includes several WebLogic-specific component types. These component types enable you to quickly model many of the most common WebLogic application components and to automatically associate install, uninstall, export, and snapshot behavior with a particular resource. Many of the component types are used by the software when you create and manage servers and clusters. As a result, you will only work with a few component types on a regular basis.

- "Enterprise Application (EAR) Component Type" on page 55
- "Web Application (WAR) Component Type" on page 56
- "Java Archive Files Containing EJBs Component Type" on page 57

However, based on the needs of your application, you might need to configure the WebLogic services before you can deploy the application components. To configure the services, you might need to rely on the component types that are described in the following sections:

- "Connection Pool Component Type" on page 58
- "Data Source and Transaction Data Source Component Types" on page 59
- "Multi Pool Component Type" on page 60
- "Thread Pool Component Type" on page 61
- "Transaction Service Component Type" on page 61
- "JMS Server Component Type" on page 61
- "JMS Queue Component Type" on page 62
- "JMS Topic Component Type" on page 63
- "JMS File Store Component Type" on page 64
- "JMS JDBC Store Component Type" on page 65
- "JMS Connection Factory Component Type" on page 66
- "JMS Destination Key Component Type" on page 67
- "Mail Session Component Type" on page 68

These configuration component types are only necessary if your application requires them. For example, if your web application uses a database to retrieve and store information, you will need to configure a connection pool and data source or transactional data source.

To use these configuration component types, select the task that you want to perform and run the associated component procedure. If you need to create and check-in a new component based on an existing component elsewhere on your file system, click Create. After checking in the new component, you can run the appropriate component procedure to configure the WebLogic environment according to your application's needs.

You usually configure and deploy these configuration component types before deploying your application. However, you can configure the WebLogic environment after the application components have been deployed by restarting the application after configuration is complete. Redeploy the application to restart it.

For more information about configuring these configuration objects, see BEA's Administration Console Online Help.

Enterprise Application (EAR) Component Type

A component of this type models an enterprise application. The component can contain either an enterprise application archive (EAR) or the expanded version of an EAR as a package.

Browsing for an Enterprise Application

You can use one of the following browsers to select your enterprise application for this component type:

- A WebLogic Administration Server browser from which you can select one of the installed applications and its relevant settings. The Administration Server browser provides an alphabetical list of enterprise applications on the Administration Server. You can choose one enterprise application for a component.

- A file system browser from which you can select the EAR file to create a component that does not include settings. The file system browser provides a list of files and directories from which you can choose. You can choose to see only those files or type *.ear in the browser.

Installing an Enterprise Application

To install an enterprise application component, you must use a WebLogic Managed Server or cluster as the target host. The installation process performs three main tasks:

1. Installs the EAR file on the target.
2. Registers the EAR with the WebLogic Administration Server.
3. Applies any properties previously captured during domain browse.

You can install the enterprise application by navigating to the application's component Details page and running the Install component procedure.

Uninstalling an Enterprise Application

When you uninstall an enterprise application component, the enterprise application no longer targets the virtual host. If the enterprise application is not targeted elsewhere, the registration component is removed from the Administration Server.

You can uninstall the enterprise application by navigating to the application's component Details page and running the Uninstall component procedure.

Error Conditions

TABLE 4–2 WebLogic Enterprise Application Error Conditions

Action	Condition	Result
Install	The topology is incorrectly configured (target host does not point at correct domain host)	Targeting fails
Install	The target host is not a valid WebLogic target	Installation prohibited
Browsing/Install/Uninstall	Credentials are not properly configured	Operation fails
Browsing	Path not correctly configured in domain host	Browsing fails

Web Application (WAR) Component Type

A component of this type includes a web application. The component can contain either a web application and its relevant settings or the web application without its settings.

Browsing for a Web Application

You can use one of the following browsers to select your web application for this component type:

- A WebLogic Administration Server browser from which you can select one of the installed applications and its relevant settings. The Administration Server browser provides an alphabetical list of web applications on the Administration Server. You can choose one web application for a component.

- A file system browser from which you can select the WAR file to create a component that does not include settings. The file system browser provides a list of files and directories from which you can choose. You can choose to see only those files or type *.war in the browser.

Installing a Web Application

To install a web application component, you must use a WebLogic Managed Server or cluster as the target host. The installation process will install the component on that target, and install the contained registration component on the Administration Server of the target.

You can install the web application by navigating to the application's component Details page and running the Install component procedure.

Uninstalling a Web Application

When you uninstall a web application component, the web application no longer targets the virtual host. If the web application is not targeted elsewhere, the registration component is removed from the Administration Server.

You can uninstall the web application by navigating to the application's component Details page and running the Uninstall component procedure.

