Sun N1 Service Provisioning System User's Guide for BEA WebLogic 9 Plug-in 1.0

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Preface

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

- Install BEA WebLogic 9 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 9 Plug-In 1.0 includes system administrators and operators of Sun N1 Service Provisioning System software who want to be able to incorporate BEA WebLogic 9 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 9 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 your WebLogic server infrastructure in the N1 SPS software.

Chapter 5 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.

Appendix A explains how to perform advanced setup and administration tasks on WebLogic domains.

Related Third-Party Web Site References

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

The BEA WebLogic 9 product documentation can be found at `http://e-docs.bea.com/wls/docs90/`.

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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.`

TABLE P–1 Typographic Conventions *(Continued)*

Typeface	Meaning	Example
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*.
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	`#`

◆ ◆ ◆ CHAPTER 1

Overview of the WebLogic 9 Plug-In

This chapter explains general information about using Sun N1 Service Provisioning System to provision BEA WebLogic 9 applications. This chapter includes the following information:

- "Purpose of the WebLogic 9 Plug-In" on page 11
- "What the WebLogic 9 Plug-In Includes" on page 11
- "Requirements for Using the WebLogic 9 Plug-In" on page 12

Purpose of the WebLogic 9 Plug-In

The Sun N1 Service Provisioning System software provides enhanced capabilities in support for BEA WebLogic 9 applications. You can provision the WebLogic 9 infrastructure by installing domains, managed servers, and clusters with the provisioning software. You can write deployment plans to combine the installation of several components, then run these plans to install an entire domain with the applications that you want to deploy.

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 9 Plug-In Includes

The WebLogic 9 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 infrastructure:
  - WebLogic Administration Server
  - WebLogic Managed Server

  - WebLogic Node Manager Machine
  - 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 9 application servers
- Special component types to configure the WebLogic 9 services.
  - Data Source – Enables you to capture, edit, and deploy data sources.
  - Multi Data Source – Enables you to capture, edit, and deploy data sources with associated connection pools and multi pools.
  - JMS Server – Enables you to capture, edit, and deploy Java Messaging Service (JMS) servers.
  - JMS Queue – Enables you to deploy JMS Queues.
  - JMS Topic – Enables you to capture, edit, and deploy JMS Topics.
  - JMS Module – Enables you to capture and configure JMS Queues and Topics in a JMS Module container.
  - 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.
  - WLScript – Enables you to run WebLogic commands through the provisioning system's interface.

The WebLogic 9 Plug-In also includes several plans that install and remove the WebLogic Administration Servers, Managed Servers, Machines, and Clusters.

Requirements for Using the WebLogic 9 Plug-In

The WebLogic 9 plug-in supports the WebLogic Server Version 9.1 on the following platforms.

- Solaris 9 for SPARC and x86
- Solaris 10 for x86
- RedHat Linux AS 3.0
- RedHat Linux 4.0
- SuSE Linux 9.0

Any host on which you intend to deploy the WebLogic 9 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 19 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 9.1 product documentation website. If your platform uses the `.bin` binary installer, a JRE is not required.

TABLE 1–1 JRE Requirements

	Java SDK already installed	Included in Installation
RedHat Linux		Sun Java 2 SDK 1.50_04
Solaris x86	Sun Java 2 SDK 1.5.0_04	
Solaris SPARC		Sun Java SDK 1.5.0_04

TABLE 1–2 WebLogic Install Media Requirements

	Binary Installer	JAR Installer
RedHat Linux	X	
SuSe Linux	X	
Solaris x86		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 9.1 Supported Configurations web page.
(`http://e-docs.bea.com/platform/suppconfigs/configs91/91_over/`)

◆ ◆ ◆ CHAPTER 2

Release Notes for the WebLogic 9 Plug-In

This chapter describes late-breaking news and known issues with the WebLogic 9 plug-in. The chapter contains the following information:

- "Installation Issues" on page 15
- "Runtime Issues" on page 15

Installation Issues

There are no known installation issues.

Runtime Issues

This section describes any known runtime issues with the WebLogic 9 plug-in.

Default Installation of Existing JMS Queues, Connection Factories, and Topics Might Leave Administration Console in Active State (6418393)

If you use the `install: default` component procedure to install JMS Queues, Connection Factories, and Topics, the Administration Console might be left in an active state. This problem occurs under the following conditions.

- You create a JMS Queue, Connection Factory, or Topic component outside of the Sun N1 SPS software and install this component on a target host.
- You create a JMS Queue, Connection Factory, or Topic component with the Sun N1 SPS software and assign the component the same name as the component that was created outside of the Sun N1 SPS software.

- You use the `install: default` component procedure to install the Sun N1 SPS component on a target host that contains the non-SPS component of the same name.

The installation of the component succeeds in the N1 SPS environment, but the domain is left in an active state.

Workaround: Choose one of the following workarounds.

- To avoid this problem, select the `install: markOnly` component procedure to install the component.

  For more information about how to install JMS configuration components, see "Installing Configuration Services" on page 85.

- If you encounter this problem, undo the failed changes to the domain through the WebLogic 9 graphical user interface, or use the `domainUtil` component procedure for the Domain and Administration server.

  For more information about how to use the `domainUtil` component procedure, see "How to Manage Changes to a Domain and Administration Server" on page 100.

◆ ◆ ◆ CHAPTER 3

Installing and Configuring the WebLogic 9 Plug-In

This chapter explains how to install and configure the WebLogic 9 plug-in. The chapter contains the following information:

- "Acquiring the WebLogic 9 Plug-In" on page 17
- "Adding the WebLogic 9 Plug-In to the Sun N1 Service Provisioning System" on page 19
- "Patching the WebLogic 9 Plug-In" on page 23

Acquiring the WebLogic 9 Plug-In

Acquiring the BEA WebLogic 9 plug-in is a two-step process. First, you must add the package file that contains the BEA WebLogic 9 plug-in JAR file to your system. Then you must import the BEA WebLogic 9 plug-in JAR file.

The BEA WebLogic 9 plug-in is packaged as a *plug-in* to the Sun N1 Service Provisioning System software. The plug-in files for the BEA WebLogic 9 plug-in are available from the Sun N1 Service Provisioning System DVD or from the Sun Download Center.

Once the package file is added to your system, the WebLogic 9 Plug-In is available for import from the `com.sun.weblogic9_1.0.jar` file.

1. Add the file containing the JAR file:
   - "Adding the WebLogic 9 Plug-In for Solaris" on page 17
   - "Adding the WebLogic 9 Plug-In for Linux" on page 18
   - "Adding the WebLogic 9 Plug-In for Windows" on page 18
2. Import the JAR file - "Adding the WebLogic 9 Plug-In to the Sun N1 Service Provisioning System" on page 19.

Adding the WebLogic 9 Plug-In for Solaris

The BEA WebLogic 9 plug-in is contained in the `SUNWspswl9`package.

▼ To Add the WebLogic 9 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* **`SUNWspswl9`**

   The standalone JAR file is in the `/opt/SUNWn1sps/plugins/com.sun.weblogic9/` directory.

Adding the WebLogic 9 Plug-In for Linux

The BEA WebLogic 9 plug-in is contained in the `sun-spswl9-1.0-1.noarch.rpm` file.

▼ To Add the WebLogic 9 Plug-In Package for Linux

1. **In a terminal window, become superuser.**
2. **Move to the directory containing the `sun-spswl9-1.0-1.noarch.rpm` file.**
3. **Type the following command and press Return.**

   `# rpm -i` *package_directory* **`sun-spswl9-1.0-1.noarch.rpm`**

   The standalone JAR file is in the `/opt/SUNWn1sps/plugins/com.sun.weblogic9/` directory.

Adding the WebLogic 9 Plug-In for Windows

The BEA WebLogic 9 plug-in is contained in the `sun-spswl9-1.0.msi` Microsoft Installer (MSI) package file.

▼ To Add the WebLogic 9 Plug-In MSI File for Windows

1. **Move to the directory containing the `sun-spswl9-1.0.msi` file.**
2. **Double-click the `sun-spswl9-1.0.msi` file.**

   The Installer GUI starts. The JAR file is copied to the `c:\Program Files\N1 Service Provisioning System\plugins\com.sun.weblogic9` directory.

