

Oracle® Communication Services Gatekeeper

Installation Guide

Release 4.0

June 2008

ORACLE®

Oracle Communication Services Gatekeeper Installation Guide, Release 4.0

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Document Roadmap

The following sections describe the audience for, and organization of, this document:

- [Document Scope and Audience](#)
- [Guide to This Document](#)
- [Terminology](#)
- [Related Documentation](#)

Document Scope and Audience

This document describes the initial installation and setup of BEA WebLogic Network Gatekeeper including:

- Installation
- Domain configuration
- Post-installation steps

This document is primarily for support engineers and system administrators working with BEA WebLogic Network Gatekeeper.

Guide to This Document

This document contains the following chapters:

Document Roadmap

- Chapter 1, “Document Roadmap”: This chapter
- [Chapter 2, “Gathering Materials”](#) Putting together what you need before you begin installing Network Gatekeeper
- [Chapter 3, “Supported Configurations.”](#)Checking your basic hardware and software
- [Chapter 4, “Installing the Database”](#):Setting up your database for use with Network Gatekeeper
- [Chapter 5, “Task Overview”](#) A high level outline of the installing and configuring tasks
- [Chapter 6, “Installing Network Gatekeeper”](#) Running all versions of the installer
- [Chapter 7, “Configuring the Domain for Network Gatekeeper”](#) Running all versions of domain configuring tools
- [Chapter 8, “Completing Post-Installation”](#) Completing final steps

Note: You should follow the order of the chapters in installing your system, i.e., gather your materials, then install the database, and then install and configure Network Gatekeeper.

Terminology

The following terms and acronyms are used in this document:

- Account—A registered application or service provider. An accounts belong to an account group, which is tied to a common SLA
- Account group—Multiple registered service providers or services which share a common SLA
- Administrative User—Someone who has privileges on the Network Gatekeeper management tool. This person has an administrative user name and password
- Alarm—The result of an unexpected event in the system, often requiring corrective action
- API—Application Programming Interface
- Application—A TCP/IP based, telecom-enabled program accessed from either a telephony terminal or a computer
- Application-facing Interface—The Application Services Provider facing interface
- Application Service Provider—An organization offering application services to end users through a telephony network

- AS—Application Server
- Application Instance—An Application Service Provider from the perspective of internal Network Gatekeeper administration. An Application Instance has a user name and password
- End User—The ultimate consumer of the services that an application provides. An end user can be the same as the network subscriber, as in the case of a prepaid service or they can be a non-subscriber, as in the case of an automated mail-ordering application where the subscriber is the mail-order company and the end user is a customer to this company
- Enterprise Operator —See Service Provider
- Event—A trackable, expected occurrence in the system, of interest to the operator
- HA —High Availability
- HTML—Hypertext Markup Language
- IP—Internet Protocol
- JDBC—Java Database Connectivity, the Java API for database access
- Location Uncertainty Shape—A geometric shape surrounding a base point specified in terms of latitude and longitude. It is used in terminal location
- MAP—Mobile Application Part
- Mated Pair—Two physically distributed installations of WebLogic Network Gatekeeper nodes sharing a subset of data allowing for high availability between the nodes
- MM7—A multimedia messaging protocol specified by 3GPP
- MPP—Mobile Positioning Protocol
- Network Plug-in—The WebLogic Network Gatekeeper module that implements the interface to a network node or OSA/Parlay SCS through a specific protocol
- NS—Network Simulator
- OAM —Operation, Administration, and Maintenance
- Operator—The party that manages the Network Gatekeeper. Usually the network operator
- OSA—Open Service Access
- PAP—Push Access Protocol

Document Roadmap

- Plug-in—See Network Plug-in
- Plug-in Manager—The Network Gatekeeper module charged with routing an requests to the Interceptor stack.
- Quotas—Access rule based on an aggregated number of invocations. See also Rates
- Rates—Access rule based on allowable invocations per time period. See also Quotas
- Rules—A customizable set of criteria in addition to those specified in SLAs according to which requests can be evaluated
- SCF—Service Capability Function or Service Control Function, in the OSA/Parlay sense.
- SCS—Service Capability Server, in the OSA/Parlay sense. WebLogic Network Gatekeeper can interact with these on its network-facing interface
- Service Capability—Support for a specific kind of traffic within WebLogic Network Gatekeeper. Defined in terms of communication services
- Service Provider—See Application Service Provider
- SIP—Session Initiation Protocol
- SLA—Service Level Agreement
- SMPP—Short Message Peer-to-Peer Protocol
- SMS—Short Message Service
- SMSC—Short Message Service Centre
- SNMP—Simple Network Management Protocol
- SOAP—Simple Object Access Protocol
- SPA—Service Provider APIs
- SS7—Signalling System 7
- Subscriber—A person or organization that signs up for access to an application. The subscriber is charged for the application service usage. See End User
- SQL—Structured Query Language
- TCP—Transmission Control Protocol

- Communication Service—The data flow of a particular request through WebLogic Network Gatekeeper. Different Service Capabilities use different communication services
- USSD—Unstructured Supplementary Service Data
- VAS—Value Added Service
- VLAN—Virtual Local Area Network
- VPN—Virtual Private Network
- WebLogic Network Gatekeeper Container Services —The set of services common to all communication services
- WSDL —Web Services Definition Language
- XML—Extended Markup Language

Related Documentation

This installation guide is a part of the WebLogic Network Gatekeeper documentation set. The other documents are:

- [*System Administrator's Guide*](#)
- [*Concepts and Architectural Overview*](#)
- [*Integration Guidelines for Partner Relationship Management*](#)
- [*SDK User Guide*](#)
- [*Managing Accounts and SLAs*](#)
- [*Statement of Compliance and Protocol Mapping*](#)
- [*Application Development Guide*](#)
- [*Communications Service Reference*](#)
- [*Handling Alarms*](#)
- [*Licensing*](#)
- [*Platform Development Studio - Developer's Guide*](#)

Additionally, many documents in the WebLogic Server 10 documentation set are of interest to users of WebLogic Network Gatekeeper, including:

Document Roadmap

- *Introduction to BEA WebLogic Service and BEA WebLogic Express[™]*
- *WebLogic Web Services: Getting Started*
- *Developing Manageable Application with JMX*
- *Configuring and Using the WebLogic Diagnostics Framework*
- *Using WebLogic Clusters*
- *Securing WebLogic Server*

Gathering Materials

This chapter describes the information and materials you need to have to begin installing WebLogic Network Gatekeeper.

- [Understand the Basics](#)
- [Check Your Hardware](#)
- [Check Your Software](#)

Understand the Basics

Before starting installation, you should understand the basics of the Network Gatekeeper. These are covered in *Concepts and Architectural Overview*, a part of the Network Gatekeeper documentation set.

Check Your Hardware

Network Gatekeeper has been tested to run on very specific hardware platforms. Supported Configurations are outlined in detail in [Chapter 3, “Supported Configurations.”](#) Unless your installation has been specified differently in cooperation with BEA, only these configurations are supported, as of the time of this writing:

Caution: This list is subject to change. Always check the *Release Notes* for the most up-to-date list of supported configurations. Also always check the *Release Notes* to make sure you have the appropriate patches to your operating system installed.

Check Your Software

You must have the following information and software available to complete this installation:

- Root passwords to the servers on which the software will be installed
- Database software, with appropriate licenses. The supported databases include:
 - Oracle 10g, with RAC

Note: This is the only supported configuration for production environments that require High Availability.

- Oracle 10g, Single Instance

Note: Oracle databases must be installed on a dedicated server or cluster of servers.

- MySQL 4.1 (4.1.22 and later bugfix releases of 4.1)

Note: MySQL is not supported for environments that require High Availability.

Caution: Always check the *Release Notes* for the most up-to-date list of supported databases.

- The WebLogic Network Gatekeeper installer. This is available from either the product CDs or the [Download Center](http://commerce.bea.com) (<http://commerce.bea.com>)

Supported Configurations

The following sections summarize the supported configurations for the WebLogic Network Gatekeeper platform:

Supported Configurations

The following sections describe the base system requirements for WebLogic Network Gatekeeper.

Overview of Network Gatekeeper Base platform

Below is a summary of the operating systems and hardware platforms for WebLogic Network Gatekeeper:

- [HP-UX 11.23 on Intel Itanium2](#)
- [Linux Redhat AS4 on x86](#)
- [Solaris 9 or Solaris 10 on Sun UltraSPARC](#)

The next sections describe the configuration requirements for access tier, network tier and database tier servers. For a description of the different tiers, see the Network Configuration chapter in the *Concepts and Architectural Overview*, another document in this set.

Common configuration requirements

All servers in the cluster building up the Network Gatekeeper must be dedicated servers.

Supported Configurations

The directory in which the software is installed must reside on the server's local file system.

There must be at least 1 GB of disk space available under `/user/local`.