Error Conditions

TABLE 4–3 WebLogic Web Application Error Conditions

Action	Condition	Result
Install	The topology is incorrectly configured (target host doesn't point at correct domain host)	Targeting fails.
Install	The target host is not a valid WL target.	Installation prohibited.
Browsing/Install/Uninstall	Credentials aren't properly configured.	Operation fails.
Browsing	Path not correctly configured in domain host.	Browsing fails.

Java Archive Files Containing EJBs Component Type

Browsing for a JAR or EJB File

You can use one of the following browsers to select your EJB or JAR files for this component type:

- A WebLogic Administration Server browser from which you can select one of the installed applications and its relevant settings. The Administration Server browser provides an alphabetical list of applications on the Administration Server. You can choose one EJB for a component.

- A file system browser from which you can select the JAR file to create a component that does not include settings. The file system browser provides a list of files and directories from which you can choose. You can choose to see only those files or type `*.jar` in the browser.

Installing a JAR or EJB File

When you install a component of this type, the file or directory is copied to the file system based on the install path. Once that copy finishes, the file or directory is registered with the WebLogic Administration Server.

You can install the JAR or EJB file by navigating to the application's component Details page and running the Install component procedure.

Uninstalling a JAR or EJB File

When you uninstall a component of this type, the file or directory is removed from the master server.

You can uninstall the JAR or EJB file by navigating to the component Details page and running the Uninstall component procedure.

Error Conditions

TABLE 4–4 WebLogic EJB container Error Conditions

Action	Condition	Result
Uninstall	A dependant WebLogic EJB is still installed.	Uninstall fails indicating the dependency.

Connection Pool Component Type

Browsing for a Connection Pool

You can use a WebLogic Administration Server browser from which you can select a connection pool and its relevant settings. The Administration Server browser provides an alphabetical list of applications on the Administration Server.

The WebLogic plug-in also includes a default connection pool component called `WLJDBCConnectionPoolConfig`. This default component eliminates the need for browsing. You can find the default component in the `/com/sun/webLogic8` folder or by selecting View All from the Common Tasks page. The default component can then be installed through the component Details page using the Default: Install component procedure.

Installing a Connection Pool

When you install a component of this type, the file or directory is copied to the file system based on the install path. Once that copy finishes, the file or directory is registered with the WebLogic Administration Server.

You can install the connection pool by navigating to the component Details page and running the Install component procedure.

You must set the following required variables before installing the connection pool:

- Pool name
- URL
- Driver

- Database name
- User
- Password

Uninstalling a Connection Pool

When you uninstall a component of this type, the file or directory is removed from the Master Server.

You can uninstall the connection pool by navigating to the component Details page and running the Uninstall component procedure.

Data Source and Transaction Data Source Component Types

Browsing for a Data Source or Transaction Data Source

You can use a WebLogic Administration Server browser from which you can select the data source or transaction data source and its relevant settings. The Administration Server browser provides an alphabetical list of applications on the Administration Server.

The WebLogic plug-in also includes a default data source and transaction data source, which eliminates the need for browsing. You can find the default components in the /com/sun/webLogic8 folder or by selecting View All from the Common Tasks page. The default components can then be installed through the component Details page using the Default: Install component procedure. The default components are named as follows:

- WLDataSourceConfig – the data source component
- WLTxDataSourceConfig – the transactional data source component

Installing a Data Source or Transaction Data Source

When you install a component of this type, the file or directory is copied to the file system based on the install path. Once that copy finishes, the file or directory is registered with the WebLogic Administration Server.

You can install the data source or transaction data source by navigating to the component Details page and running the Install component procedure.

Note – Before you install a data source or transaction data source component, a connection pool component must already be installed.

You must set the following required variables before installing the data source or transaction data source:

- Data Source or Transaction Data Source name
- Java Naming and Directory Interface™ (JNDI™) name
- Pool name

Uninstalling a Data Source or Transaction Data Source

When you uninstall a component of this type, the file or directory is removed from the master server.

You can uninstall the data source or transaction data source by navigating to the component Details page and running the Uninstall component procedure.

Multi Pool Component Type

Browsing for a Multi Pool

You can use a WebLogic Administration Server browser from which you can select a Multi Pool and its relevant settings. The Administration Server browser provides an alphabetical list of applications on the Administration Server.

The WebLogic plug-in also includes a default multi pool component called `WLJDBCMultiPoolConfig`. This default component eliminates the need for browsing. You can find the default component in the `/com/sun/webLogic8` folder or by selecting View All from the Common Tasks page. The default component can then be installed through the component Details page using the Default: Install component procedure.