Adding the WebLogic 9 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 9 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** `com.sun.weblogic9_1.0.jar` **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 9 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
```

Where *plugin-filename* is `com.sun.weblogic9_1.0.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, WebLogic machines, and Managed Servers.

Managed Servers and Administration Servers use the same `Install` component, which installs the WebLogic 9 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 Prepare all hosts.

The WebLogic 9 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*.

2 In the Common Tasks section in the browser interface, click WebLogic 9.

3 Click the WebLogic Software Installation: Install 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 `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.
`sdkJavaHome`	Required for installation with an installer JAR file. Specifies the JAVA_HOME variable value for SDK version 1.5.0_04, or compatible version. If you are using a binary installer, leave this value blank.
`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.
`wlHomeDir`	Optional. Location of the WebLogic software installation. The default value is the `weblogic91` subdirectory of the WebLogic BEAHOME directory. Specify a value for this variable if you plan to run multiple instances of the WebLogic software.
`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. You can change the default value from weblogic to this to root if you do not want to create a new user.
`targetRefName`	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. **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.
`installNodeManagerService`	Optional. Enables the WebLogic Node Manager service on the target host. The Node Manager service enables the target host to remotely control the start and stop operations on Managed Servers. The default value is `no`.

`installPath`	Required. Specifies the location where the WebLogic software is to be installed. The default value is the value of the `beaHome` variable.
`componentPaths`	Optional. Sets the WebLogic components to be installed. The WebLogic 9 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.
`weblogicTmpDir`	Required. Specifies the location for temporary install files on the target host. The default value is the `weblogic9` subdirectory of the target host's temporary directory, such as `tmp` or `Temp`.
`installName`	Optional. Enables you to specify the type of installation you want to perform, either silent or interactive. The default value is the `silent.xml` file, enabling a silent installation.
`installHostName`	Specifies the name of the target host on which you want to install the WebLogic software.

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`. For example, for a Solaris Remote Agent, if you set the `installPath` variable to `opt` and deploy the file to an Agent with a default home directory of `/opt/SUNWn1sps/agent`, the file is deployed to `/opt/SUNWn1sps/agent/opt/`.

---

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*.

6 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.

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

Ensure that the `installPath`, `weblogicUser` and `sdkJavaHome`variable values match those of the existing domain.

8 Click Run Plan (Includes Preflight).

Patching the WebLogic 9 Plug-In

Check the SunSolve (`http://sunsolve.sun.com`) site for available patches for the WebLogic 9 Plug-In. To apply the patch, follow the instructions in the patch `README` file.

◆ ◆ ◆ CHAPTER 4

Setting Up Your Environment With the WebLogic 9 Plug-In

The WebLogic 9 plug-in provides easy access to functions that are useful for working with BEA WebLogic 9 applications. This chapter describes the following information:

- "Installing and Using the WebLogic 9 Environment with the Sun N1 Service Provisioning System" on page 25
- "Creating the WebLogic Infrastructure" on page 28
- "Managing WebLogic Domains, Servers, and Clusters" on page 47

Installing and Using the WebLogic 9 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 9 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 9 plug-in organizes tasks in three categories: application tasks, infrastructure tasks, and configuration 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 in all folders.
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. **Note –** You cannot browse for application types on the WebLogic Admin Server.
Start or Stop	Links to the autogenerated plans to run the Start or Stop component procedure. You can also run these procedures directly from the component.
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 9 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 9 environment within the provisioning system is similar to the process of creating the environment without the provisioning system.

1. Import the WebLogic 9 plug-in.

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

2. 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*.

3. Prepare all hosts.

   The WebLogic 9 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*.

4. Install the WebLogic software.

   See "How to Install the WebLogic Software" on page 19

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

   See "How to Create a WebLogic 9 Domain and Administration Server" on page 28.

6. (Optional) Create a Node Manager machine.

   See "How to Create WebLogic Machines" on page 41.

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

   See "How to Create a WebLogic Managed Server" on page 33.

8. (Optional) Create a WebLogic 9 cluster.

   See "How to Create a WebLogic Cluster" on page 37.

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

   See "How to Create Cluster Members" on page 39.

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

    Depending on the needs of your application, you might need to configure database connection pools and database data sources. See "Creating Configuration Services" on page 82.

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

    See "Creating Configuration Services" on page 82.

12. Capture application archive files from the file system.

    See "Capturing and Editing WebLogic Applications" on page 59.

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

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

    See "Deploying WebLogic Applications" on page 67.

Creating the WebLogic Infrastructure

Use the WebLogic 9 Common Tasks page as a starting point to create and manage WebLogic servers and clusters.

Creating WebLogic 9 Domains and Administration Servers

▼ How to Create a WebLogic 9 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 perform the following tasks.

- Configure the domain.
- Create the Admin Server virtual host. This task is performed when the plan is run.

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 9 component is called the AdminServer component. AdminServer represents the provisioning system component and Administration Server represents the installed application running in the WebLogic 9 environment.

Before You Begin To create a WebLogic 9 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. The `WL_DEFAULT_PASSWORD` variable must contain 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 9.**

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.

    Note – For those variables that specify port values, the ports that you specify must be free if the value of the `weblogicUser` variable is not `root`.

`domainName`	Required. The WebLogic domain name.
`adminListenPort`	Required. The default TCP port (between 1024 and 65534) on which the Administration Server will listen for non-SSL communication. The default value is `7001`.
`adminSslListenPort`	The default TCP port (between 1024 and 65534) on which the Administration Server will listen for SSL communication. The default value is `7002`.
`administrationPort`	The default TCP port (between 1 and 65534) that the Administration Server will use for all connections. By setting this variable, all other ports are disabled. The default for this value is `9002`.
`enableAdministrationPort`	Enable the Domain wide administration port you specified in the `administrationPort` variable. Set this value to `true` to enable the Administration Server to listen for communication on the port you specified in the `administrationPort` variable. If you set this value to `true`, set the `secureConnect` value to `true`. All communications traffic will use this port. The default value is `false`.
`adminPort`	Required. The default port for JMX calls and the Managed Servers to use. This value must be either

	`:[adminListenPort]`, `:[adminSslListenPort]`, or `:[administrationPort]`. The default value is `:[adminSslListenPort]`.
	Note – If you set this variable to `:[adminSslListenPort]`, set the `secureConnect` variable to `true`. If you set this variable to `:[administrationPort]`, set both the `secureConnect` and `enableAdministrationPort` variables to `true`.
	Before the domain is created, a check is performed to verify that the ports are available. .
`secureConnect`	Optional. `True` specifies that the port specified for the `adminPort` variable will use SSL for connections. Set this value to true if you are using the `adminSslListenPort` or `administrationPort` variables.
`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 `AdminServer`. 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.
	Note – Due to SSL host name verifications, you might need to change this value to the node name of the machine if you are using the `secureConnect`.
`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`.
`configJAR`	Specifies the domain template JAR to use to configure the domain. Use the default value provided. The default value is `:[wlHomeDir]:[/]common:[/]templates`

`:[/]domains:[/]wls.jar`.

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. Specify the port number that you want to use in the appropriate variable field.

Specify the port value in the `adminListenPort`, `adminSslListenPort`, or `administrationPort` field.

d. Select the `adminPort` row and type the appropriate variable substitution value for the variable you set in the previous step.

Set this value to either `:[adminListenPort]`, `:[adminSslListenPort]`, or `:[administrationPort]`.

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

Set this value if the `adminPort` variable is set to either `:[adminSslListenPort]` or `:[administrationPort]`.

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

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`. For example, for a Solaris Remote Agent, if you set the `installPath` variable to `opt` and deploy the file to an Agent with a default home directory of `/opt/SUNWn1sps/agent`, the file is deployed to `/opt/SUNWn1sps/agent/opt/`.

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

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*`]`

- **If you want to use another component's variable settings, click Import Set From Component.**

The Import Variable Settings window displays.

a. If necessary, navigate to the Folder that contains the component with the variable settings you want to import.

b. Select the component version.

Note – Variable settings can vary between component versions. Ensure that the current components and the component from which you want to import variable settings share common variables. If the component from which you want to import variable settings does not share common variables with the component you want to use in your plan, the variable settings are not imported.

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c. Click Import Variable Settings.

The variables settings are imported, and are displayed in the table.

d. On the Plan Details Run page, select the variable settings that you imported from the Variable Settings drop-down list, then click Select.

- **If you want to use component variable settings that are stored in a file, follow these steps.**

  a. In the Import Sets from File text field, enter the path to the variable settings file that you want to use.

  To browse through the file system to find the appropriate file, click the Browse button.

  b. Click Import.

  The variables settings are imported, and are displayed in the table.

  Note – If the file from which you want to import variable settings does not share common variables with the component you want to use in your plan, the variable set is not imported.

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  c. On the Plan Details Run page, select the variable settings that you imported from the Variable Settings drop-down list, then 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 19 procedure.

Note – The target host must be a member of the `com.sun.weblogic9#InstallHS` host set.

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

Ensure that all the variable values you specify for this component match the configuration of the installed WebLogic domain.

8 Click Run Plan (Includes Preflight).

Creating Managed Servers

You can run multiple Managed Servers in each domain to host your applications. WebLogic Managed Servers are installed 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 9 environment.

You can also enable your Managed Servers to use the WebLogic Node Manager process to remotely manage your systems. To enable your Managed Servers to use Node Manager, you must create a WebLogic machine on the Managed Server.

▼ How to Create a WebLogic Managed Server

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.

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 9 Domain and Administration Server" on page 28.
- 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 19.
- 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.
- (Optional) If you want to remotely manage your Managed Server with a Node Manager, you must create a WebLogic machine. You must then enrol the WebLogic machine in a domain, and start the Node Manager.

  See "How to Create WebLogic Machines" on page 41.

1. **In the Common Tasks section in the browser interface, click WebLogic 9.**
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 9 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.weblogic9#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.
`serverPort`	Required. The default value for this variable is 7010. If this port is not available, the plan fails with a warning.
`serverSslPort`	Required. The default value for this variable is 7020.If this port is not available, the plan fails with a warning.
`listenAddress`	Required. The IP address the Managed Server uses to listen.
`useNodeManager`	Required. Specifies whether to use a WebLogic machine to remotely manage a Managed server (true/false). The default value is `false`. If you are using a WebLogic machine to remotely manage your managed server, set this value to `true`.
`adminPortOverRide`	Specifies the TCP port that this server will use for communications with the Administration Server. If the Managed Server is running on the same system as the Administration Server, change the default value for this variable to avoid a conflict with the port that the Administration Server is using for the administration port.

	If you change the value for this variable, this port will be used for all connections, overriding the value as specified by the `administrationPort` variable for the Administration Server. The default value is 9002.
`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.
`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`.
`serverRoot`	Required. The directory used for the Managed Server. If you are using a WebLogic machine to manage your Managed Server, set this value to `:[wlHomeDir]:[/]common:[/]nodemanager :[/]:[domainName]:[/]servers:[/]:[targetName]` to point to the Node Manager server root directory.

- **If you want to use another component's variable settings, click Import Set From Component.**

  The Import Variable Settings window displays.

  a. **If necessary, navigate to the Folder that contains the component with the variable settings you want to import.**