HP-UX 11.23 on Intel Itanium2

Configuration requirements for Access tier servers

Table 3-1 Requirements for WebLogic Network Gatekeeper access tier servers on HP-UX 11.23 on Intel Itanium2

Operating System Version and Patches	HP-UX 11.23 with HP-UX patches for Java™ See http://www.hp.com/products1/unix/java/patches/index.html .
Chip Architecture and Minimum Processor Speed	Intel Itanium2 (1.5 GHz)
JDK	HP-UX JDK for the Java 2 Standard Edition platform version 5.0.03 with Java HotSpot™ Server VM (32-bit) and all later JDK 5.0.* service packs for development and production deployment on HP-UX
RAM	1 GB required; 2 GB recommended
Disk	2 x 36 GB
Network cards	2 x LAN interface card

Configuration requirements for Network tier servers

Table 3-2 Requirements for WebLogic Network Gatekeeper network tier servers on HP-UX 11.23 on Intel Itanium2

Operating System Version and Patches	HP-UX 11.23 with HP-UX patches for Java™ See http://www.hp.com/products1/unix/java/patches/index.html .
Chip Architecture and Minimum Processor Speed	Intel Itanium2 (1.5 GHz)

Supported Configurations

Table 3-2 Requirements for WebLogic Network Gatekeeper network tier servers on HP-UX 11.23 on Intel Itanium2

JDK	HP-UX JDK for the Java 2 Standard Edition platform version 5.0.03 with Java HotSpot™ Server VM (32-bit) and all later JDK 5.0.* service packs for development and production deployment on HP-UX
RAM	1 GB required; 2 GB recommended
Disk	2 x 36 GB
Network cards	2 x LAN interface card

Configuration requirements for Database tier servers

Table 3-3 Requirements for WebLogic Network Gatekeeper database tier servers on HP-UX 11.23 on Intel Itanium2

Operating System Version and Patches	HP-UX 11.23
Chip Architecture and Minimum Processor Speed	Intel Itanium2 (1.5 GHz)
RAM	2 GB required; >6 GB recommended
Disk	2 x 36 GB
Network cards	2 x LAN interface card
RDBMS	See Supported databases
Database storage system	Network attached storage using fibre channel interface.

Linux Redhat AS4 on x86

Configuration requirements Access tier servers

Table 3-4 Requirements for WebLogic Network Gatekeeper access tier servers on Linux Redhat AS4 on x86

Operating System Version and Patches	Red Hat Enterprise Linux AS release 4 (Nahant Update 2) Kernel version 2.6.9-22.Elsmg glibc-2.3.4-2.13 and later updates and errata levels
Chip Architecture and Minimum Processor Speed	Xeon or Opteron Class

Supported Configurations

Table 3-4 Requirements for WebLogic Network Gatekeeper access tier servers on Linux Redhat AS4 on x86

JVM/32 bit	Sun: Version 1.5.0_14 and all later JDK 5.0.* service packs JRockit: Version 1.5.0_14, build R27.5* and greater (patched version of build R27.5.0-110_o_CR365808-99683-1.5.0_14)
JVM/x-86_64 bit	Sun: Version 1.5.0_14 and all later JDK 5.0.* service packs JRockit: Version 1.5.0_14, build R27.5* and greater (patched version of build R27.5.0-110_o_CR365808-99683-1.5.0_14)
RAM	1 GB required; 2 GB recommended
Disk	2 x 36 GB
Network cards	2 x LAN interface card

Configuration requirements for Network tier servers

Table 3-5 Requirements for WebLogic Network Gatekeeper network tier servers on Linux Redhat AS4 on x86

Operating System Version and Patches	Red Hat Enterprise Linux AS release 4 (Nahant Update 2) Kernel version 2.6.9-22.Elsmp glibc-2.3.4-2.13 and later updates and errata levels
Chip Architecture and Minimum Processor Speed	Xeon or Opteron Class
JVM/32 bit	Sun: Version 1.5.0_14 and all later JDK 5.0.* service packs JRockit: Version 1.5.0_14, build R27.5* and greater (patched version of build R27.5.0-110_o_CR365808-99683-1.5.0_14)
JVM/x-86_64 bit	Sun: Version 1.5.0_14 and all later JDK 5.0.* service packs JRockit: Version 1.5.0_14, build R27.5* and greater (patched version of build R27.5.0-110_o_CR365808-99683-1.5.0_14)
RAM	1 GB required; 2 GB recommended
Disk	2 x 36 GB
Network cards	2 x LAN interface card

Configuration requirements for Database tier servers

Table 3-6 Requirements for WebLogic Network Gatekeeper database tier servers on Linux Redhat AS4 on x86

Operating System Version and Patches	Red Hat Enterprise Linux AS release 4 (Nahant Update 2) Kernel version 2.6.9-22.Elsmp glibc-2.3.4-2.13 and later updates and errata levels
Chip Architecture and Minimum Processor Speed	Xeon or Opteron Class
RAM	2 GB required; >6GB recommended
Disk	2 x 36 GB
Network cards	2 x LAN interface card
RDBMS	See Supported databases
Database storage system	Network attached storage using fibre channel interface.

Solaris 9 or Solaris 10 on Sun UltraSPARC

Configuration requirements Access tier servers

Table 3-7 Requirements for WebLogic Network Gatekeeper access tier servers on Solaris 9/10 on UltraSPARC

Operating System Version and Patches	Solaris 9/10
Chip Architecture and Minimum Processor Speed	UltraSPARC IIIi (1.5 Ghz)

Table 3-7 Requirements for WebLogic Network Gatekeeper access tier servers on Solaris 9/10 on UltraSPARC

JVM	Sun: Version 1.5.0_14 and all later JDK 5.0.* service packs JRockit: Version 1.5.0_14, build R27.5* and greater (patched version of build R27.5.0-110_o_CR365808-99683-1.5.0_14)
RAM	1 GB required; 2 GB recommended
Disk	2 x 35 GB
Network cards	2 x LAN interface card

Configuration requirements for Network tier servers

Table 3-8 Requirements for WebLogic Network Gatekeeper network tier servers on Solaris 9/10 on UltraSPARC

Operating System Version and Patches	Solaris 9/10
Chip Architecture and Minimum Processor Speed	UltraSPARC IIIi (1.5 Ghz)
JVM	Sun: Version 1.5.0_14 and all later JDK 5.0.* service packs JRockit: Version 1.5.0_14, build R27.5* and greater (patched version of build R27.5.0-110_o_CR365808-99683-1.5.0_14)
RAM	1 GB required; 2 GB recommended
Disk	2 x 35 GB
Network cards	2 x LAN interface card

Configuration requirements for Database tier servers

Table 3-9 Requirements for WebLogic Network Gatekeeper database tier servers on Solaris 9/10 on UltraSPARC

Operating System Version and Patches	Solaris 9/10
Chip Architecture and Minimum Processor Speed	UltraSPARC IIIi (1.5 Ghz)
RAM	2 GB required; >6 GB recommended
Disk	2 x 36 GB

Table 3-9 Requirements for WebLogic Network Gatekeeper database tier servers on Solaris 9/10 on UltraSPARC

Network cards	2 x LAN interface card
RDBMS	See Supported databases
Database storage system	Network attached storage using fibre channel interface.

Supported databases

Oracle 10g RAC	Full DB Failover and Fault Tolerance
Oracle 10g Single Instance	
MySQL 4.1 Single Instance (4.1.22 and later bugfix releases of 4.1)	

Load balancer and tier 3 switches

Per customer preference.

Firewall

Optional. Per customer preferences.

Disc storage

While disc storage can be an ordinary disk system, for performance and high availability reasons, a RAID system should be used.

General characteristics

Java version	JRE 1.5, JDBC 3.0
Database	Oracle, Single Instance or RAC: <ul style="list-style-type: none">• Oracle 10g R1 (Oracle 10.1.0.4 and later patch sets of 10.1.x)• Oracle 10g R2 (Oracle 10.2.0.1 and later patch sets of 10.2.x) MySQL 4.1 Single Instance (4.1.22 and later bugfix releases of 4.1)
Parlay X	2.1, 3.0
SNMP version	v1, v2
SOAP version	1.1, 1.2
SOAP engine	WLS
CORBA version	CORBA 2.5
ORB	Orbacus 4.3
Rule engine	JRules 6.5.2

Installing the Database

This chapter provides an overview of the process of installing the database for use with WebLogic Network Gatekeeper.

- [Outline of Installation](#)
- [Install an Oracle 10g with RAC Database](#)
- [Install an Oracle 10g Single Instance Database](#)
- [Install a MySQL Database](#)

Note: Individual files names are given in the form: `filename<version>.type`. As an example, the file referred to as `jrocket-j2sdk<version>.bin.gz` could have the full name `jrocket-j2sdk1.4.2_05-linux-ia32.bin.gz`

Outline of Installation

Although there are substantial differences among the installation procedures for each type of database, all installation types include the following basic steps:

- Install the base software
- Set up a user account that Network Gatekeeper will use to access the database
- Give the user account appropriate privileges on the database

Install an Oracle 10g with RAC Database

Use these instructions if you are using Oracle 10g with RAC as your database. For more information on using WLS RAC with multidatasource configuration, see also http://e-docs.bea.com/wls/docs100/jdbc_admin/oracle_rac.html.

Note: This is the only database configuration supported for production environments that require High Availability.

1. Set up the base configuration

Oracle 10g RAC must be installed on dedicated servers *not* running in the cluster building up the WebLogic Network Gatekeeper.

1. Install the Oracle 10g RAC database software using the instructions provided by Oracle.
2. Download and install the latest patch set. This is important because significant improvements have been made with regards to fail-over.