Installing a Multi Pool

When you install a component of this type, the file or directory is copied to the file system based on the install path. Once that copy finishes, the file or directory is registered with the WebLogic Administration Server.

You can install the multi pool by navigating to the component Details page and running the Install component procedure.

You must set the following required variables before installing the multi pool:

- Multi Pool name
- Algorithm type
- Pool List – A pipe-separated (|) list of connection pools.

Uninstalling a Multi Pool

When you uninstall a component of this type, the file or directory is removed from the Master Server.

You can uninstall the Multi Pool by navigating to the component Details page and running the Uninstall component procedure.

Thread Pool Component Type

Configuring the Thread Pool

When you install a component of this type, the file or directory is copied to the file system based on the install path. Once that copy finishes, the file or directory is registered with the WebLogic Administration Server.

You can install the thread pool by navigating to the component Details page and running the Install component procedure.

You can edit the plan parameter variable settings.

Uninstalling a Thread Pool

When you uninstall a component of this type, the file or directory is removed from the Master Server.

You can uninstall the thread pool by navigating to the component Details page and running the Uninstall component procedure.

Transaction Service Component Type

Configuring the Transaction Service

When you install a component of this type, the file or directory is copied to the file system based on the install path. Once that copy finishes, the file or directory is registered with the WebLogic Administration Server.

You can install the transaction service by navigating to the component Details page and running the Install component procedure.

You can edit the plan parameter variable settings.

Uninstalling a Transaction Service

When you uninstall a component of this type, the file or directory is removed from the Master Server.

You can uninstall the transaction service by navigating to the component Details page and running the Uninstall component procedure.

JMS Server Component Type

Browsing for a JMS Server

You can use a WebLogic Administration Server browser from which you can select a JMS Server and its relevant settings. The Administration Server browser provides an alphabetical list of applications on the Administration Server.

The WebLogic plug-in also includes a default JMS server component called `WLJMSServerConfig`. This default component eliminates the need for browsing. You can find the default component in the `/com/sun/webLogic8` folder or by selecting View All from the Common Tasks page. The default component can then be installed through the component Details page using the Default: Install component procedure.

Installing a JMS Server

When you install a component of this type, the file or directory is copied to the file system based on the install path. Once that copy finishes, the file or directory is registered with the WebLogic Administration Server.

You can install the JMS Server by navigating to the component Details page and running the Install component procedure.

You must set the required JMS Server name variable before installing the JMS Server.

Uninstalling a JMS Server

When you uninstall a component of this type, the file or directory is removed from the Master Server.

You can uninstall the JMS Server by navigating to the component Details page and running the Uninstall component procedure.

JMS Queue Component Type

Browsing for a JMS Queue

You can use a WebLogic Administration Server browser from which you can select a JMS queue and its relevant settings. The Administration Server browser provides an alphabetical list of applications on the Administration Server.

The WebLogic plug-in also includes a default JMS Queue component called `WLJMSQueueConfig`. This default component eliminates the need for browsing. You can find the default component in the `/com/sun/webLogic8` folder or by selecting View All from the Common Tasks page. The default component can then be installed through the component Details page using the Default: Install component procedure.

Installing a JMS Queue

When you install a component of this type, the file or directory is copied to the file system based on the install path. Once that copy finishes, the file or directory is registered with the WebLogic Administration Server.

You can install the JMS Queue by navigating to the component Details page and running the Install component procedure.

> **Note –** Before you install a JMS Queue component, a JMS Server component must already be installed.

You must set the following required variables before installing the component:

- jmsDestName
- jmsserverName
- jndiName

Uninstalling a JMS Queue

When you uninstall a component of this type, the file or directory is removed from the Master Server.

You can uninstall the JMS Queue by navigating to the component Details page and running the Uninstall component procedure.

JMS Topic Component Type

Browsing for a JMS Topic

You can use a WebLogic Administration Server browser from which you can select a JMS topic and its relevant settings. The Administration Server browser provides an alphabetical list of applications on the Administration Server.

The WebLogic plug-in also includes a default JMS Topic component called `WLJMSTopicConfig`. This default component eliminates the need for browsing. You can find the default component in the `/com/sun/webLogic8` folder or by selecting View All from the Common Tasks page. The default component can then be installed through the component Details page using the Default: Install component procedure.

Installing a JMS Topic

When you install a component of this type, the file or directory is copied to the file system based on the install path. Once that copy finishes, the file or directory is registered with the WebLogic Administration Server.

You can install the connection pool by navigating to the component Details page and running the Install component procedure.

> **Note –** Before you install a JMS Topic component, a JMS Server component must already be installed.

You must set the following required variables before installing the component:

- jmsDestName
- jmsserverName
- jndiName

Uninstalling a JMS Topic

When you uninstall a component of this type, the file or directory is removed from the Master Server.