  b. **Select the component version.**

  Note – Variable settings can vary between component versions. Ensure that the current components and the component from which you want to import variable settings share common variables. If the component from which you want to import variable settings does not share common variables with the component you want to use in your plan, the variable settings are not imported.

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  c. **Click Import Variable Settings.**

  The variables settings are imported, and are displayed in the table.

  d. **On the Plan Details Run page, select the variable settings that you imported from the Variable Settings drop-down list, then click Select.**

- **If you want to use component variable settings that are stored in a file, follow these steps.**

  a. **In the Import Sets from File text field, enter the path to the variable settings file that you want to use.**

     To browse through the file system to find the appropriate file, click the Browse button.

  b. **Click Import.**

     The variables settings are imported, and are displayed in the table.

     Note – If the file from which you want to import variable settings does not share common variables with the component you want to use in your plan, the variable set is not imported.

  c. **On the Plan Details Run page, select the variable settings that you imported from the Variable Settings drop-down list, then click Select.**

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

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

Target the virtual host that was created when you installed the WebLogic software. See "How to Install the WebLogic Software" on page 19 procedure.

Note – The target host must be a member of the `com.sun.weblogic9#InstallHS` host set.

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

Ensure that the variables you specified for the component match the values for the existing managed server.

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

Creating WebLogic Clusters

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.

How to Create a WebLogic Cluster

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, and an Administration Server.

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 9.**
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.**

- **If you want to use another component's variable settings, click Import Set From Component.**

  The Import Variable Settings window displays.

  a. **If necessary, navigate to the Folder that contains the component with the variable settings you want to import.**

  b. **Select the component version.**

Note – Variable settings can vary between component versions. Ensure that the current components and the component from which you want to import variable settings share common variables. If the component from which you want to import variable settings does not share common variables with the component you want to use in your plan, the variable settings are not imported.

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c. **Click Import Variable Settings.**

The variables settings are imported, and are displayed in the table.

d. **On the Plan Details Run page, select the variable settings that you imported from the Variable Settings drop-down list, then click Select.**

- **If you want to use component variable settings that are stored in a file, follow these steps.**

a. **In the Import Sets from File text field, enter the path to the variable settings file that you want to use.**

To browse through the file system to find the appropriate file, click the Browse button.

b. **Click Import.**

The variables settings are imported, and are displayed in the table.

Note – If the file from which you want to import variable settings does not share common variables with the component you want to use in your plan, the variable set is not imported.

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c. **On the Plan Details Run page, select the variable settings that you imported from the Variable Settings drop-down list, then click Select.**

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 33.
- The cluster that you plan to add nodes to must exist.

  For more information, see "How to Create a WebLogic Cluster" on page 37.

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 9.**
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).**

Creating WebLogic Machines

You can set up a WebLogic machine to use the Node Manager process to remotely manage your Managed Servers. To use the Node Manager process to control your Managed Server, you must install the WebLogic machine component, and then enroll the Machine in a domain.

Choose the appropriate procedure to create a WebLogic machine.

- To install the Machine component on a Managed Server, see "How to Create WebLogic Machines" on page 41.
- To incorporate an existing WebLogic machine in your N1 SPS environment, see "How to Capture an Existing WebLogic Machines in Your N1 SPS Environment" on page 44.

▼ How to Create WebLogic Machines

This procedure describes how to install the WebLogic machine component and start the Node Manager process.

To incorporate an existing WebLogic machine in your N1 SPS environment, see "How to Capture an Existing WebLogic Machines in Your N1 SPS Environment" on page 44.

1 In the Common Tasks section in the browser interface, click WebLogic 9.

2 Click the WebLogic Machine Installation: Install 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 `Machine` component that you plan to deploy.

The `Machine` component represents the Machine instance within the WebLogic 9 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 `Machine` component.

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

`machineName`	Required. Specifies the name for the Node Manager machine in the domain. The default value is the host name of the target host.
`nodeManagerPort`	Required. Specifies the port that the Node Manager uses to listen for communication. The default value is `5556`.
`nodeManagerListenAddress`	Required. Specifies the IP address the Node Manager uses to listen. The default value is the IP address of the Remote Agent.
`unixPlatform`	Required. Specifies the type of machine to create (true,false). The default value is `true`.
`weblogicUser`	Required. The UNIX user to run the Node Manager. This user must exist on the host to be installed and must have write permission on the `beaHome` directory. The default value is the value for the `weblogicUser` variable that is set for the `installall` component.
`wlHomeDir`	Required. Specifies the location of the WebLogic software installation. Do not change this variable.
`installPath`	Required. Specifies the unique install path for the machine. Do not change this variable.

- **If you want to use another component's variable settings, click Import Set From Component.**

  The Import Variable Settings window displays.

  a. **If necessary, navigate to the Folder that contains the component with the variable settings you want to import.**

  b. **Select the component version.**

  Note – Variable settings can vary between component versions. Ensure that the current components and the component from which you want to import variable settings share common variables. If the component from which you want to import variable settings does not share common variables with the component you want to use in your plan, the variable settings are not imported.

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  c. **Click Import Variable Settings.**

  The variables settings are imported, and are displayed in the table.

  d. **On the Plan Details Run page, select the variable settings that you imported from the Variable Settings drop-down list, then click Select.**

- **If you want to use component variable settings that are stored in a file, follow these steps.**

  a. **In the Import Sets from File text field, enter the path to the variable settings file that you want to use.**

     To browse through the file system to find the appropriate file, click the Browse button.

  b. **Click Import.**

     The variables settings are imported, and are displayed in the table.

     Note – If the file from which you want to import variable settings does not share common variables with the component you want to use in your plan, the variable set is not imported.

  c. **On the Plan Details Run page, select the variable settings that you imported from the Variable Settings drop-down list, then click Select.**

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

The WebLogic machine resides on the Remote Agent that you target.

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

Target the virtual host that was created when you installed the WebLogic software. See "How to Install the WebLogic Software" on page 19 procedure.

6 **If you want to start the Node Manager after the installation, verify that the Start Node Manager checkbox is checked.**

7 **(Optional) If you want to pass any Java arguments to the WebLogic Server Scripting Tool (WLST) during the installation, type the arguments in the Java Arguments Used for weblogic.WLST field.**

You might need to use WLST if the Administration Server port uses SSL and requires demo certificates.

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

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

The provisioning software creates the WebLogic machine.

9 **Verify that the WebLogic machine was created.**

a. **In the Common Tasks section of the browser interface, click WebLogic 9.**

b. Click the WebLogic Machine Installation: View Installations link.

The Component Details Where Installed page displays. The WebLogic machine you created appears in the Hosts Where Installed table with the extension `-machine`.

Next Steps You must enroll your WebLogic machine in a WebLogic domain. For instructions, see "How to Enroll WebLogic Machines in a Domain" on page 46.

To use the WebLogic machine to manage your Managed Servers, you must instruct your Managed Servers to use Node Manager. See "How to Create a WebLogic Managed Server" on page 33.

▼ How to Capture an Existing WebLogic Machines in Your N1 SPS Environment

This procedure describes how to incorporate an existing WebLogic machinein the provisioning system.

To create a new WebLogic machine, see "How to Create WebLogic Machines" on page 41.

1 In the Application Deployments section in the browser interface, click Components.

The Components page is displayed.

2 If necessary, click the Change Folder link to navigate to the `com/sun/weblogic9` folder.

3 In the Components column, click Machine.

The Components Details page is displayed.

4 In the Component Procedures table, click the Run link in the install: markOnly row.

The Plans Details Run page is displayed.

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

The `Machine` component represents the Machine instance within the WebLogic 9 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 `Machine` component.

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

`machineName`	Required. Specifies the name for the Node Manager machine in the domain. The default value is the host name of the target host.
`nodeManagerPort`	Required. Specifies the port that the Node Manager uses to listen for communication. The default value is `5556`.
`nodeManagerListenAddress`	Required. Specifies the IP address the Node Manager uses to listen.
`unixPlatform`	Required. Specifies the type of machine to create (true,false). The default value is `true`.
`weblogicUser`	Required. The UNIX user to run the Node Manager. This user must exist on the host to be installed and must have write permission on the `beaHome` directory.
`wlHomeDir`	Required. Specifies the location of the WebLogic software installation.
`installPath`	Required. Specifies the unique install path for the machine.

- **If you want to use another component's variable settings, click Import Set From Component.**

  The Import Variable Settings window displays.

  a. **If necessary, navigate to the Folder that contains the component with the variable settings you want to import.**

  b. **Select the component version.**

  Note – Variable settings can vary between component versions. Ensure that the current components and the component from which you want to import variable settings share common variables. If the component from which you want to import variable settings does not share common variables with the component you want to use in your plan, the variable settings are not imported.

  ---

  c. **Click Import Variable Settings.**

     The variables settings are imported, and are displayed in the table.

  d. **On the Plan Details Run page, select the variable settings that you imported from the Variable Settings drop-down list, then click Select.**

- **If you want to use component variable settings that are stored in a file, follow these steps.**

  a. **In the Import Sets from File text field, enter the path to the variable settings file that you want to use.**

     To browse through the file system to find the appropriate file, click the Browse button.

b. Click Import.

The variables settings are imported, and are displayed in the table.

Note – If the file from which you want to import variable settings does not share common variables with the component you want to use in your plan, the variable set is not imported.

---

c. On the Plan Details Run page, select the variable settings that you imported from the Variable Settings drop-down list, then click Select.

6 Select the target host or target host set.

The WebLogic machine resides on the Remote Agent that you target.

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

Target the virtual host that was created when you installed the WebLogic software. See "How to Install the WebLogic Software" on page 19 procedure.

7 Click Run Plan (Includes Preflight).

The provisioning software creates the WebLogic machine.

8 Verify that the WebLogic machine was created.

a. In the Common Tasks section of the browser interface, click WebLogic 9.

b. Click the WebLogic Machine Installation: View Installations link.

The Component Details Where Installed page displays. The WebLogic machine you created appears in the Hosts Where Installed table with the extension `-machine`.

Next Steps You must enroll your WebLogic machine in a WebLogic domain. For instructions, see "How to Enroll WebLogic Machines in a Domain" on page 46.

To use the WebLogic machine to manage your Managed Servers, you must instruct your Managed Servers to use Node Manager. See "How to Create a WebLogic Managed Server" on page 33.

▼ How to Enroll WebLogic Machines in a Domain

After you create a WebLogic machine, you must enroll the machine in a WebLogic domain. This procedure describes how to enroll a WebLogic machine in a domain.

Before You Begin You must create a WebLogic domain before you enroll a WebLogic machine. For more information, see "How to Create a WebLogic 9 Domain and Administration Server" on page 28.

1. **In the Common Tasks section of the browser interface, click WebLogic 9.**
2. **Click the WebLogic Machine Installation: Enroll link.**

   The Plans Details Run page displays.
3. **Select the WebLogic machine that you want to enroll from the Current Installations list.**
4. **Click the Run Selected Installations link.**

   The Plans Details Run page refreshes to include plan parameters and options.
5. **In the Logical Host for Domain Admin Server field, type the logical host name for the Administration Server.**
6. **In the Java Arguments Used for weblogic.WLST field, type any appropriate options to use with the WebLogic Scripting Tool (WLST).**

   If your Administration Server is using SSL, specify the following options to use the demo SSL certificates. Specify these arguments on one line, separated by a space.

   ```
   -Dweblogic.security.SSL.ignoreHostnameVerification=true
   -Dweblogic.security.TrustKeyStore=DemoTrust
   ```
7. **Specify any additional options or limits as appropriate for your environment.**
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 48