2. Use these recommended configuration options

1. Create the database using the **Transaction Processing** template.
2. Use **Automatic Storage Management**.
3. Use the **Dedicated Server Mode** for the database.
4. Change the **processes** parameter:

Define the number of processes to be equal to `(wlng.datasource MaximumCapacity + wlng.localTX.datasource MaximumCapacity)` times the number of Network Gatekeeper servers in the cluster. `MaximumCapacity` is defined as a parameter in the connection pool settings for the JDBC datasources. Normally this value is 150 for both datasources.

3. Define a database user

1. Create a database user for Network Gatekeeper with an allowed (unlimited) quota on its default tablespace, (the **users** tablespace). The user name and password for the user are later copied to each Network Gatekeeper Server.
2. The user must be granted the following privileges:

- CREATE SESSION
- CREATE TABLE

Network Gatekeeper must be configured with an additional set of parameters to make it work correctly with the database. This action is performed during the domain configuration phase. See [Chapter 7, “Configuring the Domain for Network Gatekeeper”](#) for more information.

4. Configure the Oracle database for backup

1. Configure the Oracle database for backup as described in the *System Backup and Restoration Guide*.

Install an Oracle 10g Single Instance Database

Follow the instructions in this section if you are using a Oracle 10g single instance as your database.

1. Set up the base configuration

The Oracle 10g instance must be installed on a dedicated server *not* running in the cluster building up the WebLogic Network Gatekeeper.

1. Install the Oracle 10g database software using the instructions provided by Oracle.

2. Use these recommended configuration options

1. Create the database using the **Transaction Processing** template.
1. Use **Automatic Storage Management**.
2. Use **Dedicated Server Mode** for the database.
3. Change the **processes** parameter:

Define the number of processes to be equal to `(wlng.datasource MaximumCapacity + wlng.localTX.datasource MaximumCapacity)` times the number of Network Gatekeeper servers in the cluster. `MaximumCapacity` is defined as a parameter in the connection pool settings for the JDBC datasources. Normally this value is 150 for both datasources.

3. Define a database user

1. Create a database user for Network Gatekeeper with an allowed (unlimited) quota on its default tablespace, (the **users** tablespace). The user name and password for the user are later defined in each Network Gatekeeper Server.
2. The user must be granted the following privileges:
 - CREATE SESSION
 - CREATE TABLE

Network Gatekeeper must be configured with an additional set of parameters to make it work correctly with the database. This action is performed during the domain configuration phase. See [Chapter 7, “Configuring the Domain for Network Gatekeeper”](#) for more information.

4. Configure the Oracle database for backup

1. Configure the Oracle database for backup as described in the *System Backup and Restoration Guide*

Install a MySQL Database

Follow the instructions in this section if you are using MySQL as your database.

Note: MySQL is not supported in environments that require High Availability.

MySQL can be installed either on a server in the cluster building up the WebLogic Network Gatekeeper or on a separate server. If it is installed in the cluster, it should be in the same server as the Network Tier.

Before you start, make sure you have the appropriate installation binaries (4.1.22 and higher bugfix releases for 4.1) for your platform. The binaries can be downloaded from <http://www.mysql.com>.

1. Copy the installation file to the desired directory.
2. Follow the installation instructions for your platform. These may vary widely depending on your platform and the type of binary you chose to download. You may need to be logged in with administrative privileges.

Linux:

The following is a summary of the commands needed to install MySQL on some versions of Linux. You should check the specific instructions for your version. It assumes an installation directory of `/usr/local`:

- a. Create a group for mysql and add the mysql user to it:

```
groupadd mysql
useradd -g mysql mysql
```

- b. Run the installation script:

```
cd /usr/local
ln -s /usr/local/mysql-standard-<version> mysql
cd mysql
scripts/mysql_install_db --user=mysql
```

- c. Set ownership:

```
chown -R root .
chown -R mysql data
chgrp -R mysql .
```

- d. Start the database:

```
bin/mysqld_safe --user=mysql &
```

- e. Create a file, `/usr/local/mysql/data/my.cnf`, and set the following connection variable, so that `max_connections` is equal to `(wlng.datasource MaximumCapacity + wlng.localTX.datasource MaximumCapacity)` times the number of Network Gatekeeper servers in the cluster. `MaximumCapacity` is defined as a parameter in the connection pool settings for the JDBC datasources. Normally this value is 150 for both datasources. For example:

```
[mysqld]
set-variable=max_connections=400
```

You should also add settings for default character set and storage engine:

```
set-variable=default-character-set=<desired character set>
```

Note: The recommended character set is `latin1`. If you need to use a multibyte character, such as UTF-8, you should select the InnoDB storage engine.

```
set-variable=default-storage-engine=<desired default storage engine>
```

Note: The recommended default storage engine is MYISAM.

- f. Restart MySQL.

Windows:

Installing the Database

The Windows version is available with a GUI installer. Detailed instructions on using the installer are available at the [MySQL](#) web site. Unless you need to install the database in a non-standard location, you can select Typical Install.

You can also use the **Instance Configuration Wizard** to do configuration basics. (Use the default choice unless specified below):

- Select **Detailed Configuration**

- Select your appropriate usage type

Note: The recommended usage type is **Non-transactional Database** unless you are using a multibyte character set such as UTF-8, in which case you should use **Multifunctional** or **Transactional**.

- To set concurrent connections, select **Manual** and choose a value equal to $(wlng.datasource MaximumCapacity + wlng.localTX.datasource MaximumCapacity)$ times the number of Network Gatekeeper servers in the cluster. `MaximumCapacity` is defined as a parameter in the connection pool settings for the JDBC datasources. Normally this value is 150 for both datasources. Use the dropdown menu. You can change this value later if necessary.

- Check **Enable TCP/IP Networking** (the standard port is fine unless you need to change it for your particular installation)

- Select your default character set.

Note: The recommended character set is **Latin1**. If you need to use a multibyte character set such as UTF-8, make sure you have selected **Multifunction** or **Transactional** as your usage type.

- Select **Install as Windows Service** if you desire
- Select **Modify Security Settings** and set a root password.
- Do not check **Enable root access from remote machines**

1. Setting MySQL to autostart on reboot is recommended. Refer to the instructions for MySQL and the operating system. If you are installing on Windows, you can set up MySQL to run as a Windows Service (see above).
2. Create the Network Gatekeeper database user and password and give it access privileges using the SQL command. You will need the user name and password for the domain configuration stage of the installation. (For information on the various command level modes of accessing the MySQL server, see the [documentation](#) on the MySQL website.

```
GRANT ALL ON *.* TO <Network Gatekeeper database user>@'<ip-address>'
IDENTIFIED BY '<password>'
```


You must do this for every IP address in the cluster.

3. Create the database for Network Gatekeeper. This name will be used in the Domain Configuration stage of the installation. The standard way to do this is to issue the following SQL command

```
CREATE DATABASE <database name>
```

4. Network Gatekeeper must be configured with an additional set of parameters to make it work correctly with the database. This action is performed during the domain configuration phase. See [Chapter 7, “Configuring the Domain for Network Gatekeeper”](#) for more information.

Installing the Database

Task Overview

This chapter provides a high level description of the process of installing and configuring WebLogic Network Gatekeeper. Subsequent chapters describe the specific steps required to use each type of installation and configuration tools in detail.

Setting up Network Gatekeeper is a four step process. You must:

- [Check Network/Hardware Setup](#)
- [Install Software](#)
- [Configure the WebLogic Server Domain for Network Gatekeeper](#)
- [Complete Post-Installation](#)

Check Network/Hardware Setup

Before you can install Network Gatekeeper, you must gather a certain amount of information about your system. You need to know:

- The network names or IP addresses of the machines on which you are going to install
- The directory on each machine which will serve as your *BEA Home directory*. This directory serves as a repository for common files that are used by all BEA products installed on the same machine.

The files in the BEA Home directory are essential to ensuring that BEA software operates correctly on your system. They:

- Ensure that licensing works correctly for the installed BEA products

- Facilitate checking of cross-product dependencies during installation
- Facilitate Service Pack installation
- The directory on each machine which will serve as your *Product Installation Directory*. Usually this is a subdirectory of the BEA Home directory. The product installation directory contains all the software components that will be used in configuring the Network Gatekeeper domains. The default directory is <BEA_home>\wlng400.
- If you are going to install the Network Gatekeeper Platform Development Studio, the machine's Eclipse Plugin directory.
- The password you are going to use for the Administration User. The default password is “weblogic”, which should be used during the initial setup and configuration period.

Install Software

Installing WebLogic Network Gatekeeper generally requires that three separate components be copied to your hardware:

- The platform container, WebLogic Server
- The Network Gatekeeper software, including the container and the communication services applications
- The Network Gatekeeper Platform Development Studio software

Each of these components is copied to its appropriate places when you run the Network Gatekeeper installer. There are three main installer modes available:

- Graphical-mode (GUI-based)

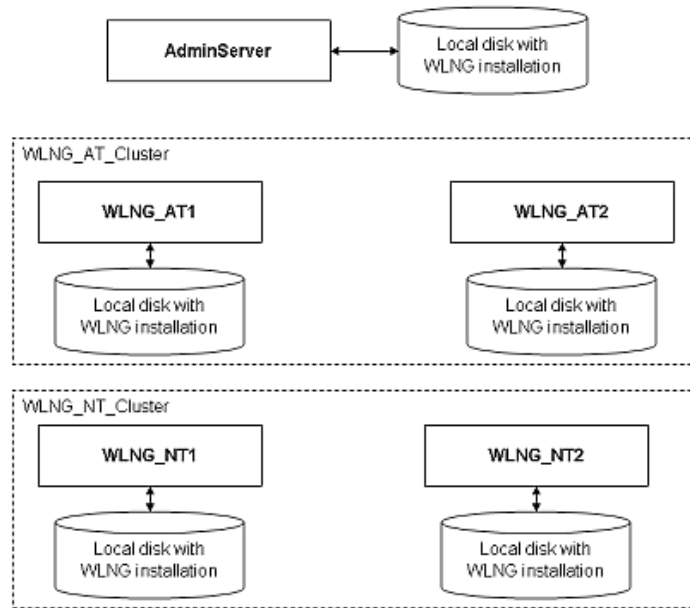
Note: If you want to run graphical-mode installation, the console attached to the machine on which you are installing the software must support a Java-based GUI. All consoles for Windows systems support Java-based GUIs, but not all consoles for UNIX/Linux systems do. If you attempt to start the installation program in graphical mode on a system that cannot support a graphical display, the installation program automatically starts console-mode installation.