You can uninstall the JMS topic by navigating to the component Details page and running the Uninstall component procedure.

JMS File Store Component Type

Browsing for a JMS File Store

You can use a WebLogic Administration Server browser from which you can select a JMS File Store and its relevant settings. The Administration Server browser provides an alphabetical list of applications on the Administration Server.

The WebLogic plug-in also includes a default JMS File Store component called WLJMSFileStoreConfig. This default component eliminates the need for browsing. You can find the default component in the /com/sun/webLogic8 folder or by selecting View All from the Common Tasks page. The default component can then be installed through the component Details page using the Default: Install component procedure.

Installing a JMS File Store

When you install a component of this type, the file or directory is copied to the file system based on the install path. Once that copy finishes, the file or directory is registered with the WebLogic Administration Server.

You can install the JMS File Store by navigating to the component Details page and running the Install component procedure.

You must set the following required variables before installing the component:

- jmsFileStoreName

Uninstalling a JMS File Store

When you uninstall a component of this type, the file or directory is removed from the Master Server.

You can uninstall the JMS File Store by navigating to the component Details page and running the Uninstall component procedure.

JMS JDBC Store Component Type

Browsing for a JMS JDBC Store

You can use a WebLogic Administration Server browser from which you can select a JMS JDBC Store and its relevant settings. The Administration Server browser provides an alphabetical list of applications on the Administration Server.

The WebLogic plug-in also includes a default JMS JDBC Store component called WLJMSJDBCStoreConfig. This default component eliminates the need for browsing. You can find the default component in the /com/sun/webLogic8 folder or by selecting View All from the Common Tasks page. The default component can then be installed through the component Details page using the Default: Install component procedure.

Installing a JMS JDBC Store

When you install a component of this type, the file or directory is copied to the file system based on the install path. Once that copy finishes, the file or directory is registered with the WebLogic Administration Server.

You can install the JMS JDBC Store by navigating to the component Details page and running the Install component procedure.

You must set the following required variables before installing the component:

- jmsJDBCStoreName

Uninstalling a JMS JDBC Store

When you uninstall a component of this type, the file or directory is removed from the Master Server.

You can uninstall the JMS JDBC Store by navigating to the component Details page and running the Uninstall component procedure.

JMS Connection Factory Component Type

A JMS connection factory encapsulates connection configuration information and enables JMS applications to communicate with the messaging system.

Browsing for a JMS Connection Factory

You can use a WebLogic Administration Server browser from which you can select a JMS connection factory and its relevant settings. The Administration Server browser provides an alphabetical list of applications on the Administration Server.

The WebLogic plug-in also includes a default JMS Connection Factory component called `WLJMSConnectionFactoryConfig`. This default component eliminates the need for browsing. You can find the default component in the `/com/sun/webLogic8` folder or by selecting View All from the Common Tasks page. The default component can then be installed through the component Details page using the Default: Install component procedure.

Installing a JMS Connection Factory

When you install a component of this type, the file or directory is copied to the file system based on the install path. Once that copy finishes, the file or directory is registered with the WebLogic Administration Server.

You can install the JMS Connection Factory by navigating to the component Details page and running the Install component procedure.

You must set the following required variables before installing the component:

- jmsConnectionFactoryName
- jndiName

Uninstalling a JMS Connection Factory

When you uninstall a component of this type, the file or directory is removed from the Master Server.

You can uninstall the JMS Connection Factory by navigating to the component Details page and running the Uninstall component procedure.

JMS Destination Key Component Type

Browsing for a JMS Destination Key

You can use a WebLogic Administration Server browser from which you can select a JMS destination key and its relevant settings. The Administration Server browser provides an alphabetical list of applications on the Administration Server.

The WebLogic plug-in also includes a default JMS Destination Key component called `WLJMSDestinationKeyConfig`. This default component eliminates the need for browsing. You can find the default component in the `/com/sun/webLogic8` folder or by selecting View All from the Common Tasks page. The default component can then be installed through the component Details page using the Default: Install component procedure.

Installing a JMS Destination Key

When you install a component of this type, the file or directory is copied to the file system based on the install path. Once that copy finishes, the file or directory is registered with the WebLogic Administration Server.

You can install the JMS Destination Key by navigating to the component Details page and running the Install component procedure.

You must set the following required variables before installing the component:

- jmsDestinationKeyName

Uninstalling a JMS Destination Key

When you uninstall a component of this type, the file or directory is removed from the Master Server.

You can uninstall the JMS Destination Key by navigating to the component Details page and running the Uninstall component procedure.