- "How to Start a WebLogic Domain or Administration Server" on page 49

Clusters

- "How to Start or Stop Clusters" on page 50
- "How to Remove a WebLogic Cluster" on page 50
- "How to Remove a WebLogic Cluster Member" on page 51

WebLogic Machines

- "How to Start a Node Manager Machine" on page 52
- "How to Stop a Node Manager Machine" on page 53
- "How to Remove a Node Manager Machine From a Domain" on page 53

- "How to Uninstall a Node Manager Machine" on page 53

Managed Servers

- "How to Start a Managed Server" on page 54
- "How to Stop a Managed Server" on page 55
- "How to Remove a Managed Server" on page 56
- "How to Add Additional CLASSPATH Elements to a Managed Server" on page 56

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 9.

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 19 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 9.**

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 WebLogic BEA home directory.. 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 9.**

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 51.

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 54

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 9.**
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 54.

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 9.**
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 WebLogic Machines

▼ How to Start a Node Manager Machine

1. **In the Common Tasks section in the browser interface, click WebLogic 9.**
2. **Click the WebLogic Machine Installation: Start 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 machine. See "Creating WebLogic Machines" on page 41 procedure.

   Note – The target host must be a member of the `com.sun.weblogic9#InstallHS` host set.

5. **Click Run Plan (includes preflight).**

How to Stop a Node Manager Machine

1. **In the Common Tasks section in the browser interface, click WebLogic 9.**
2. **Click the WebLogic Machine Installation: Stop 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 machine. See "Creating WebLogic Machines" on page 41 procedure.

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

5. **Click Run Plan (includes preflight).**

How to Remove a Node Manager Machine From a Domain

1. **In the Common Tasks section of the browser interface, click WebLogic 9.**
2. **Click the WebLogic Machine Installation: Unenroll link.**
   The Plans Details Run page displays.
3. **Select the WebLogic machine that you want to unenroll from the Current Installations list.**
4. **Click the Run Selected Installations link.**
   The Plans Details Run page refreshes to include plan parameters and options.
5. **In the Logical Host for Domain Admin Server field, type the logical host name for the domain from which you want to unenroll the for the WebLogic machine.**
6. **Specify any additional options or limits as appropriate for your environment.**
7. **Click Run Plan (includes preflight).**

How to Uninstall a Node Manager Machine

When you uninstall a WebLogic machine, you stop the Node Manager application and remove the `Machine` component from the system.

Before You Begin If the WebLogic machine is enrolled in multiple domains, you must first unenroll the system from all the domains in which the system is enrolled. For more information, see "How to Remove a Node Manager Machine From a Domain" on page 53.

If the WebLogic machine is enrolled in a single domain, you can use the following procedure to unenroll and uninstall the WebLogic machine by running a single plan.

1. **In the Common Tasks section in the browser interface, click WebLogic 9.**
2. **Click the WebLogic Machine Installation: Uninstall link.**
   The plan's Details page displays.
3. **Click Run.**
   The plan's Run page displays.
4. **Select the WebLogic machine that you want to uninstall from the Current Installations list.**
5. **Click the Run Selected Installations link.**
   The Plans Details Run page refreshes to include plan parameters and options.
6. **If the WebLogic machine is enrolled in only one domain, specify the domain in the Logical Host for Domain Admin Server field.**
   Leave the Logical Host for Domain Admin Server field blank to unenroll the WebLogic machine from all domains.
7. **Specify any additional options or limits as appropriate for your environment.**
8. **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 9.**
2. **Click the Application Server Management: Start link.**
   The Plans Details Run page displays.

3 **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`

4 **Click Run Selected Installations.**

The plan's Run page displays.

5 **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.**

6 **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 9.**

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

The Plans Details Run page displays.

3 **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`.

4 **Click Run Selected Installations.**

The plan's Run page displays.

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

▼ How to Remove a Managed Server

1. **In the Common Tasks section in the browser interface, click WebLogic 9.**
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 9.**
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 "How to Create a WebLogic Managed Server" on page 33.

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

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

◆ ◆ ◆ CHAPTER 5

Deploying and Managing Applications With the WebLogic 9 Plug-In

The WebLogic 9 Plug-In provides several specific component types to enable you to capture and provision your enterprise applications. This chapter describes the following topics.

- "Capturing and Editing WebLogic Applications" on page 59
- "Configuring Services for WebLogic Applications" on page 81
- "Using the CLI to Work With WebLogic" on page 91
- "Using Plans" on page 96
- "Troubleshooting" on page 96

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:

- "How to Capture an Application Archive" on page 59
- "How to Capture a Deployment Plan" on page 61
- "How to Capture a Shared J2EE Library" on page 62
- "How to Group Application Archives and Deployment Plans in a Container" on page 63

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 an Application Archive

This procedure describes how to capture enterprise application (EAR), web application (WAR), and Java archive (JAR) files.

1. **In the Common Tasks section in the browser interface, click WebLogic 9.**
2. **Click the Application Archives: Create link.**
3. **Type a name for this component.**
4. **(Optional) Type a label for this component.**
5. **(Optional) Type a description for this component.**
6. **In the Import From Host field, specify the system from which you want to capture the application.**

   You can specify the system in two different ways.

   - **Type the name of the system from which you want to capture the application, then click the Refresh link.**
   - **Click the Select From List link, then select the system from the Current Found Hosts list in the Select Host From List window.**
7. **Navigate through the hierarchy to find the enterprise application to capture.**
8. **Select the appropriate options for your application.**

   You can set the following options for your application.

   - Check in an application archive that has not changed since a previous check in.
   - Assign user and group ownership permissions to the application.
9. **In the Path of the Resource Descriptor File field, type the path to the resource descriptor file for this component.**

   A resource descriptor file specifies the owner, group, and permission settings to use for the files and directories that comprise the resource of a component. For more information about resource descriptor files, see "Using a Resource Descriptor File" in *Sun N1 Service Provisioning System 5.2 XML Schema Reference Guide*.
10. **Click Check-in Selected Item.**
11. **Confirm the information on the check-in page, then click Continue to Check-in.**

Next Steps If you want to use a plan to deploy your application, you must first capture your deployment plan , and then group your application archive component with the deployment plan in an Application Archive Container component. For more information about how to capture deployment plans, see "How to Capture a Deployment Plan" on page 61.

▼ How to Capture a Deployment Plan

You can author your own XML deployment plans to coordinate the deployment of complex enterprise and web applications involving multiple components. You can then include these plans in containers that hold the deployment plan and all the necessary application archive components for your deployment.

This procedure describes how to capture your deployment plans. For information about how to author a deployment plan in XML, see *Sun N1 Service Provisioning System 5.2 Plan and Component Developer's Guide*.

1. **In the Common Tasks section in the browser interface, click WebLogic 9.**
2. **Click Create in the Deployment Plans section of the WebLogic 9 Common Tasks page.**
3. **Type a name for this component.**
4. **(Optional) Type a label for this component.**
5. **(Optional) Type a description for this component.**
6. **In the Import From Host field, specify the system from which you want to capture the plan.**

   You can specify the system in two different ways.

   - **Type the name of the system from which you want to capture the plan, then click the Refresh link.**
   - **Click the Select From List link, then select the system from the Current Found Hosts list in the Select Host From List window.**
7. **Navigate through the hierarchy to find the plan to capture.**
8. **Select the appropriate options for your plan.**

   You can set the following options for your plan.

   - Check in a plan that has not changed since a previous check in.
   - Assign user and group ownership permissions to the plan.
   - Designate the plan as a configuration template. If you check the Configuration Template check box, all the component variables for you plan will be added to the container that holds your plan and all associated components. You can then edit these variables when you deploy your application with this container.

9. **In the Path of the Resource Descriptor File field, type the path to the resource descriptor file for this component.**

   A resource descriptor file specifies the owner, group, and permission settings to use for the files and directories that comprise the resource of a component. For more information about resource descriptor files, see "Using a Resource Descriptor File" in *Sun N1 Service Provisioning System 5.2 XML Schema Reference Guide*.

10. **Click Check-in Selected Item.**

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

Next Steps To use your plan to deploy your application, you must group your plan and the associated application archive components in a Application Archive container. For more information, see "How to Group Application Archives and Deployment Plans in a Container" on page 63.

▼ How to Capture a Shared J2EE Library

1. **In the Common Tasks section in the browser interface, click WebLogic 9.**

2. **Click Create in the Shared J2EE Libraries section of the WebLogic 9 Common Tasks page.**

3. **Type a name for this component.**

4. **(Optional) Type a label for this component.**

5. **(Optional) Type a description for this component.**

6. **In the Import From Host field, specify the system from which you want to capture the J2EE library.**

   You can specify the system in two different ways.

   - **Type the name of the system from which you want to capture the plan, then click the Refresh link.**
   - **Click the Select From List link, then select the system from the Current Found Hosts list in the Select Host From List window.**

7. **Navigate through the hierarchy to find the library to capture.**

8. **Select the appropriate options for your library.**

   You can set the following options for the J2EE library.

   - Check in a library that has not changed since a previous check in.
   - Assign user and group ownership permissions to the library.

9. **In the Path of the Resource Descriptor File field, type the path to the resource descriptor file for this component.**

   A resource descriptor file specifies the owner, group, and permission settings to use for the files and directories that comprise the resource of a component. For more information about resource descriptor files, see "Using a Resource Descriptor File" in *Sun N1 Service Provisioning System 5.2 XML Schema Reference Guide*.

10. **Click Check-in Selected Item.**

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

▼ How to Group Application Archives and Deployment Plans in a Container

1. **In the Common Tasks section in the browser interface, click WebLogic 9.**

2. **Click Create in the Application Archive With Deployment Plan Container: section of the WebLogic Common Tasks page.**

   The Component Details Edit page is displayed.

3. **Type a name for the container component.**

4. **Select the appropriate platform for you container from the Platform drop down menu.**

5. **Type a label for this container component**

6. **Type a description for this component component.**

7. **Select the Application Archive components and deployment plan that you want to group together.**

   a. **In the Referenced Components table, select the component type that you want to include in your Application Archive container from the Type drop down menu.**

      - To specify an Application Archive, select the `com.sun.weblogic9#ApplicationArchive` component type.
      - To specify a Deployment Plan, select the `com.sun.weblogic9#DeploymentPlan` component type.

b. Select the component that you want to include in the Application Archive container.

- **To use an existing component, follow these steps.**

  i. Click the Reference Existing link in the Actions column.

  The Reference Existing Components in Current Component window is displayed.

  ii. Select the component in the Reference Existing Components in Current Component window.

  Click the Change Folder link to navigate through the file system to find the component that you want to use.

- **To use a new component, follow these steps.**

  i. Click the Check In New link in the Actions column.

  The Components Details Edit page is displayed.

  ii. Type a name for this component.

  iii. (Optional) Type a label for this component.

  iv. (Optional) Type a description for this component.

  v. In the Import From Host field, specify the system from which you want to capture the application.

  You can specify the system in two different ways.

  - **Type the name of the system from which you want to capture the application, then click the Refresh link.**
  - **Click the Select From List link, then select the system from the Current Found Hosts list in the Select Host From List window.**

  vi. Navigate through the hierarchy to find the application to capture.

  vii. Select the appropriate options for your application.

  You can set the following options for your application.

  - Check in an application archive that has not changed since a previous check in.
  - Assign user and group ownership permissions to the application.

- If you are checking in a plan, you can designate the plan as a configuration template. If you check the Configuration Template check box, all the component variables for you plan will be added to the container that holds your plan and all associated components. You can then edit these variables when you deploy your application with this container.

viii. In the Path of the Resource Descriptor File field, type the path to the resource descriptor file for this component.

A resource descriptor file specifies the owner, group, and permission settings to use for the files and directories that comprise the resource of a component. For more information about resource descriptor files, see "Using a Resource Descriptor File" in *Sun N1 Service Provisioning System 5.2 XML Schema Reference Guide*.

ix. Click Check-in Selected Item.

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

8 Repeat the previous step for each Application Archive or Deployment Plan that you want to include in your Application Archive container.