- Console (interactive text-based).
- Silent mode (uses an XML file instead of user-entered responses)

The specifics of each of these installers are covered in [Chapter 6, “Installing Network Gatekeeper.”](#) You need to do this for each machine in your installation.

Note: It is recommended that you install Network Gatekeeper on the local disk of each server in your setup, as in [Figure 5-1](#).

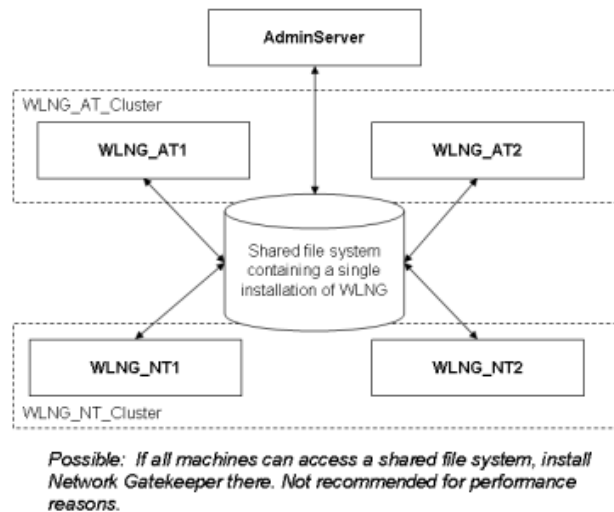
Figure 5-1 The Recommended Install Pattern



Recommended: Install Network Gatekeeper on each local disk

If all of your servers can access a shared file system, it is possible to install Network Gatekeeper only there (see [Figure 5-2](#)), but this is not recommended, for performance reasons.

Figure 5-2 Possible, but not recommended



Configure the WebLogic Server Domain for Network Gatekeeper

Configuring the domain for WebLogic Server for use in Network Gatekeeper can be accomplished using one of two available tools:

- The Configuration Wizard, using either the GUI-based version or the interactive console version.

Note: If you want to run graphical-mode configuration, the console attached to the machine on which you are configuring the domain must support a Java-based GUI. All consoles for Windows systems support Java-based GUIs, but not all consoles for UNIX/Linux systems do. If you attempt to start the installation program in graphical mode on a system that cannot support a graphical display, the installation program automatically starts console-mode installation.

- The command-line scripting tool (WebLogic Scripting Tool) and provided scripts.

Note: The WebLogic Scripting Tool (WLST) is a command-line scripting interface that system administrators and operators use to monitor and manage WebLogic Server instances and domains. The WLST scripting environment is based on the Java scripting interpreter, Jython. For more information on WLST, see [WebLogic Scripting Tool](#), part of the WebLogic Server documentation set.

Network Gatekeeper ships with six default configuration templates:

- WLNG Basic HA configuration
- WLNG Domain with Access and Network Clusters
- WLNG Domain with Access, Network, and PRM Clusters
- WLNG Domain with Access, Network, and PRM Clusters with Oracle RAC Configuration
- WLNG Domain with Access and Network Clusters with Oracle RAC Configuration
- Basic Weblogic Network Gatekeeper Domain

These templates contain the basic information for setting up various common installation selections. However in all cases, some aspects of the domain may need to be adjusted during the domain configuring process. The entire process is covered in [Chapter 7, “Configuring the Domain for Network Gatekeeper.”](#)

Complete Post-Installation

Once installation is complete and your domain has been set up, you must:

- Complete a few post-installation tasks
- Configure the Network Gatekeeper installation itself

These are covered in [Chapter 8, “Completing Post-Installation.”](#)

For Further Information

To learn more about installing WebLogic Server products in general, and about the installer program in particular in regard to WebLogic Server, see the WLS [Installation Guide](#), a separate document in the WebLogic Server set.

Task Overview

Installing Network Gatekeeper

This chapter describes how to use the WebLogic Network Gatekeeper installers. This process must be followed on every server in the system. The chapter includes information on:

- [The Graphical Mode Installer](#)
- [The Console Installer](#)
- [The Silent Mode Installer](#)
- [Where to Go From Here](#)

Before you run the installer, you should have a high level understanding of the entire installation and configuration process. See [Chapter 5, “Task Overview”](#) for more information.

The Graphical Mode Installer

Use the following instructions if you wish to use the GUI-based installer to install WebLogic Network Gatekeeper. You must do this for all servers.

Note: If you want to use the GUI-based installer, the console attached to the machine on which you are installing the software must support a Java-based GUI. All consoles for Windows systems support Java-based GUIs, but not all consoles for UNIX/Linux systems do. If you attempt to start the installation program in graphical mode on a system that cannot support a graphical display, the installation program automatically starts console-mode installation.

Launch the GUI Installer - Windows

Note: Windows is only supported for dev/test environments. It is not supported for production.

If you are using the GUI-based installer on a Windows machine, do the following:

1. Log in to the Windows system. If you are going to use this machine as an Administration Server and you wish to install the Node Manager as a Windows service, you must be logged in as an administrator. Node Manager is used to monitor, start, and stop server instances in a domain.
2. Go to the directory where you have copied the installation program. You acquire this program either from a WebLogic Network Gatekeeper CD or the Download Center.
3. If you are using Explorer to find the file, double-click the installation file, `wlng400_win32.exe`
4. If you are using the console window to find the file, enter the following command:

```
wlng400_win32
```

Note: You can also include the `-log=full_path_to_log_file` option in the command line to create a verbose installation log. For example:

```
wlng400_win32 -log=<full_path>install.log
```

5. Go on to [Respond to the Prompts](#)

Launch the GUI Installer - UNIX/Linux

If you are using the GUI-based installer on a UNIX/Linux machine, do the following:

1. Log into the target UNIX system
2. Go to the directory where you have copied the installation program. You acquire this program either from the WebLogic Network Gatekeeper CD or the Download Center.
3. Launch the installation by entering the following two commands:

```
chmod a+x wlng400_<appropriate-platform-filename>.bin
```

```
./wlng400_<appropriate-platform-filename>.bin
```

Note: You can also include the `-log=full_path_to_log_file` option in the command line to create a verbose installation log. For example:

```
wlng400_<appropriate-platform-filename>.bin -log=<full_path>install.log
```

4. Go on to [Respond to the Prompts](#)

Launch the GUI Installer - Generic

Network Gatekeeper ships with a generic installer that is primarily designed to be run on machines running HP-UX. If you are using the GUI-based installer, do the following:

1. Log into the target UNIX system
2. Add the `bin` directory of the appropriate JDK to the beginning of the `PATH` variable definition on the target system. For example:

```
PATH=JAVA_HOME/bin:$PATH
export PATH
```

Here `JAVA_HOME` represents the full path to the JDK directory.

3. Go to the directory where you downloaded the installation program.
4. Launch the installation program by entering the following command:

```
java -jar ./wlng400_generic.jar
```

5. Go on to [Respond to the Prompts](#)

Note: Once you have run the installer you must do the following additional two steps:

- a. Set the `WL_HOME` variable to the directory in which you installed your BEA product, and `export WL_HOME`. For example:

```
$ export WL_HOME=<your_installation_directory>/weblogic92
cd $WL_HOME/server/native/hpux11/IPF32/
```

- b. Set the following execution modes on the contents of the `$WL_HOME/server/native` directory:

```
$ chmod -R +x $WL_HOME/server/native/hpux11/
```

Respond to the Prompts

The installation program prompts you to enter specific information about your system and configuration. For instructions on responding to the prompts during installation, see the following table.

In this window...	Perform the following action...
Welcome	Click Next to proceed with the installation. You may cancel the installation at any time by clicking Exit .
Choose BEA Home Directory	Specify the BEA Home directory that will serve as the central support directory for all BEA products installed on the target system. If you already have a BEA Home directory on your system, you can select that directory (recommended) or create a new BEA Home directory. If you choose to create a new directory by typing a new directory name in the BEA Home Directory field, the installation program automatically creates one for you. You can also click Browse and select a directory from the BEA Home Directory Selection window.
Choose Install Type	Select the type of installation you wish to perform: <ul style="list-style-type: none"> • Complete - Installs WebLogic Server, WebLogic Network Gatekeeper (including the Extension Toolkit), and WebLogic SIP Server • Custom - Allows you to choose to install individual components
Choose Components This window only appears if you have selected the Custom installation type	Uncheck any component you do not wish to install Note: You cannot install the Extension Toolkit without WebLogic Server and WebLogic Network Gatekeeper.
Extension Toolkit Eclipse Plugin Path This window only appears if you have chosen to install the Extension Toolkit	In the text box, enter the full path to the Plugin directory of your Eclipse installation
Choose Product Installation Directories	Specify the directory in which you want to install the Network Gatekeeper software. This is the directory from which information will be copied during the domain configuration phase. Once you have chosen your directory, click Next . You can accept the default product directory (wlng400) or create a new product directory.