Mail Session Component Type

Browsing for a Mail Session

You can use a WebLogic Administration Server browser from which you can select a mail session and its relevant settings. The Administration Server browser provides an alphabetical list of applications on the Administration Server.

Installing a Mail Session

When you install a component of this type, the file or directory is copied to the file system based on the install path. Once that copy finishes, the file or directory is registered with the WebLogic Administration Server.

You can install the mail session by navigating to the component Details page and running the Install component procedure.

You must set the following required variables before installing the mail session:

- msName
- jndiName
- Mail session property – This variable is generated by the WebLogic 8 plug-in, and is set to the value you set for the property of the mail session in the WebLogic console. For example, mail.user.

Uninstalling a Mail Session

When you uninstall a component of this type, the file or directory is removed from the Master Server.

You can uninstall the mail session by navigating to the component Details page and running the Uninstall component procedure.

Configuring WebLogic With Component Types

Browsing for Existing Configuration Settings and Infrastructure Objects

You can use a WebLogic Administration Server browser to select application server configuration objects and their relevant settings. The Administration Server browser provides an alphabetical list of applications on the Administration Server.

The WebLogic plug-in also includes default components, which eliminate the need for browsing. You can find the default component in the `/com/sun/webLogic8` folder or by selecting View All from the Configuration Tasks section of the Common Tasks page. The default component can then be installed through the component Details page using the Default: Install component procedure.

The following list contains each WebLogic configuration object that has been modeled as a component type. The list also provides the default component name and the component variables that require custom values.

Data Source Component Type
: The default component for this component type is `WLDataSourceConfig`. Required component variables: Data source name (`dataSourceName`), JNDI name (`jndiName`), Pool name (`poolName`).

Transactional Data Source Component Type
: The default component for this component type is `WLTxDataSourceConfig`. Required component variables: Transaction data source name (`dataSourceName`), JNDI name (`jndiName`), Pool name (`poolName`).

Connection Pool Component Type
: The default component for this component type is `WLJDBCConnectionPoolConfig`. Required component variables: Pool name (`name`), URL (`url`), Driver (`driverName`), Database name (`databaseName`), User (`user`), Password (`password`).

Multi Pool Component Type
: The default component for this component type is `WLJDBCMultiPoolConfig`. Required component variables: Multi Pool name(`multiPoolName`), Algorithm type(`algorithmType`), Pool list – A pipe-separated (|) list of connection pools (`poolList`).

Thread Pool Component Type
: You cannot browse for an existing thread pool.

Transaction Service Component Type
: You cannot browse for an existing thread pool.

JMS Server Component Type	The default component for this component type is `WLJMSServerConfig`. Required component variables: JMS Server name (`jmsServerName`).
JMS Queue Component Type	The default component for this component type is `WLJMSQueueConfig`. Required component variables: JMS destination name (`jmsDestName`), JMS Server name (`jmsserverName`), JNDI name of the JMS destination (`jndiName`).
JMS Topic Component Type	The default component for this component type is `WLJMSTopicConfig`. Required component variables: JMS destination name (`jmsDestName`), JMS Server name (`jmsserverName`), JNDI name of the JMS destination (`jndiName`).
JMS File Store Component Type	The default component for this component type is `WLJMSFileStoreConfig`. Required component variables: Name of the JMS file store (`jmsFileStoreName`).
JMS JDBC Store Component Type	The default component for this component type is `WLJMSJDBCStoreConfig`. Required component variables: Name of the JMS JDBC store (`jmsJDBCStoreName`).
JMS Connection Factory Component Type	The default component for this component type is `WLJMSConnectionFactoryConfig`. Required component variables:Name of the JMS connection factory (`jmsConnectionFactoryName`), JNDI name (`jndiName`).
JMS Destination Key Component Type	The default component for this component type is `WLJMSDestinationKeyConfig`. Required component variables: Name of the JMS destination key (`jmsDestinationKeyName`).
Mail Session Component Type	No default component exists for this component type.
	Required component variables: Mail session name (`msName`), JNDI name (`jndiName`), and the variable generated from the WebLogic value of the mail session property.

Installing a WebLogic Configuration Component

When you install a component of this type, the file or directory is copied to the file system based on the install path. Once that copy finishes, the file or directory is registered with the WebLogic Administration Server.

You can install the component by navigating to the component Details page and running the Install component procedure. Many components require that you edit certain component variables. See the list of WebLogic configuration component types for variables that require custom values.

Uninstalling a WebLogic Configuration Component

When you uninstall a component of this type, the file or directory is removed from the Master Server.

You can uninstall the configuration component by navigating to the component Details page and running the Uninstall component procedure.

License Component Type

Browsing for a License

You can use a WebLogic Administration Server browser from which you can select a mail session and its relevant settings. The Administration Server browser provides an alphabetical list of applications on the Administration Server.