9 In the Component Variables table, set the variable settings for the Application Archive container.

- **To create new variables, follow these steps.**

  a. In the text field in the Variable column of the first row, type the name of the variable you want to create.

  b. In the text field in the Prompt column, type a description of the variable.

  c. In the text field in the Value for This Component column, type the variable value that you want to use.

  d. Click the Create link.

- **To edit existing variable values, follow these steps.**

  a. Select the checkbox for the variable that you want to edit.

  b. Type the variable value in the text field in the Value for This Component column.

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

  `deploymentName` — Required. Specifies the deployment name to be used for the application.

`appVersion`	Optional. Specifies the version of the application to deploy. Specify a value for this variable to enable the redeployment of your application.
`stagingMode`	Required. Specifies the staging mode for the deployment of the application. The valid values are `stage`(default), `nostage`, and `external_stage`. `stage` deploys the container resources to the Administration Server, and the WebLogic software copies the application archive files to the target hosts. `nostage` makes the application archive files accessible to the target hosts, but does not copy the application archive files to the target hosts. `external_stage` deploys the container resources to the Administration Server, and the N1 SPS software deploys the application archive files to the staging area of the target hosts.
`target`	Required. Specifies the target host for the deployment.
`subModuleTargets`	Optional. Specifies submodule targets for the deployment.
`adminServerHostName`	Required. Specifies the logical host name for the Administration Server for the domain.
`installPath`	Required. Specifies the installation location for the application archive. If you specify `stage` or `external_stage` for the `stagingMode` variable, specify the location on the Administration Server to install the application archive. If you specify `nostage` for the `stagingMode` variable, specify the network path to the application archive. This location must be accessible to the target host through NFS.

10 Click Check In.

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

Deploying WebLogic Applications

The WebLogic 9 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.

The WebLogic 9 Plug-In provides the following component types for modeling and defining your applications.

- **Application Archive Component Type** – Use this component type to model enterprise applications, web applications, and Java archive (JAR) files. The component can contain either an application archive, such as an enterprise application archive (EAR), a web application (WAR), or JAR file, or the expanded version of an archive as a package. You can deploy this component directly from the component procedures, or you can group this component with a Deployment Plan to deploy the application with an Application Archive With Plan container component.
- **Deployment Plan Component Type** – Use this component type to create your own XML plans to deploy your application. If you want to use Deployment Plan components, you must include the Deployment Plan and an associated Application Archive component in an Application Archive With Plan container component.
- **Application Archive With Plan Container Component Type** – Use this component type to group Application Archive components with Deployment Plans. You can use this component type to pair existing application components with deployment plans that define the tasks for your deployment. If you use an Application Archive With Plan container for your deployment, any changes you make to the container variable set override the variable values for the Application Archive that you want to deploy.
- **Shared J2EE Library Component Type** – Use this component type to enable your applications to access a shared J2EE library.

For instructions about how to create these components, see "Capturing and Editing WebLogic Applications" on page 59.

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 "Configuring Services for WebLogic Applications" on page 81.

This section describes how to perform the following deployment tasks.

- "How to Install an Application" on page 68
- "How to Install a Shared J2EE Library" on page 72
- "How to Start an Application" on page 74
- "How to Stop an Application" on page 75
- "How to Uninstall an Application" on page 76

- "How to Uninstall Previous Versions of an Application" on page 77
- "How to Update an Application" on page 78
- "How to Update a Deployment Plan in an Application Archive With Plan Component" on page 79

How to Install an Application

To install an Application Archive component, either directly from the component procedures or with an Application Archive With Plan component, you must use a WebLogic Managed Server or cluster as the target host. The installation process performs two main tasks:

- Installs the application archive on the target.
- Registers the application archive with the WebLogic Administration Server.

1. **In the Common Tasks section in the browser interface, click WebLogic 9.**

2. **Click the Components link.**

   The Components page is displayed.

3. **Navigate to the location of the Application Archive or Application Archive With Plan component that you want to deploy.**

   Click the Change Folder link to browse through the file system to select the location of the application archive.

4. **In the Component column, click the Application Archive or Application Archive With Plan component that you want to deploy.**

   The Components Details page is displayed.

5. **In the Component Procedures table, select the type of deployment that you want to perform.**

   - **To deploy the application and start the application on the target host, click the Run link in the Install: Default row.**

     Use this procedure to directly install an Application Archive component.

   - **To deploy the application with a Deployment Plan, click the Run link in the Install: deployAppPlan row.**

     Use this procedure to install an Application Archive component that is grouped with a Deployment Plan in an Application Archive With Plan container component.

- **To deploy the application to the target host, but not start and activate the application, click the Run link in the Install: Distribute or Install: DistributeAppPlan row.**

  Use this procedure if you want to start the application in Administration Mode, rather than in general mode. Click the Run link for the Install: DistributeAppPlan procedure if you are using an Application Archive With Plan component.

The Plans Details Run page is displayed.

6 In the Plan Parameters area, select the variable settings for the `ApplicationArchive` 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 `ApplicationArchive` component.

variable set name	Required. A name for the new variable set you create
`deploymentName`	Required. Specifies the deployment name for the application.
`installName`	Required. Specifies the name of the Application Archive to deploy.
`appVersion`	Optional. Specifies the version of the application to deploy. Specify a value for this variable to enable the redeployment of your application.
`stagingMode`	Required. Specifies the staging mode for the deployment of the application. The valid values are `stage`(default), `nostage`, and `external_stage`. `stage` deploys the container resources to the Administration Server, and the WebLogic software copies the application archive files to the target hosts. `nostage` makes the application archive files accessible to the target hosts, but does not copy the application archive files to the target hosts. `external_stage` deploys the container resources to the Administration Server, and the N1 SPS software deploys the application archive files to the staging area of the target hosts.
`target`	Required. Specifies the target host for the deployment.

`subModuleTargets`	Optional. Specifies the application submodule targets for the deployment.
`adminServerHostName`	Required. Specifies the logical host name for the Administration Server for the domain.
`adminDomainRootDir`	Required. Specifies the root directory for the Administration Server for the domain.
`installPath`	Required. Specifies the installation location for the application archive. If you specify `stage` or `external_stage` for the `stagingMode` variable, specify the location on the Administration Server to install the application archive. If you specify `nostage` for the `stagingMode` variable, specify the network path to the application archive. This location must be accessible to the target host through NFS.

- **If you want to use another component's variable settings, click Import Set From Component.**

  The Import Variable Settings window displays.

  a. **If necessary, navigate to the Folder that contains the component with the variable settings you want to import.**

  b. **Select the component version.**

  Note – Variable settings can vary between component versions. Ensure that the current components and the component from which you want to import variable settings share common variables. If the component from which you want to import variable settings does not share common variables with the component you want to use in your plan, the variable settings are not imported.

  ---

  c. **Click Import Variable Settings.**

     The variables settings are imported, and are displayed in the table.

  d. **On the Plan Details Run page, select the variable settings that you imported from the Variable Settings drop-down list, then click Select.**

- **If you want to use component variable settings that are stored in a file, follow these steps.**

  a. **In the Import Sets from File text field, enter the path to the variable settings file that you want to use.**

     To browse through the file system to find the appropriate file, click the Browse button.

b. Click Import.

The variables settings are imported, and are displayed in the table.

Note – If the file from which you want to import variable settings does not share common variables with the component you want to use in your plan, the variable set is not imported.

---

c. On the Plan Details Run page, select the variable settings that you imported from the Variable Settings drop-down list, then click Select.

7 Select the target host or target host set.

Target either a Managed Server or WebLogic Cluster.

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

---

8 In the Plan Parameters section, specify any options that you want to use with the install plan.

- **(Optional) If you want to pass any Java arguments to the weblogic.Deployer command during the installation, type the arguments in the Java Arguments Used for weblogic.Deployer field.**

  For information on how to perform deployment tasks using the weblogic.Deployer command, see BEA's WebLogic Server weblogic.Deployer Command-Line Reference (`http://e-docs.bea.com/wls/docs91/deployment/wldeployer.html`) document.

- **If you want to wait for a specified period to enable the previous version of the application to retire before installing the application, type a numerical value in seconds in the Optional: Second to Wait Before Previous Application Retires text field.**

- **If you want to install and start the application in Administration Mode, type `true` in the Start Application in Admin Mode text field.**

  You might want to start the application in Admin Mode for development systems.

  If you want to start the application in General Mode for production systems, set this value to `false`.

9 Click Run Plan (includes preflight).

The application is deployed to the target host or host set.

How to Install a Shared J2EE Library

1. **In the Common Tasks section in the browser interface, click WebLogic 9.**
2. **Click the Components link.**
   The Components page is displayed.
3. **Navigate to the location of the shared J2EE library component that you want to deploy.**
   Click the Change Folder link to browse through the file system to select the location of the library.
4. **In the Component column, click the J2EE Library component that you want to deploy.**
   The Components Details page is displayed.
5. **In the Component Procedures table, click the Run link in the Install: Default row.**
   The Plans Details Run page is displayed.
6. **In the Plan Parameters area, select the variable settings for the J2EE Library 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 `J2EELibrary` component.

variable set name	Required. A name for the new variable set you create
`extensionName`	Required. Specifies the name of the library that you want to install. This name must match the name of the library in the manifest.
`libspecver`	Optional. Specifies the version of the library. This value must match the version number in the archive, or be left blank.
`installPath`	Required. Specifies the path to the library.
`installUser`	Required. Specifies the user who will own the deployed library.

     - **If you want to use another component's variable settings, click Import Set From Component.**
       The Import Variable Settings window displays.

       a. **If necessary, navigate to the Folder that contains the component with the variable settings you want to import.**

b. Select the component version.

Note – Variable settings can vary between component versions. Ensure that the current components and the component from which you want to import variable settings share common variables. If the component from which you want to import variable settings does not share common variables with the component you want to use in your plan, the variable settings are not imported.

---

c. Click Import Variable Settings.

The variables settings are imported, and are displayed in the table.

d. On the Plan Details Run page, select the variable settings that you imported from the Variable Settings drop-down list, then click Select.

- **If you want to use component variable settings that are stored in a file, follow these steps.**

  a. In the Import Sets from File text field, enter the path to the variable settings file that you want to use.

  To browse through the file system to find the appropriate file, click the Browse button.

  b. Click Import.

  The variables settings are imported, and are displayed in the table.

  Note – If the file from which you want to import variable settings does not share common variables with the component you want to use in your plan, the variable set is not imported.

  ---

  c. On the Plan Details Run page, select the variable settings that you imported from the Variable Settings drop-down list, then click Select.

7 Select the target host or target host set.

Target either a Managed Server or WebLogic Cluster.

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

---

8 If you want to pass any Java arguments to the weblogic.WLST tool during the installation, type the arguments in the Java Arguments field.

For information on how to perform deployment tasks using the weblogic.Deployer command, see BEA's WebLogic Server Using the WebLogic Server Scripting Tool (`http://dev.bea.com/codelibrary/code/wlst.jsp`) document.

9 Click Run Plan (includes preflight).

How to Start an Application

You can start an application in Administration Mode or General Mode.

1 **In the Common Tasks section in the browser interface, click WebLogic 9.**

2 **Click the Components link.**

The Components page is displayed.

3 **Navigate to the location of the Application Archive component that you want to start.**

Click the Change Folder link to browse through the file system to select the location of the application archive.

4 **In the Component column, click the Application Archive component that you want to start.**

The Components Details page is displayed.

5 **In the Component Procedures table, click the Run link in the startApp row.**