In this window...	Perform the following action...
<p>Install Windows Service</p> <p>This window only appears if you are installing the software on a Windows machine and you've chosen a Custom installation type</p>	<p>The Node Manager allows you to stop and start Managed Servers remotely. If you are installing on a Windows machine, the Node Manager should be installed as a Windows Service. Select Yes to install or No to skip installation</p>
<p>Choose Shortcut Location</p> <p>This window is displayed only under the following conditions:</p> <ul style="list-style-type: none"> • You have Administrator privileges. • You are performing an initial installation. • You are installing on a Windows platform. 	<p>Specify the Start menu folder in which you want the Start menu shortcuts created. You can select from the following options:</p> <ul style="list-style-type: none"> • All Users Start menu folder Selecting this option provides all users registered on the machine with access to the installed software. However, only users with Administrator privileges can create shortcuts in the All Users folder. Therefore, if a user without Administrator privileges uses the Configuration Wizard to create domains, Start menu shortcuts to the domains are not created. In this case, users can manually create shortcuts in their local Start menu folders, if desired. Press ALT+Y on the keyboard to select the All Users Start Menu. • Local user's Start menu folder Selecting this option ensures that other users registered on this machine will not have access to the Start menu entries for this installation. Press ALT+N on the keyboard to select the Local User's start menu.
Status	<p>Read the information displayed about the Gatekeeper. When the installation program has finished copying the specified files to your system, click Next.</p>
Installation Complete	<p>If you are using Windows, specify whether you want to run the QuickStart application. QuickStart, designed to assist first-time users in evaluating, learning, and using the software, provides quick access to domain configuration wizard. Clear the check box for this option if you do not want to launch QuickStart.</p>

The Console Installer

Use the following instructions if you wish to use the Console-based installer to install WebLogic Network Gatekeeper. You must do this for all servers.

Launch the Console Installer - Windows

Note: Windows is only supported for dev/test environments. It is not supported for production.

If you are using the Console-based installer on a Windows machine, do the following:

1. Log in to the target Windows system.
2. Go to the directory where you have copied the installation program. You acquire this program either from a WebLogic Network Gatekeeper CD or the Download Center.
3. Launch the installation by entering the following command:

```
wlng400_win32.exe -mode=console
```

Note: You can also include the `-log=full_path_to_log_file` option in the command line to create a verbose installation log. For example:

```
wlng400_win32.exe -mode=console -log=C:\logs\server_install.log
```

4. After a few moments, a BEA Installer window opens and the installation program begins to install the software.
5. Go on to [Respond to the Prompts](#)

Launch the Console Installer - UNIX/Linux

If you are using the Console-based installer on a UNIX/Linux machine, do the following:

1. Log into the target UNIX system
2. Go to the directory where you have copied the installation program. You acquire this program either from the WebLogic Network Gatekeeper CD or the Download Center.
3. Launch the installation by entering the following two commands:

```
chmod a+x wlng400_<appropriate-platform-filename>.bin
```

```
./wlng400_<appropriate-platform-filename>.bin -mode=console
```

Note: You can also include the `-log=full_path_to_log_file` option in the command line to create a verbose installation log. For example:

```
./wlng400_<appropriate-platform-filename>.bin -mode=console  
-log=/home/logs/BEA_install.log [all on one line]
```

4. After a few moments, a BEA Installer window opens the installation program begins to install the software.
5. Go on to [Respond to the Prompts](#)

Launch the Console Installer - Generic

Network Gatekeeper ships with a generic installer that is primarily designed to be run on machines running HP-UX. If you are using the console based installer, do the following:

1. Log into the target UNIX system
2. Add the `bin` directory of the appropriate JDK to the beginning of the `PATH` variable definition on the target system. For example:

```
PATH=JAVA_HOME/bin:$PATH
export PATH
```

Here `JAVA_HOME` represents the full path to the JDK directory.

3. Go to the directory where you downloaded the installation program.
 4. Launch the installation program by entering the following command:
- ```
java -jar ./wlng400_generic.jar -mode=console
```
5. Go on to [Respond to the Prompts](#)

**Note:** Once you have run the installer you must do the following additional two steps:

- a. Set the `WL_HOME` variable to the directory in which you installed your BEA product, and `export WL_HOME`. For example:

```
$ export WL_HOME=<your_installation_directory>/weblogic92
cd $WL_HOME/server/native/hpux11/IPF32/
```

- b. Set the following execution modes on the contents of the `$WL_HOME/server/native` directory:

```
$ chmod -R +x $WL_HOME/server/native/hpux11/
```

## Respond to the Prompts

The installation program prompts you to enter specific information about your system and configuration. For instructions on responding to the prompts during installation, see the following table.

## Installing Network Gatekeeper

To complete the console-mode installation process, respond to the prompts in each section by entering the number associated with your choice or by pressing Enter to accept the default. To exit the installation process, enter exit (or x, for short) in response to any prompt. To review or change your selection, enter previous (or p, for short) at the prompt. To proceed to the following window, enter next (or n, for short).

**Note:** In the sample console text and directory pathnames provided in this section, Windows conventions (such as backslashes in pathnames) are used, for example, C:\bea\weblogic92. When entering pathnames on a UNIX system, be sure to use UNIX conventions, instead. For example, use forward slashes in pathnames, such as /home/bea/weblogic92.

| On this screen...                | Perform the following action...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Welcome</b>                   | Type next (or n for short) or press Enter to continue with the installation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Choose BEA Home Directory</b> | <p>Specify the BEA Home directory that will serve as the central support directory for all BEA products installed on the target system.</p> <p><b>If you already have a BEA Home directory</b> on your system, you can select that directory or create a new BEA Home directory.</p> <ul style="list-style-type: none"><li>• If you already have an existing BEA Home directory, it will be displayed. To use that directory, type the number associated with it.</li><li>• To create a new BEA Home directory, type 1 or press Enter.</li></ul> <p><b>If there are no BEA Home directories on your system</b>, or you have selected to create a new BEA Home:</p> <ul style="list-style-type: none"><li>• To choose the default directory, simply type n or Enter.</li><li>• To select a new directory, enter its full path, for example:<br/>C:\beahome</li></ul> <p>The installer asks you to confirm your choice:.</p> <ul style="list-style-type: none"><li>• To accept your choice, type Enter</li><li>• To go back, type 1 or 2, as you desire</li></ul> |
| <b>Choose Install Type</b>       | <p>Select the type of installation you wish to perform:</p> <ul style="list-style-type: none"><li>• <b>1 - Complete</b> - Installs WebLogic Server, WebLogic Network Gatekeeper (including the Extension Toolkit), and WebLogic SIP Server</li><li>• <b>2 - Custom</b> - Allows you to choose to install individual components</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |



| On this screen...                                                                                                                                                                                                                                                                                              | Perform the following action...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Choose Components</b></p> <p>This window only appears if you have selected the <b>Custom</b> installation type</p>                                                                                                                                                                                       | <p>Enter the number next to the name(s) of the component(s) you do not wish to install and hit <b>Enter</b>. The screen refreshes, and the checkmark next to that component is removed. Continue until only the items you wish to install are checkmarked.</p> <p><b>Note:</b> You cannot install the Extension Toolkit without WebLogic Server and WebLogic Network Gatekeeper.</p> <p>Hit <b>n</b> to continue.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p><b>Extension Toolkit Eclipse Plugin Path</b></p> <p>This window only appears if you have chosen to install the Extension Toolkit</p>                                                                                                                                                                        | <p>Enter <b>1</b> to change the path to your <code>Eclipse\plugin</code> installation. Then enter the full path. The screen refreshes, and the path is displayed.</p> <p>Hit <b>n</b> to continue.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <p><b>Choose Product Directory</b></p>                                                                                                                                                                                                                                                                         | <p>Specify the directory in which you want to install the Network Gatekeeper software. This is the directory from which information will be copied during the domain configuration phase. You can accept the default product directory (<code>wlmg400</code>) or create a new product directory by inputting the full path to the directory. The installer asks you to confirm your choice.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p><b>Choose Shortcut Location</b></p> <p>This window is displayed only under the following conditions:</p> <ul style="list-style-type: none"> <li>• You have Administrator privileges.</li> <li>• You are performing an initial installation.</li> <li>• You are installing on a Windows platform.</li> </ul> | <p>Specify the Start menu folder in which you want the Start menu shortcuts created. You can select from the following options:</p> <ul style="list-style-type: none"> <li>• <b>All Users Start menu folder</b> <p>Selecting this option provides all users registered on the machine with access to the installed software. However, only users with Administrator privileges can create shortcuts in the All Users folder. Therefore, if a user without Administrator privileges uses the Configuration Wizard to create domains, Start menu shortcuts to the domains are not created. In this case, users can manually create shortcuts in their local Start menu folders, if desired. Press ALT+Y on the keyboard to select the All Users Start Menu.</p> </li> <li>• <b>Local user's Start menu folder</b> <p>Selecting this option ensures that other users registered on this machine will not have access to the Start menu entries for this installation. Press ALT+N on the keyboard to select the Local User's start menu.</p> </li> </ul> <p>The installer asks you to confirm your choice.</p> |
| <p><b>Status</b></p>                                                                                                                                                                                                                                                                                           | <p>A status bar indicates the progress of the install</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p><b>Installation Complete</b></p>                                                                                                                                                                                                                                                                            | <p>Press <b>Enter</b> to exit the installer.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

## The Silent Mode Installer

Silent-mode installation is a way of setting installation configurations only once and then using those configurations to duplicate the installation on many machines. During installation in silent mode, the installation program reads the settings for your configuration from an XML file that you create prior to beginning the installation. The installation program does not display any configuration options during the installation process. Silent-mode installation works on both Windows and UNIX systems. Please note: Windows is only supported for dev/test environments. It is not supported for production.