You can use a file system browser from which you can select the license. The file system browser provides a list of files and directories from which you can choose.

Installing a License

When you install a component of this type, the file or directory is copied to the file system based on the install path. Once that copy finishes, the file or directory is registered with the WebLogic Administration Server.

You can install the license by navigating to the component Details page and running the Install component procedure.

Uninstalling a License

When you uninstall a component of this type, the file or directory is removed from the Master Server.

You can uninstall the license by navigating to the component Details page and running the Uninstall component procedure.

Solaris: Running the WebLogic 8 Demonstration Application: Avitek Medical Records

The Avitek Medical Records demonstration is included in the WebLogic 8 Plug-In to illustrate how to provision BEA WebLogic 8 and a custom application. This demonstration runs on the Solaris OS only. All demo-related plans and components exist in the `/com/sun/weblogic8/demo/` folder.

Installing the Sample Application

To install the demo application, run the installDemoAppPlan plan. This plan sets up the database and configures the JMS and JDBC resources for the managed server. The JMS and JDBC components are created from existing component types.

The InstallDemoAppPlan performs the following tasks.

- Starts the PointBase database
- Installs the sample JDBC connection pools
- Installs the sample JDBC DataSource
- Installs the sample JMS JDBC store
- Installs the sample JMS server
- Installs the sample JMS queues
- Installs the sample JMS connection factory
- Adds email capabilities to the sample application
- Configures the authenticators that are required to log in to the demo application

▼ How to Compile the Sample Application

Before you install the Avitek Medical Records sample application, you must compile the application. Follow these steps.

1   If you created a domain for the sample application, source the environment script in the sample application domain directory.

   # *BEA-InstallDirectory*/**user_projects/domains/medrec/setMedRecEnv.sh**

   In the previous example, *BEA-InstallDirectory* specifies the BEA WebLogic home directory, for example, /export/home/bea.

2   Change directories to the src directory of the sample application.

   # *BEA-InstallDirectory*/**weblogic81/samples/server/medrec/src**

3 **Use the** ant **build utility to build the sample application source.**

   # **ant**

4 **Create an XML file named** package.xml **with content that is similar to the following example.**

```
<project name="tutorial" default="package">
        <target name="package">
           <wlpackage srcdir="/export/home/bea/weblogic81/samples/server/medrec/src/medrecEar"
                   destdir="/export/home/bea/weblogic81/samples/server/medrec/build/medrecEar"
                   toFile="/export/home/bea/weblogic81/samples/server/medrec/dist/medrecEar.ear" />
        </target>
     </project>
```

In the wlpackage element, change the paths for srcdir, destdir, and toFile to point to the appropriate directories on your system.

5 **Save this file to the** *BEA-InstallDirectory*/weblogic81/samples/server/medrec/src/medrecEar **directory.**

6 **Repeat Step 4 and Step 5 to create** package.xml **files for the** physicianEar **and** startupEar **directories.**

   Change the paths for srcdir, destdir, and toFile to point to the appropriate physicianEar and startupEar directories. Save each package.xml file to the appropriate subdirectory of the *BEA-InstallDirectory*/weblogic81/samples/server/medrec/src directory.

7 **Use the** ant **build utility in each EAR directory to update the build with the contents of the** package.xml **file.**

   # cd *BEA-InstallDirectory***/weblogic81/samples/server/medrec/src/***EAR-dir*
   # **ant -f package.xml**

   In the previous example, *EAR-dir* specifies either the medrecEar, the physicianEar or the startupEar directory.

   The medrecEar.ear, the physicianEar.ear, and the startupEar.ear files are created in the *BEA-InstallDirectory*/weblogic81/samples/server/medrec/dist directory.

▼ How to Install the Sample Application

Before You Begin   Before you can run the Avitek Medical Records demonstration, the following procedures must be performed.

- "How to Install the WebLogic Software" on page 24
- "How to Create a WebLogic 8 Domain and Administration Server" on page 32
- "How to Create a WebLogic Managed Server" on page 36
- "How to Start a WebLogic Domain or Administration Server" on page 46
- "How to Start a Managed Server" on page 49
- "How to Compile the Sample Application" on page 72

You must perform the previous procedures after you install or upgrade to the 3.0 version of the WebLogic 8 Plug-In version 3.0.

1   Convert the WebLogic demonstration expanded EAR directories to .ear files.

The WebLogic demonstration files are located at
BEA-InstallDirectory/weblogic81/samples/server/medrec/dist/. You need to convert the
medrecEar, physicialEar, and startupEar directories.

a. From inside each directory, create an .ear file.