The Plans Details Run page is displayed.

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

Target either a Managed Server or WebLogic Cluster.

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

---

7 **In the Plan Parameters section, specify any options that you want to use with the uninstall plan.**

- **(Optional) If you want to pass any Java arguments to the weblogic.Deployer command, type the arguments in the Java Arguments Used for weblogic.Deployer field.**

  For information on how to perform deployment tasks using the weblogic.Deployer command, see BEA's WebLogic Server weblogic.Deployer Command-Line Reference (`http://e-docs.bea.com/wls/docs91/deployment/wldeployer.html`) document.

- **If you want to wait for a specified period to enable the previous version of the application to retire before starting the application, type a numerical value in seconds in the Optional: Second to Wait Before Previous Application Retires text field.**

- **If you want to start the application in Administration Mode, type `true` in the Start Application in Admin Mode text field.**

  You might want to start the application in Admin Mode for development systems.

  If you want to start the application in General Mode for production systems, set this value to `false`.

8 Click Run Plan (includes preflight).

How to Stop an Application

You can stop an application, or transfer the application from General Mode to Admin Mode.

1 In the Common Tasks section in the browser interface, click WebLogic 9.

2 Click the Components link.

The Components page is displayed.

3 Navigate to the location of the Application Archive component that you want to stop.

Click the Change Folder link to browse through the file system to select the location of the Application Archive.

4 In the Component column, click the Application Archive component that you want to stop.

The Components Details page is displayed.

5 In the Component Procedures table, click the Run link in the stopApp row.

The Plans Details Run page is displayed.

6 Select the target host or target host set.

Target either a Managed Server or WebLogic Cluster.

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

---

7 In the Plan Parameters section, specify any options that you want to use with the stop plan.

- **(Optional) If you want to pass any Java arguments to the weblogic.Deployer command, type the arguments in the Java Arguments Used for weblogic.Deployer field.**

  For information on how to perform deployment tasks using the weblogic.Deployer command, see BEA's WebLogic Server weblogic.Deployer Command-Line Reference (`http://e-docs.bea.com/wls/docs91/deployment/wldeployer.html`) document.

- **If you want to wait for all existing HTTP sessions to complete before stopping the application, type `true` in the Wait for Existing HTTP Clients to Complete text field.**

- **If you want to stop the application and transfer the application to Administration Mode, type `true` in the Start Application in Admin Mode text field.**

  You might want to transfer the application to Admin Mode for development systems.

8 **Click Run Plan (includes preflight).**

The application is uninstalled from the target host or host set.

▼ How to Uninstall an Application

1 **In the Common Tasks section in the browser interface, click WebLogic 9.**

2 **Click the Components link.**

The Components page is displayed.

3 **Navigate to the location of the Application Archive component that you want to uninstall.**

Click the Change Folder link to browse through the file system to select the location of the Application Archive.

4 **In the Component column, click the Application Archive component that you want to uninstall.**

The Components Details page is displayed.

5 **In the Component Procedures table, select the correct procedure to uinstall the application.**

- **Click the Run link in the Uninstall: Default row to directly redeploy an application from an Application Archive component.**
- **Click the Run link in the Uninstall: UninstallFromContainer row to redeploy an application from an Application Archive With Plan container.**

The Plans Details Run page is displayed.

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

Target either a Managed Server or WebLogic Cluster.

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

---

7 **In the Plan Parameters section, specify any options that you want to use with the uninstall plan.**

- **(Optional) If you want to pass any Java arguments to the weblogic.Deployer command during the uninstallation, type the arguments in the Java Arguments Used for weblogic.Deployer field.**

  For information on how to perform deployment tasks using the weblogic.Deployer command, see BEA's WebLogic Server weblogic.Deployer Command-Line Reference (`http://e-docs.bea.com/wls/docs91/deployment/wldeployer.html`) document.

- **If you want to wait for all existing HTTP sessions to complete before uninstalling the application, type** `true` **in the Wait for Existing HTTP Clients to Complete text field.**
- **If you want to uninstall the application without waiting for current HTTP client sessions to complete, type** `true` **in the Ignore Current HTTP Client Sessions text field.**
- **If you want to remove the Application Archive files from the Administration Server, type** `true` **in the Remove Deployment Files text field.**

8 **Click Run Plan (includes preflight).**

The application is uninstalled from the target host or host set.

▼ How to Uninstall Previous Versions of an Application

If you installed an application without N1 SPS software, and want to install an updated version of the application with N1 SPS, you can uninstall the previous version of the application. The application must be versioned to enable the WebLogic 9 Plug-In to uninstall the previous version of the application.

1 **In the Common Tasks section in the browser interface, click WebLogic 9.**

2 **Click the Components link.**

The Components page is displayed.

3 **Navigate to the location of the Application Archive component that you want to uninstall.**

Click the Change Folder link to browse through the file system to select the location of the Application Archive.

4 **In the Component column, click the Application Archive component that you want to uninstall.**

The Components Details page is displayed.

5 **In the Component Procedures table, click the Run link in the undeployPreviousVersion row.**

The Plans Details Run page is displayed.

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

Target either a Managed Server or WebLogic Cluster.

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

---

7 **In the Plan Parameters section, specify any options that you want to use with the uninstall plan.**

- **In the Version of This App Needed to Review text field, specify the version of the application that you want to uninstall.**
- **(Optional) If you want to pass any Java arguments to the weblogic.Deployer command, type the arguments in the Java Arguments Used for weblogic.Deployer field.**

  For information on how to perform deployment tasks using the weblogic.Deployer command, see BEA's WebLogic Server weblogic.Deployer Command-Line Reference (`http://e-docs.bea.com/wls/docs91/deployment/wldeployer.html`) document.

8 **Click Run Plan (includes preflight).**

The application is uninstalled from the target host or host set.

How to Update an Application

If you want to update an application with changes that you have made to the Application Archive, you can redeploy the application to your Managed Servers or cluster.

1 **In the Common Tasks section in the browser interface, click WebLogic 9.**

2 **Click the Components link.**

The Components page is displayed.

3 **Navigate to the location of the Application Archive component that you want to update.**

Click the Change Folder link to browse through the file system to select the location of the Application Archive.

4 **In the Component column, click the Application Archive component that you want to update.**

The Components Details page is displayed.

5 **In the Component Procedures table, select the correct procedure to update the application.**

- **Click the Run link in the Install: Redeploy row to directly redeploy an application from an Application Archive component.**
- **Click the Run link in the Install: RedeployAppPlan row to redeploy an application from an Application Archive With Plan container.**

The Plans Details Run page is displayed.

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

Target either a Managed Server or WebLogic Cluster.

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

7 In the Plan Parameters section, specify any options that you want to use with the redeployment plan.

- **If you want to pass any Java arguments to the weblogic.Deployer command, type the arguments in the Java Arguments Used for weblogic.Deployer field.**

  For information on how to perform deployment tasks using the weblogic.Deployer command, see BEA's WebLogic Server weblogic.Deployer Command-Line Reference (`http://e-docs.bea.com/wls/docs91/deployment/wldeployer.html`) document.

- **If you are using an Application Archive With Plan component to deploy your application, specify the location of the Deployment Plan in the Path for Deployment Plan text field.**

- **In the Required WebLogic Target for Deployment text field, specify the systems that you want to update.**

- **In the Optional WebLogic Submodule Targets for Deployment text field, specify the application submodules to target with your redeployment.**

- **In the Deployment Name Used for This Application text field, specify the name of the Application Archive or Application Archive With Plan component that you want to redeploy.**

- **In the App Version text field, specify the version number of the application that you want to redeploy.**

8 Click Run Plan (includes preflight).

The application is uninstalled from the target host or host set.

▼ How to Update a Deployment Plan in an Application Archive With Plan Component

If you change a Deployment Plan component that you are using with an Application Archive With Plan container component, you can update your Managed Servers or clusters with the new Deployment Plan.

1 In the Common Tasks section in the browser interface, click WebLogic 9.

2 Click the Components link.

The Components page is displayed.

3 **Navigate to the location of the Application Archive With Plan component that you want to update with a new Deployment Plan.**

Click the Change Folder link to browse through the file system to select the location of the Application Archive With Plan component.

4 **In the Component column, click the Application Archive With Plan component that you want to update.**

The Components Details page is displayed.

5 **In the Component Procedures table, click the Run link in the Install: updatePlan row.**

The Plans Details Run page is displayed.

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

Target either a Managed Server or WebLogic Cluster.

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

---

7 **In the Plan Parameters section, specify any options that you want to use with the uninstall plan.**

- **(Optional) If you want to pass any Java arguments to the weblogic.Deployer command, type the arguments in the Java Arguments Used for weblogic.Deployer field.**

  For information on how to perform deployment tasks using the weblogic.Deployer command, see BEA's WebLogic Server weblogic.Deployer Command-Line Reference (`http://e-docs.bea.com/wls/docs91/deployment/wldeployer.html`) document.

- **If you want to specify the version of the plan to use, type the version number in the Optional Plan Version text field.**

8 **Click Run Plan (includes preflight).**

The application is uninstalled from the target host or host set.

Error Conditions

TABLE 5–1 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

TABLE 5–1 WebLogic Enterprise Application Error Conditions *(Continued)*

Action	Condition	Result
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

Configuring Services for WebLogic Applications

Based on the needs of your application, you might need to configure the WebLogic services before you can deploy the application components as described in "Deploying WebLogic Applications" on page 67. To configure the services, you might need to rely on the following component types.

- Data Source component type – Use this component type to capture database data sources.
- Multi Data Source component type – Use this component type to capture database data sources and associated connection pools.
- Java Messaging Service (JMS) Server component type – Use this component type to capture a server to store and serve JMS information.
- JMS Module component type – Use this component type to create a configuration module for JMS Queues, Topics, Connection Factories, and Destination Keys.
- JMS Queue component type – Use this component type to install a messaging queue for point-to-point messaging.
- JMS Topic component type – Use this component type to capture a messaging topic for publish-and-subscribe messaging.
- JMS File Store component type – Use this component type to capture a JMS backing store.
- JMS JDBC Store component type – Use this component type to capture a JMS JDBC backing store.
- JMS Connection Factory component type – Use this component type to capture a connection factory to create JMS connections to the data source.
- JMS Destination Key component type – Use this component type to capture destination keys to specify the order in which messages are delivered.
- Mail Session component type – Use this component type to capture a mail service to use for communication between the Administration Server and Managed Servers.

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 data source or multi 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.

This section describes how to create, install, and uninstall these configuration objects. For instructions, see the following procedures.

- "Creating Configuration Services" on page 82
- "Installing Configuration Services" on page 85
- "Uninstalling Configuration Services" on page 88
- "WebLogic Configuration Component Types and Variables" on page 89

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

Creating Configuration Services

To use the configuration objects in your WebLogic environment, you must first capture the service as a configuration component. This section provides the following procedures that describe how to capture these objects.

- "How to Create a Configuration Service" on page 82 describes how to capture configuration objects as components.
- "How to Configure a JMS Module" on page 83 describes how to create a JMS Module to configure JMS Queues and Topics during deployment.

▼ How to Create a Configuration Service

This procedure describes how to create configuration components. If you plan to use JMS Queues, Topics, Connection Factories, or Destination Keys, you must also create a JMS Module. For more information, see "How to Configure a JMS Module" on page 83.

1 In the Common Tasks section of the browser interface, click WebLogic 9.

2 In the Configuration Tasks section of the WebLogic 9 page, click the Create link for the configuration object that you want to capture.

Click the Create link for one of the following configuration components.

- Data Source
- Multi Data Source
- JMS Server
- JMS Queues

- JMS Topics
- JMS File Store
- JMS JDBC Store
- JMS Connection Factory
- JMS Destination Key
- Mail Session

The Components Details Edit page is displayed.

3 **Specify the name of the component.**

4 **(Optional) Specify a label for the component.**

5 **(Optional) Specify a description for the component.**

6 **In the WebLogic Admin Server field, select the Managed Server or cluster from which you want to capture the configuration service.**

7 **Navigate through the server file system to find the configuration service to capture.**

8 **Click Check-in Selected Item.**

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

Next Steps To deploy the configuration service in your WebLogic environment, see "Installing Configuration Services" on page 85.