**Note:** For more information on Silent-mode installation, see the [What Is Silent-Mode Installation?](#) section of the WLS *Installation Guide*, a description of silent mode installation for WebLogic Server in general.

Use the following instructions if you wish to use the Silent Mode installer to install WebLogic Network Gatekeeper. You must do this for all servers.

### Create the silent.xml file

The entries in the silent.xml file correspond to the prompts that you would see if you used one of the interactive modes above.

**Note:** Incorrect entries in the silent.xml file can cause installation failures. To help you determine the cause of a failure, we recommend that you create a log file when you start the installation.

The following is a sample version of a silent.xml file, corresponding to a Complete installation type. Your input may be slightly different, depending on your installation:

#### Listing 6-1 Sample silent.xml

---

```
<?xml version="1.0" encoding="UTF-8"?>
<bea-installer>
 <input-field>
 <data-value name="BEAHOME" value="d:/bea-wlmg400" />
 <data-value name="USER_INSTALL_DIR" value="d:/bea-wlmg400/wlmg400"/>
 <data-value name="INSTALL_NODE_MANAGER_SERVICE" value="yes" />
 <data-value name="NODEMGR_PORT" value="5559" />
 </input-field>
</bea-installer>
```

```

 <data-value name="COMPONENT_PATHS" value="WebLogic Network
Gatekeeper" />
 <data-value name="INSTALL_SHORTCUT_IN_ALL_USERS_FOLDER"
value="true"/>
 <data-value name="WLNGEclipseConfig.dir" value="d:/eclipse/plugin"/>
</input-fields>
</bea-installer>

```

---

## Launch the Silent Installer - Windows

If you are using the silent installer on a Windows machine, do the following:

1. Log in to the target Windows system. If you are going to use this machine as an Administration Server and you wish to install the Node Manager as a Windows service, you must be logged in as an administrator. Node Manager is used to monitor, start, and stop managed server instances in a domain.
2. Go to the directory where you have copied the installation program. You acquire this program either from a WebLogic Network Gatekeeper CD or the Download Center.
3. Launch the installation by entering the following command:
  - `wlng400_win32.exe -mode=silent -log=<full_path_name>install.log -silent_xml=<full_path_name>silent_xml [all on one line]`
4. After a few moments, a BEA Installer window opens, indicating that the files are being extracted. No other prompt or text is displayed.

## Launch the Silent Installer - UNIX/Linux

If you are using the silent installer on a UNIX/Linux machine, do the following:

1. Log into the target UNIX system
2. Go to the directory where you have copied the installation program. You acquire this program either from the WebLogic Network Gatekeeper CD or the Download Center.
3. Launch the installation by entering the following commands:

```
chmod a+x wlng400_<appropriate-platform-filename>.bin
```

## Installing Network Gatekeeper

```
./<filename.bin> -mode=silent -log=<full_path_name>install.log
-silent.xml=<full_path_name>silent.xml [all on one line]
```

4. After a few moments, a BEA Installer window opens, indicating that the files are being extracted. No other prompt or text is displayed.

## Launch the Silent Installer - Generic

Network Gatekeeper ships with a generic installer that is primarily designed to be run on machines running HP-UX:

1. Log into the target UNIX system
2. Add the `bin` directory of the appropriate JDK to the beginning of the `PATH` variable definition on the target system. For example:

```
PATH=JAVA_HOME/bin:$PATH
export PATH
```

Here `JAVA_HOME` represents the full path to the JDK directory.

3. Go to the directory where you downloaded the installation program.
4. Launch the installation program by entering the following command:

```
java -jar ./wlng400_generic.jar -mode=silent
-silent_xml=/full_path_to_silent.xml [all on one line]
```

**Note:** Once you have run the installer you must do the following additional two steps:

- a. Set the `WL_HOME` variable to the directory in which you installed your BEA product, and export `WL_HOME`. For example:

```
$ export WL_HOME=<your_installation_directory>/weblogic92
cd $WL_HOME/server/native/hpux11/IPF32/
```

- b. Set the following execution modes on the contents of the `$WL_HOME/server/native` directory:

```
$ chmod -R +x $WL_HOME/server/native/hpux11/
```

## Returning Exit Codes to the Console

When run in silent mode, the installation program generates exit codes that indicate the success or failure of the installation. These exit codes are shown in the following table:

**Table 6-1 Installation Program Exit Codes**

Code	Description
0	Installation completed successfully
-1	Installation failed due to a fatal error
-2	Installation failed due to an internal XML parsing error

If you are launching the silent-mode installation process from a script, you can choose to have these exit codes displayed to the console. The following provides a sample command file that invokes the WebLogic Platform installation in silent mode and echoes the exit codes to the console from which the script is executed.

**Listing 6-2 Return exit codes**

```
rem Execute the installer in silent mode
@echo off

wlng400_win32.exe -mode=silent -log=<full_path_name>install.log
-silent_xml=<full_path_name>silent.xml

@rem Return an exit code to indicate success or failure of installation
set exit_code=%ERRORLEVEL%

@echo.
@echo Exitcode=%exit_code%
@echo.
@echo Exit Code Key
@echo -----
@echo 0=Installation completed successfully
@echo -1=Installation failed due to a fatal error
```

## Installing Network Gatekeeper

```
@echo -2=Installation failed due to an internal XML parsing error
@echo .
```

---

## Where to Go From Here

You must now configure WebLogic Network Gatekeeper's Administrative Domain. See [Chapter 7, "Configuring the Domain for Network Gatekeeper"](#)

**Note:** If you wish to be able to start and stop servers remotely, for example by using the Administration Console, you must set up Node Manager on each server. The software for Node Manager is automatically installed along with WebLogic Server software when you use any of the installation methods. See ["Using Node Manager to Control Servers"](#) in *Managing Server Startup and Shutdown*, a separate document in the WebLogic Server set for more information on setting up and configuring Node Manager.

# Configuring the Domain for Network Gatekeeper

This chapter describes how to use the WebLogic Network Gatekeeper domain configuration tools. It covers:

- [Domain Overview](#)
- [The Graphical Mode Configuration Wizard](#)
- [The Console Configuration Wizard](#)
- [The WebLogic Scripting Tool scripts](#)

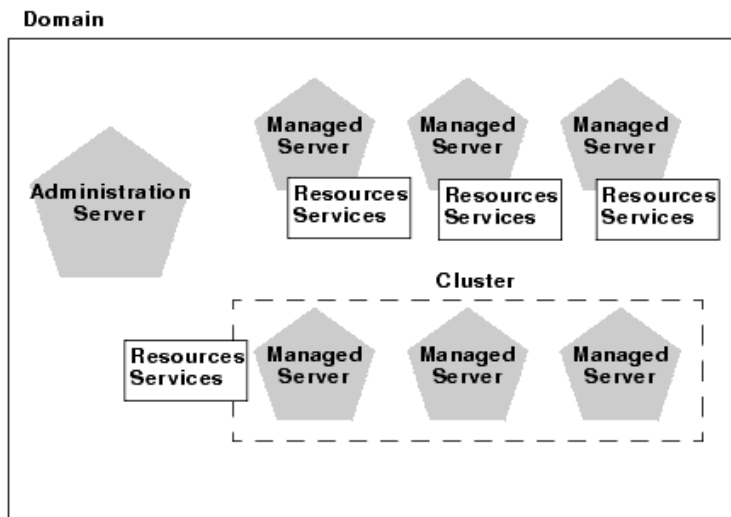
Before you run the domain tools, you should have:

- Read [Chapter 5, “Task Overview”](#) for an overview of the entire process
- Installed the database, as covered in [Chapter 4, “Installing the Database,”](#) and the software, as covered in [Chapter 6, “Installing Network Gatekeeper”](#)

## Domain Overview

In order to run Network Gatekeeper, its container, WebLogic Server, must be given basic information about the various parts of the system. This is called *configuring the domain*. A domain is the basic administrative unit in WebLogic Server. It consists of an *Administration Server* and, usually, one or more *Managed Servers*, which may be associated into *clusters*.

Figure 7-1 WebLogic Domains

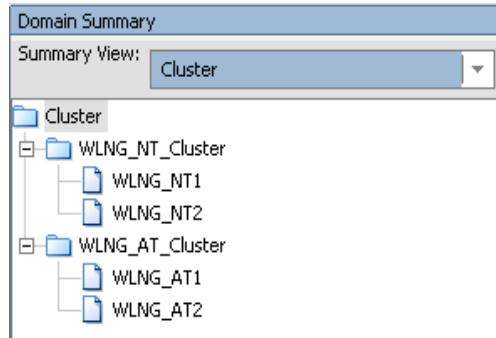


The Administration Server provides a central point for managing the domain and providing access to the WebLogic Server administration tools.