Use the following command syntax: jar cvf *jar-file input-files*

From the startupEar directory
jar cvf startupEar.ear .

2   Create components out of the demonstration .ear files.

For more information, see "How to Capture a WebLogic Enterprise Application or EAR File"
on page 52.

Note – You need to save your components in a folder that is not owned by the WebLogic 8 plug-in.

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3   Create session variables for the WebLogic application.

Create the following session variable.

WL_POINTBASE_PORT   Specifies the port to use for the WebLogic application. The value for
                         WL_POINTBASE_PORT can be any open port number. The default value is
                         9092.

4   From the Common Tasks page, click Demo Application Configuration: Configure.

The plan Details page displays.

5   Click Run.

6   Leave the plan parameter component variables set at the default value.

7   Select a managed server as the target host.

8   Install the demo application EAR components.

a. On the WebLogic plug-in Common Tasks page, click Create in the Enterprise Application (EAR) section.

b. Navigate to the folder in which you installed the medrecEar.ear **component.**

c. Run the component's Default:Install component procedure.

    d. **Repeat steps Step b through Step c for the** `physicianEar.ear` **and the** `startupEar.ear`
    components.

9 **View the Avitek Medical Records demonstration applications.**

You can see the three demonstration applications at the following urls.

- http://*RA-hostname*:7010/patient
- http://*RA-hostname*:7010/admin
- http://*RA-hostname*:7010/physician

Using the CLI to Work With WebLogic

When you work with WebLogic through the provisioning system, you can use two command lines:
the Sun N1 Service Provisioning System command line and the WebLogic command line.

Using the Sun N1 Service Provisioning System Command-Line Interface

By default, the provisioning system's command-line interface is located in the following directory:
`/opt/SUNWn1sps/N1_Service_Provisioning_system_5.1/cli/bin/cr_cli`.

BEA WebLogic 8 plug-in objects are located in the `/com/sun/weblogic8` folder.

You can interact with plug-in components and plans much like any other custom component or
plan. However, if you want to make changes to the components or plans, you need to save the
component or plan to a new folder and make your changes there. For more information about using
the provisioning system's command-line interface, see Chapter 1, "Using the Command-Line
Interface," in *Sun N1 Service Provisioning System 5.2 Command-Line Interface Reference Manual*

Using the WebLogic Command-Line Interface

The WebLogic command line is accessible through the WebLogic 8 Common Task page. For more
information about the WebLogic 8 command-line interface, see the WebLogic Server Command
Reference on BEA's web site.

▼ **How to Use the WebLogic Command-Line Interface Through the Sun N1
Service Provisioning System**

You can run WebLogic commands on any Administration Server or Managed Server.

1 **In the Common Tasks section in the browser interface, click WebLogic 8.**

2   Select whether you plan to run the command on an Administration Server or a Managed Server.

- **If you plan to run commands on an Administration Server, click Domain Management: Start.**

- **If you plan to run commands on a Managed Server, click Application Server Management: Start.**

The component Details page displays

3   Select the Run-cli **component procedure and click Run.**

The plan's Run page displays.

4   Select the AdminServer virtual host or Managed Server virtual host on which to run the CLI and click Run Selected Installations.

5   Type the needed information in the plan variable fields.

Many of the plan variables do not require information and can be left blank. The following list describes the optional variables.

The SSL arguments for the command
   This variable can be safely ignored if you do not connect to the server using SSL.

The name of the user who must have appropriate permission to view or modify the target of the command
   This is the user name variable. The user name and password variables are mutually exclusive with the user-configuration file and key file variables. Supply either the user name and password or the user-configuration file and key file locations.

The password that is associated with the username
   This is the password variable. The user name and password variables are mutually exclusive with the user-configuration file and key file variables. Supply either the user name and password or the user-configuration file and key file locations.

The name and location of a user-configuration file, which contains an encrypted username and password
   This is the user-configuration file variable. The user name and password variables are mutually exclusive with the user-configuration file and key file variables. Supply either the user name and password or the user-configuration file and key file locations.

The name and location of the key file
   This is the key file variable. The user name and password variables are mutually exclusive with the user-configuration file and key file variables. Supply either the user name and password or the user-configuration file and key file locations.

6   Click Run Plan (Includes Preflight).

Example 4–1 Using the Command-Line Interface

This example uses the WebLogic FORCESHUTDOWN command to illustrate input for each Run-cli plan variable.