If you plan to deploy JMS Queues, Topics, Connection Factories, or Destination Keys, you must configure a JMS Module. See "How to Configure a JMS Module" on page 83 for more information.

How to Configure a JMS Module

If you plan to use JMS Queues, Topics, Connection Factories, or Destination Keys, in your WebLogic environment, you must create a JMS Module container to configure these objects during deployment.

1 **In the Common Tasks section of the browser interface, click WebLogic 9.**

2 **In the Configuration Tasks section of the WebLogic 9 page, click the JMS Module: Configure link.**

The Plans Details Run page is displayed.

3 **In the Plan Parameters area, select the variable settings for the JMS Module component that you plan to configure.**

- **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 JMS Module component.

variable set name	Required. A name for the new variable set you create
`Name`	Required. Specifies the name of the JMS Module that you want to deploy.
`DescriptorFileName`	Required. Specifies the name of the JMS Module descriptor file.
`Notes`	Optional. Specifies any additional information or notes about the JMS Module.
`installName`	Required. Specifies the name to use to deploy the JMS Module
`installPath`	Required. Specifies the location to install the JMS Module.
`pluginClassPath`	Optional. Specifies the path to the WebLogic 9 Plug-In execJava classes.

  - **If you want to use another component's variable settings, click Import Set From Component.**

    The Import Variable Settings window displays.

    a. **If necessary, navigate to the Folder that contains the component with the variable settings you want to import.**

    b. **Select the component version.**

    Note – Variable settings can vary between component versions. Ensure that the current components and the component from which you want to import variable settings share common variables. If the component from which you want to import variable settings does not share common variables with the component you want to use in your plan, the variable settings are not imported.

    ---

    c. **Click Import Variable Settings.**

    The variables settings are imported, and are displayed in the table.

    d. **On the Plan Details Run page, select the variable settings that you imported from the Variable Settings drop-down list, then click Select.**

- **If you want to use component variable settings that are stored in a file, follow these steps.**

  a. **In the Import Sets from File text field, enter the path to the variable settings file that you want to use.**

     To browse through the file system to find the appropriate file, click the Browse button.

  b. **Click Import.**

     The variables settings are imported, and are displayed in the table.

     Note – If the file from which you want to import variable settings does not share common variables with the component you want to use in your plan, the variable set is not imported.

  c. **On the Plan Details Run page, select the variable settings that you imported from the Variable Settings drop-down list, then click Select.**

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

Target either a Managed Server or WebLogic Cluster.

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

5 **Click Run Plan (includes preflight).**

Installing Configuration Services

After you create your configuration components, you can deploy these services to your Administration Server.

When you install a configuration component, 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 "WebLogic Configuration Component Types and Variables" on page 89for variables that require custom values.

▼ How to Install Configuration Services

This procedure describes how to install the following components.

- Data Source
- Multi Data Source

- JMS Server
- JMS Queues
- JMS Topics
- JMS File Store
- JMS JDBC Store
- JMS Connection Factory
- JMS Destination Key
- Mail Session

Before You Begin If you want to install JMS Queues, Topics, Connection Factories, or Destination Keys, you must first configure a JMS Module to hold the configuration information for these components. See "How to Configure a JMS Module" on page 83 for more information.

1. **In the Common Tasks section of the browser interface, click WebLogic 9.**

2. **Click the Components link.**

   The Components page is displayed.

3. **Navigate to the location of the configuration component that you want to deploy.**

   Click the Change Folder link to browse through the file system to select the location of the configuration component.

4. **In the Component column, click the configuration component that you want to deploy.**

   The Components Details page is displayed.

5. **In the Component Procedures table, click the Run link in the Install: Default row.**

   The Plans Details Run page is displayed.

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

   For information about the required variables for each configuration component, see "WebLogic Configuration Component Types and Variables" on page 89.

   - **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.**

     For

     The Select Variable Settings From List window displays.

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

       Specify the variable values that are appropriate for your installation.

- **If you want to use another component's variable settings, click Import Set From Component.**
  The Import Variable Settings window displays.

  a. **If necessary, navigate to the Folder that contains the component with the variable settings you want to import.**

  b. **Select the component version.**

  Note – Variable settings can vary between component versions. Ensure that the current components and the component from which you want to import variable settings share common variables. If the component from which you want to import variable settings does not share common variables with the component you want to use in your plan, the variable settings are not imported.

  ---

  c. **Click Import Variable Settings.**
  The variables settings are imported, and are displayed in the table.

  d. **On the Plan Details Run page, select the variable settings that you imported from the Variable Settings drop-down list, then click Select.**

- **If you want to use component variable settings that are stored in a file, follow these steps.**

  a. **In the Import Sets from File text field, enter the path to the variable settings file that you want to use.**
  To browse through the file system to find the appropriate file, click the Browse button.

  b. **Click Import.**
  The variables settings are imported, and are displayed in the table.

  Note – If the file from which you want to import variable settings does not share common variables with the component you want to use in your plan, the variable set is not imported.

  ---

  c. **On the Plan Details Run page, select the variable settings that you imported from the Variable Settings drop-down list, then click Select.**

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

8 **In the Plan Parameters section, specify any options that you want to use with the install plan.**

9 **Click Run Plan (includes preflight).**

Uninstalling Configuration Services

If necessary, you can uninstall configuration services from your Administration Server.

When you uninstall a configuration component, 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.

▼ How to Uninstall Configuration Services.

This procedure describes how to uninstall the following configuration services.

- Data Source
- Multi Data Source
- JMS Server
- JMS Queue
- JMS Topic
- JMS File Store
- JMS JDBC Store
- JMS Connection Factory
- JMS Destination Key
- Mail Session

1 In the Common Tasks section of the browser interface, click WebLogic 9.

2 Click the Components link.

The Components page is displayed.

3 Navigate to the location of the configuration component that you want to uninstall.

Click the Change Folder link to browse through the file system to select the location of the configuration component.

4 In the Component column, click the configuration component that you want to uninstall.

The Components Details page is displayed.

5 In the Component Procedures table, click the Run link in the Uninstall: Default row.

The Plans Details Run page is displayed.

6 Select the target host or target host set.

7 In the Plan Parameters section, specify any options that you want to use with the uninstall plan.

8 Click Run Plan (includes preflight).

WebLogic Configuration Component Types and Variables

The following sections contain the WebLogic configuration objects that have been modeled as a component type. These sections also provide the default component names and the component variables that require custom values.

Data Source and Multi Data Source Component Types and Variables

The WebLogic 9 Plug-In provides the Data Source and Multi Data Source component types for capturing database data sources and connection pools. The following table lists the required component variables for these component types.

TABLE 5–2 Data Source and Multi Data Source Component Information and Variables

Component Type	Description	Required Variables
Data Source	Specifies the database data source for your application.	■ Data source name (`Name`) ■ JNDI name (`JNDINames`)
Multi Data Source	Specifies the database data source and associated connection pools for your application.	■ Multi Data source name (`Name`) ■ Algorithm type (either Failover or Load-Balancing) for the multi data source (`AlgorithmType`) ■ Comma-separated list of data sources (`DataSourceList`) ■ JNDI name (`JNDINames`)

For information about how to create and deploy these component types, see "Configuring Services for WebLogic Applications" on page 81.

Java Messaging Service (JMS) Components and Variables

The WebLogic 9 Plug-In provides several Java Messaging Service (JMS) component types for capturing JMS configuration components. The following table lists the required component variables for these components or component types.

TABLE 5–3 JMS Component Information and Variables

Component Type	Description	Default Component	Required Variables
JMS Server	Specifies the server to store and serve JMS information.	`WLJMSServerConfig`	JMS server name (`Name`)
JMS Module	Specifies the configuration module for JMS Queues, Topics, Connection Factories, and Destination Keys.	None	■ JMS Module name (`Name`) ■ JMS Module descriptor file (`DescriptorFileName`)
JMS Queue	Specifies the messaging queue for point-to-point messaging.	`WLJMSQueueConfig`	■ JMS destination name (`Name`) ■ JMS module name (`JMSModuleName`) ■ JNDI name of the JMS destination (`JNDIName`)
JMS Topic	Specifies the messaging topic for publish-and-subscribe messaging.	`WLJMSTopicConfig`	■ JMS destination name (`Name`) ■ JMS module name (`JMSModuleName`) ■ JNDI name of the JMS destination (`JNDIName`)
JMS File Store	Specifies the JMS backing store.	`WLJMSFileStoreConfig`	Name of the JMS file store (`Name`)
JMS JDBC Store	Specifies the JMS JDBC backing store.	`WLJMSJDBCStoreConfig`	■ JMS JDBC store (`Name`) ■ The JDBC data source used by this JDBC store (`DataSource`)
JMS Connection Factory	Specifies the connection factory to create JMS connections to the data source.	`WLJMSConnection FactoryConfig`	■ Name of the JMS connection factory (`Name`) ■ JNDI name (`JNDIName`)

TABLE 5–3 JMS Component Information and Variables *(Continued)*

Component Type	Description	Default Component	Required Variables
JMS Destination Key	Specifies the destination keys to specify the order in which messages are delivered.	`WLJMSDestinationKeyConfig`	Name of the JMS destination key (`Name`)

For information about how to create and deploy these component types, see "Configuring Services for WebLogic Applications" on page 81.

Mail Session Component Type and Variables

With the WebLogic 9 Plug-In you can capture mail sessions as N1 SPS components, and then deploy these components. The following table lists the required component variables for these components.

TABLE 5–4 Mail Service Component Information and Variables

Component Type	Description	Required Variables
Mail Service	Specifies the mail service to use for communication between the Administration Server and Managed Servers.	■ Mail session name (`msName`) ■ JNDI name (`jndiName`) ■ Variable generated from the WebLogic value of the mail session property

For information about how to create and deploy this component type, see "Configuring Services for WebLogic Applications" on page 81.

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_5.2/cli/bin/cr_cli`.

BEA WebLogic 9 plug-in objects are located in the `/com/sun/weblogic9` 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 9 Common Task page. For more information about the WebLogic 9 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 9.**
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 5–1 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 , then check in the script as an N1 SPS component, then install it. This procedure assumes that you have an existing WLST script available on a file system.

1. **In the Common Tasks section in the browser interface, click the Create New Component link.**

   The Components table is displayed.

2. **In the Action column, click the Create link.**

   The Component Details Edit page is displayed.

3. **In the Component field, type the name of your component.**

4. **Select com.sun.weblogic9#WLSTScript from the Type drop down menu.**

5. **(Optional) Type a label and description for the component.**

6. **Select a host that has a copy of the WebLogic script file in the file system.**

7. **Navigate to the location of the script on the host.**

8. **Select the appropriate options for your component.**

   You can set the following options for your application.

   - Check in a script component that has not changed since a previous check in.
   - Assign user and group ownership permissions to the script component.
   - You can designate the script component as a configuration template. If you check the Configuration Template check box, all the component variables for your script component will be added to the container that holds your script component and all associated components. You can then edit these variables when you deploy your application with this container.

9. **In the Path of the Resource Descriptor File field, type the path to the resource descriptor file for this component.**

   A resource descriptor file specifies the owner, group, and permission settings to use for the files and directories that comprise the resource of a component. For more information about resource descriptor files, see "Using a Resource Descriptor File" in *Sun N1 Service Provisioning System 5.2 XML Schema Reference Guide*.

10. **Click Check In Selected Item.**

    The component's Check In page displays.

11. **Select a folder on which you have edit permissions.**

12. **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 94.

1. **In the Common Tasks section in the browser interface, click WebLogic 9.**

2. **In the Common Tasks section in the browser interface, click the Components link.**

   The Components table is displayed.

3. **If necessary, navigate to the directory that contains the script component.**

4. **In the row of the WLSTScript component that you plan to install, click Details.**

   The component's Details page displays.

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

   The plan's Run page displays.

6. **Select the target host.**

   You target the AdminServer virtual host.

7. **(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.

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

Using Plans

The WebLogic 9 Plug-In relies on plans to perform many of the tasks associated with installing and removing Administration Servers, Managed Servers, and clusters.

BEA WebLogic 9 plug-in plans are located in the `/com/sun/weblogic9` 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/weblogic9/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 5–2 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 5–3 Target Host Error Message