**Note:** A single WebLogic Server instance can function as both the Administration Server and a Managed Server, depending on the needs of the installation. For example, developers creating communication service extensions using the Extension Toolkit commonly might run both the Administration Server and Managed Servers on a single machine.

Managed Servers are often grouped together into clusters. Clusters are groups of server instances that work together to provide scalability and high availability. Clusters improve performance and provide failover should a server instance become unavailable. The servers within a cluster can run on the same machine, or they can reside on different machines. To the client, a cluster appears as a single WebLogic Server instance.



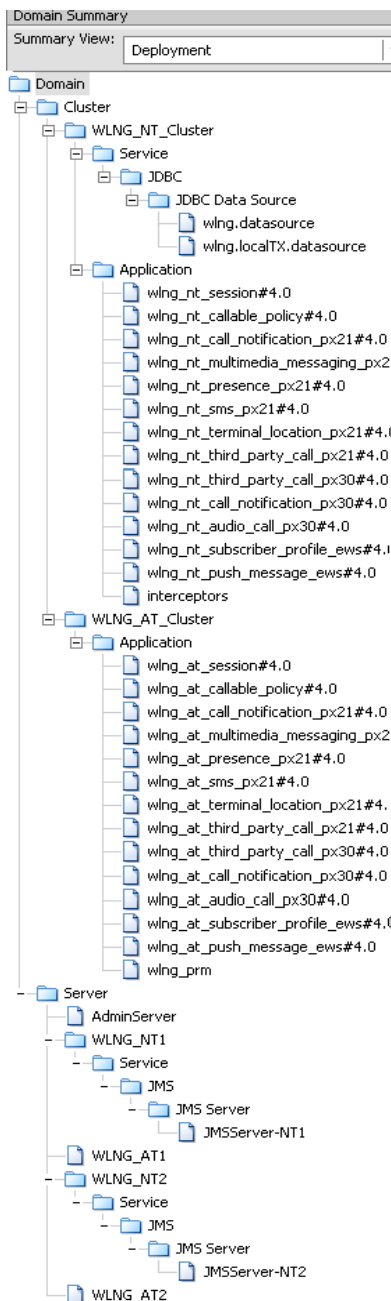
**Figure 7-2 Initial server instances added to clusters**

Managed Servers, or the clusters into which they are linked, host application components - in this case, the communication services - and resources, which are also deployed and managed as part of the domain. In [Figure 7-3](#) below, the applications (`wlng_nt_<communication-service-name>` and `wlng_at_<exposure-service-name>`) are assigned to the two clusters (`WLANG_NT_Cluster` and `WLANG_AT_Cluster`). But each Network Tier server must have its own JMS resources, so they are shown per server.

Configuring the Domain for Network Gatekeeper

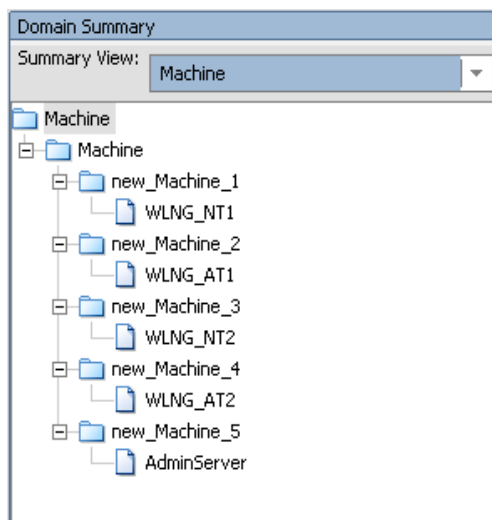
**Figure 7-3 Managed servers/clusters host applications and resources**

## Domain Overview



Each server instance is also assigned to a *Machine*, a logical representation of actual hardware. The Machine representation is used by the Administration Server to start and stop remote servers using the Node Manager. Multiple server instances can run in a single Machine.

**Figure 7-4 Servers are assigned to Machines**



For more information on WebLogic Server domains, see the [Introduction to Creating WebLogic Domains Using the Configuration Wizard](#), part of the WebLogic Server documentation set.

**Note:** All servers must have their domains configured. You can either use one of the methods below to manually configure each server in your installation, or you can configure the domain on your Administration server and then use the pack and unpack commands provided by WLS to package the configuration data for copying to all the other servers. For more information on pack and unpack, see the [pack and unpack Command Descriptions](#) chapter in *Creating Templates and Domains Using the Pack and Unpack Commands*, a document in the WLS set. The scripts themselves are located in the <install>/common/bin directory. In the default installation, this would be <beahome>/wlng400/common/bin/.

## The Graphical Mode Configuration Wizard

Use the following instructions if you wish to use the GUI-based Configuration Wizard to configure WebLogic Server for Network Gatekeeper.

**Note:** If you want to use the GUI-based Wizard, the console attached to the machine on which you are configuring the domain must support a Java-based GUI. All consoles for Windows systems support Java-based GUIs, but not all consoles for UNIX/Linux systems do. If you attempt to start the configuration program in graphical mode on a system that cannot support a graphical display, the configuration program automatically starts console-mode installation.

## Launch the GUI Configuration Wizard - Windows

You can start the Configuration Wizard in graphical mode from either the Windows Start menu or from the command line.

- To start the GUI Configuration Wizard from the Windows Start menu, choose the Configuration Wizard option from the BEA program group in the Windows Start Menu:

Start->Programs->BEA Products->Tools->Configuration Wizard

**Note:** If you have used the GUI-based installer, and the Run Quickstart box is checked in the Installation Complete window, the Quickstart window opens automatically. Simply click **Start Domain Configuration Wizard** to launch the Wizard.

- To start the GUI Configuration Wizard from the command line:

- a. Log in to the target system
- b. Open a command prompt window
- c. Go to the `\common\bin` subdirectory. For example:  

```
cd c:\<beahome_dir>\wlng400\common\bin
```
- d. At the prompt, type `config` and Enter
- e. The Configuration Wizard starts in graphical mode

**Note:** You can also use Explorer to find the `config.cmd` file in `c:\<beahome_dir>\wlng400\common\bin`, and simply double-click it.

## Launch the GUI Configuration Wizard - UNIX/Linux

To start the GUI Configuration Wizard:

- a. Log in to the target system
- b. Open a command shell window

## Configuring the Domain for Network Gatekeeper

c. Go to the `/common/bin` subdirectory. For example:

```
cd c: /<beahome_dir>/wlng400/common/bin
```

d. Invoke the following script:

```
sh config.sh
```

e. The Configuration Wizard starts in graphical mode

## Respond to the Prompts

The GUI Configuration Wizard prompts you to enter specific information about your system and configuration. For instructions on responding to the prompts during installation, see the following table

**Note:** If you are going to be using any CORBA based functionality that in one way or another connects to a machine other than your own, you should not use the value “localhost” in any of your configuration choices.

## The Graphical Mode Configuration Wizard

## Configuring the Domain for Network Gatekeeper

---

In this window...	Perform the following action...
<b>Welcome</b>	Make sure <b>Create WebLogic domain</b> is selected. Click <b>Next</b> to proceed with the installation. You may cancel the installation at any time by clicking <b>Exit</b> and you may go back to a previous window by clicking <b>Previous</b> .

---



In this window...	Perform the following action...
<b>Select a Template</b>	<p>There are six standard domain templates that have already been constructed. Select the appropriate template depending on your needs:</p> <ul style="list-style-type: none"> <li> <p>• <b>WLNG Basic HA configuration</b></p> <p>Creates a basic domain with two servers, each with an AT and an NT instance and a database. This configuration can be expanded later in the process.</p> </li> <li> <p>• <b>WLNG Domain with Access and Network Clusters</b></p> <p>Creates a basic distributed domain, with a two instance Access cluster and a two instance Network cluster. This configuration can be expanded later in the process.</p> </li> <li> <p>• <b>WLNG Domain with Access, Network, and PRM Clusters</b></p> <p>Creates a basic distributed domain, with a two instance Access cluster and a two instance Network cluster and adds the Partner Relationship Management interfaces. This configuration can also be expanded later in the process</p> </li> <li> <p>• <b>WLNG Domain with Access, Network, and PRM Clusters with Oracle RAC Configuration</b></p> <p>Creates a basic distributed domain, with a two instance Access cluster and a two instance Network cluster and adds the Partner Relationship Management interfaces. This configuration can also be expanded later in the process. It also creates the additional datasources required for use with an Oracle RAC based installation.</p> </li> <li> <p>• <b>WLNG Domain with Access and Network Clusters with Oracle RAC Configuration</b></p> <p>Creates a basic distributed domain, with a two instance Access cluster and a two instance Network cluster. This configuration can be expanded later in the process. It also creates the additional datasources required for use with an Oracle RAC based installation.</p> </li> <li> <p>• <b>Basic Weblogic Network Gatekeeper Domain</b></p> <p>Creates an all-in-one domain, with the Access and Network Tier and the Administration Server all on a single machine. This configuration is common for development machines.</p> </li> </ul> <p>After selecting the appropriate template, click <b>OK</b> to continue. When you return to the <b>Select Domain Source</b> window, click <b>Next</b>.</p>