Weblogic CLI to run (weblogic.Admin or weblogic.Deployer):	weblogic.Admin
The SSL arguments for the command:	
The listen address of the server instance that runs the command:	sun03 *This is the name of the AdminServer.*
The listen port of the server instance that runs the command:	7001
The name of the user who must have appropriate permission to view or modify the target of the command:	admin
The password that is associated with the username:	xxxxx
The name and location of a user-configuration file, which contains an encrypted username and password:	
the name and location of the key file:	
The name of the command to run:	FORCESHUTDOWN
Arguments of the command:	Server-one

Using the WebLogic Server Scripting Tool Within the Sun N1 Service Provisioning System

You can use the WebLogic Server Scripting Tool (WLST) from the provisioning system's browser interface. For information on how to perform administrative tasks and configuration changes using the WLST, see BEA's WebLogic Server Using the WebLogic Server Scripting Tool (http://dev.bea.com/codelibrary/code/wlst.jsp) document.

▼ How to Create a WebLogic Script Component

You must first create the WebLogic script component, then install it.

1 In the Common Tasks section in the browser interface, click WebLogic 8.

2 Click the Command Line Interface: Create link.

The component's Edit page displays.

3   Type the name of the new WebLogic Script component.

4   (Optional) Type the components label and description.

5   Select a host that has a copy of the WebLogic script file on its file system.

6   Navigate through the host's file system and select the file.

7   Click Check In Selected Item.
The component's Check In page displays.

8   Select a folder on which you have edit permissions.

9   Click Continue to Check In.

▼ How to Install a WebLogic Script Component

Before You Begin   Before you can install a WebLogic script component, one must exist within the provisioning system. See "How to Create a WebLogic Script Component" on page 77.

1   In the Common Tasks section in the browser interface, click WebLogic 8.

2   Click the Command Line Interface: View All link.
The Components page displays.

3   In the row of the WLScript component that you plan to install, click Details.
The component's Details page displays.

4   In the Component Procedures table, select the Default: Install procedure and click Run.
The plan's Run page displays.

5   Select the target host.
You target the AdminServer virtual host.

Note – You do not need to modify the component variables for license installation.

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6   (Optional) Type the name of the WebLogic user who installed the software in the RunAs field.
This user represented by the webLogicUser variable used in the software installation plan.

7   Click Run Plan (Includes Preflight).

Using Plans

The WebLogic 8 Plug-In relies on plans to perform many of the tasks associated with installing and removing Administration Servers, Managed Servers, and clusters.

BEA WebLogic 8 plug-in plans are located in the /com/sun/weblogic8 folder and linked to from the Common Tasks page.

Troubleshooting

If you are experiencing problems managing WebLogic through the provisioning software, messages will likely appear on the screen to tell you that a problem exists.

```
Problems encountered during plan run or preflight
The plan (or preflight) "/com/sun/weblogic8/InstallAdminServerPlan"
finished with 1 failed host(s). (017034)
Unable to find session variable "WL_DEFAULT_PASSWORD" (Unresolved
session variable WL_DEFAULT_PASSWORD. This session variable was
automatically created when the system was unable to find it.).
Add this session variable and try the operation again. (040111)
```

Although the message in this example is easily understood, not all messages are this straightforward.

The following message means that the JMX interface on the Administration Server was not available or the login information is wrong.

```
Admin Server adminHost JMX interface
 running on port portNumber is not available;
Admin Server must be running for this operation.
```

To find out more information about the specific problem, follow the Run History Details links until you reach the final error block. View the output of stderr and stdout for details on the error condition.

Examples of WebLogic Installation Error Messages

This section includes examples of error messages that you might encounter during the installation of WebLogic.

EXAMPLE 4–2 Invalid User Message

```
The user specified is not a valid system users: weblogic (017056)
```

You must create the system user "weblogic" or change the Install variable weblogicUser to an existing user.

EXAMPLE 4–3 Target Host Error Message

```
Specified target(s) "sol01" were not in the required host set
 "com.sun.weblogic8#SupportedHS". (017087)
```

This error message could result for two reasons:

- The host does not support an operating system that is compatible with the plug-in.

  If true, select a host that uses an operating system that is supported by the plug-in.

- The host has not been prepared.

  If true, go to the Hosts page and prepare the host.

EXAMPLE 4–4 Error Message in a Raise Step

```
Error: Installation could not be preformed check the deployment details
 for more information.
```

You must check the deployment details of the final execNative control to find information from the WebLogic installer.

The following messages are examples of what could be contained in the stdout output.

- SilentBEAHomeTask – Access to the directory is denied: [/usr/local/bea]

  If this message is displayed, the WebLogic user specified in the installation plan does not have permission to create or write to the beaHome directory. You can change the permissions on the directory or create the beaHome directory using the provisioning system's directory component.

- SilentBEAHomeTask – At least one item must be selected.

  If this message is displayed, an installation of WebLogic already exists in this path. You must change the path or uninstall the existing WebLogic installation.

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