```
Specified target(s) "sol01" were not in the required host set
 "com.sun.weblogic9#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 5–4 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.

◆ ◆ ◆ APPENDIX A

Advanced Domain Administration Tasks

This appendix describes how to perform advanced administration tasks on your WebLogic domains. This appendix explains the following topics.

- "Creating Domains With Different Passwords" on page 99
- "Managing Changes to Domains" on page 100

Creating Domains With Different Passwords

▼ 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 9 Domain and Administration Server" on page 28.

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.**

Managing Changes to Domains

▼ How to Manage Changes to a Domain and Administration Server

1 **In the Common Tasks section in the browser interface, click WebLogic 9.**

2 **Click the Components link.**

3 **If necessary, navigate to the `com/sun/weblogic9` components directory.**
The table of WebLogic 9 components is displayed.

4 **In the Component column, click the AdminServer component.**
The AdminServer Component Details page is displayed.

5 **In the Component Procedures table, click the Run link for the domainUtil procedure.**
The Plans Details Run page is displayed.

6 **Select the Administration Server that you want to update from the Current Installations list.**

7 **Click Run Selected Installations.**
The Plans Details Run page is displayed for the autogenerated plan for this update.

8 **In the Plan Variables text field, enter the appropriate update utility that you want to run.**
Specify one or more of the following values.

- `activate` – Use this variable to activate any changes on the WebLogic domain.

- `undoAndStop` – Use this variable to undo any changes to the WebLogic domain and stop the server.
- `stopEdit` – Use this variable to halt any changes to the WebLogic domain.
- `cancelEdit` – Use this variable to cancel any changes to the WebLogic domain.
- `undoUnactivatedChanges` – Use this variable to undo those changes that have not been activated on the WebLogic domain.
- `undo` – Use this variable to undo all changes to the WebLogic domain.

9 Change any of the options and limits as necessary.

10 Click Run Plan (includes preflight).

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