In this window...	Perform the following action...
<p><b>Configure Administrator Username and Password</b></p>	<p>Specify the username of the main Administrative user. This name is used to boot the Administration Server and connect to it. For setup purposes, this username should be “weblogic”. User names are case sensitive. Do not use commas or any characters in the following comma-separated list:</p> <p style="text-align: center;">\t, &lt;, &gt;, #,  , &amp;, ?, ( ), { }</p> <p>Specify the password for the Administrative user. For setup purposes, this password should be “weblogic.” You can change it later. A valid password is a string of at least 8 case-sensitive characters. The password value is encrypted. Re-enter the password.</p> <p>Optionally, enter a login description for this username.</p> <p>Click <b>Next</b> to continue.</p>
<p><b>Configure Server Startup Mode and JDK</b></p>	<p>On the left side of the window, select the appropriate startup mode for your installation:</p> <ul style="list-style-type: none"> <li>• <b>Development Mode</b></li> <li>• <b>Production Mode</b></li> </ul> <p><b>Note:</b> If you select <b>Production Mode</b>, you should not enable SSL unless you have a trusted key. For more information on startup modes, see the <a href="#">Choose the Startup Mode</a> section in <i>Creating WebLogic Domains Using the Configuration Wizard</i>.</p> <p>On the right side of the window, you should select the <b>BEA Supplied JDK’s</b> radio button and choose the appropriate JDK.</p> <p>Click <b>Next</b> to continue.</p>
<p><b>Customize Environment and Services Settings</b></p>	<p>Select <b>Yes</b>. For more information on the values you might enter in the following windows in the general context of WebLogic Server, see the <a href="#">Customizing the Environment</a> chapter in <i>Creating WebLogic Domains Using the Configuration Wizard</i></p> <p>Click <b>Next</b> to continue.</p>
<p><b>Configure the Administration Server</b></p>	<p>Change the Listen address from host-admin.bea.com to the IP number or DNS name of your Administration Server and make any other changes necessary based on your installation.</p> <p>Click <b>Next</b> to continue.</p>

In this window...	Perform the following action...
<b>Configure Managed Servers</b>	<p>Use this window to add or change connection information for Managed Servers. Each Managed Server is an instance of WebLogic Server. If you are configuring a basic distributed domain based on the <code>wlng-access-network-domain.jar</code> or the <code>wlng-access-network-prm-domain.jar</code> templates, some information is already filled in. Change the <code>Listen</code> address of each of your servers, based on your installation values. You can add Managed Server instances at this time. (You can also do this using the Management Console at any time.)</p> <p><b>Note:</b> The <code>Listen</code> address and <code>Listen port</code> per server combination must be unique. The values for the <code>Listen</code> address can include alphanumeric characters, dots [<code>.</code>], and dashes [<code>-</code>] only.</p> <p>Click <b>Next</b> to continue.</p>
<b>Configure Clusters</b> This window does not appear if you selected Create Basic Domain	<p>Use this window to change connection information for clusters. Clusters are logical representations that for reasons of scalability and high availability allow multiple Managed Servers to act as if they were a single host. The <code>wlng-access-network-domain.jar</code> templates create two clusters, with each cluster containing two Managed Server instances. The <code>wlng-access-network-prm-domain.jar</code> templates add an additional, PRM, cluster. Change the <code>Cluster</code> address to reflect the addresses and ports you set in the previous window. Values should be comma-delimited, with no spaces. You may also change the <code>Multicast address</code> if your installation requires it.</p> <p>Click <b>Next</b> to continue.</p>
<b>Assign Servers to Clusters</b> This window does not appear if you selected Create Basic Domain	<p>Use this window to add any additional Managed Servers you listed in the <b>Configure Managed Servers</b> window to clusters configured in the <b>Configure Clusters</b> window. Select the appropriate cluster in the right pane, the appropriate Managed Server in the left pane, and assign them to each other by clicking the <b>right arrow button</b>.</p> <p>Click <b>Next</b> to continue.</p>

## Configuring the Domain for Network Gatekeeper

In this window...	Perform the following action...
<b>Configure Machines/Configure Unix Machines</b>	<p>Use this window to add or change information about <b>Machines</b>. In the context of WebLogic Server, a <b>Machine</b> is the logical representation of the system that hosts one or more WebLogic Server instances, for the purposes of starting and stopping remote servers using the Node Manager. In a domain, machine definitions identify a particular, physical piece of hardware and are used to associate a computer with the Managed Servers it hosts.</p> <p>For more information about the various fields, see the <a href="#">Configure Machines</a> section in <i>Creating WebLogic Domains Using the Configuration Wizard</i>. Click <b>Next</b> to continue.</p>
<b>Assign Servers to Machines</b> This window does not appear if you selected Create Basic Domain	<p>Use this window to assign Servers (either Administration or Managed) to their appropriate Machines, if necessary. Select the appropriate Machine in the right pane and the server(s) in the left pane and assign them to each other by clicking the <b>right arrow button</b>.</p> <p>Click <b>Next</b> to continue.</p>
<b>Configure JDBC Datasource</b> This window appears if you are installing a non-RAC based Gatekeeper.	<p>Use this window to make adjustments to the Network Gatekeeper JDBC datasources if you are using a non-RAC database. A JDBC datasource contains a pool of database connections that are created when the data source instance is created—when it is deployed or targeted, or at server startup. Applications look up a datasource on the JNDI tree, and then request a connection.</p> <p><b>In a non-RAC configuration, you must configure two datasources using the two tabs in this window.</b></p>

In this window...	Perform the following action...
<b>NON-RAC TAB ONE:</b> <b>wlng.datasource</b>	<p>Use the <b>first tab</b> to make adjustments in the datasource for the transactional datasource.</p> <p>Typically, fields you may need to edit include:</p> <ul style="list-style-type: none"> <li>• <b>Database type:</b> The default is Oracle</li> <li>• <b>Driver:</b> The driver appropriate to the database type</li> <li>• <b>Supports global transactions</b> should be checked, and either <b>Two phase commit</b> (Oracle) or <b>Emulate two phase commit</b> (MySQL) should be selected</li> <li>• <b>DBMS name:</b> The name of the database you created in <a href="#">Chapter 4, “Installing the Database”</a></li> <li>• <b>DBMS host:</b> Where the database is located</li> <li>• <b>DBMS port:</b> The port for contacting the database.</li> <li>• <b>User name:</b> The Network Gatekeeper user name you created when you installed the database</li> <li>• <b>Password:</b> The Network Gatekeeper password you created when you installed the database</li> </ul> <p><b>Note:</b> Do not change the <b>Name</b> or <b>JNDI name</b> fields.</p> <p>Click the <b>wlng.localTX.datasource</b> tab to continue</p>
<b>NON-RAC TAB TWO</b> <b>wlng.localTX.datasource</b>	<p>Use this <b>second tab</b> to make adjustments in the datasource for local transactions. You will need to set the values as in wlng.datasource, with the following exceptions:</p> <ul style="list-style-type: none"> <li>• <b>Driver:</b> If you are using Oracle, you should select the <b>non-XA</b> driver for this datasource</li> <li>• <b>Supports global transactions</b> should <i>not</i> be checked, for either Oracle and MySQL.</li> </ul> <p>Click <b>Next</b> to continue.</p>
<b>Configure JDBC Datasource</b>  This window appears if you are installing a RAC based Gatekeeper.	<p>Use this window to make adjustments to the Network Gatekeeper JDBC datasources if you are using a RAC database. A JDBC datasource contains a pool of database connections that are created when the data source instance is created—when it is deployed or targeted, or at server startup. Applications look up a datasource on the JNDI tree, and then request a connection.</p> <p><b>In a RAC-based configuration, you must configure four datasources (two of each type) using the four tabs in this window.</b></p>

---

In this window...	Perform the following action...
<b>RAC TAB ONE:</b> <b>wlng.localTX.datasourc-</b> <b>1</b>	Use the <b>first tab</b> to make adjustments in the first datasource for local transactions. Typically, fields you may need to edit include: <ul style="list-style-type: none"><li>• <b>Supports global transactions should <i>not</i> be checked.</b></li><li>• <b>DBMS name:</b> The name of the first database instance you created in <a href="#">Chapter 4, “Installing the Database”</a></li><li>• <b>DBMS host:</b> Where the first database instance is located</li><li>• <b>DBMS port:</b> The port for contacting the first database instance.</li><li>• <b>User name:</b> The Network Gatekeeper user name you created when you installed the database.</li><li>• <b>Password:</b> The Network Gatekeeper password you created when you installed the database. You must confirm the password</li></ul> <p><b>Note:</b> Do not change the <b>Name</b> or <b>JNDI name</b> fields. Click the <b>wlng.localTX.datasourc - 2</b> tab to continue</p>
<b>RAC TAB TWO:</b> <b>wlng.localTX.datasourc-</b> <b>2</b>	Use this tab to make adjustments in the second datasource for local transactions. You should enter the same values as in <b>wlng.localTX.datasourc-1</b> with the following exceptions: <ul style="list-style-type: none"><li>• <b>DBMS name:</b> The name of the second database instance you created in <a href="#">Chapter 4, “Installing the Database”</a></li><li>• <b>DBMS host:</b> Where the second database instance is located</li></ul> Click the <b>wlng.datasourc - 1</b> tab to continue

---

In this window...	Perform the following action...
<b>RAC TAB THREE</b> <b>wlng.datasource - 1</b>	<p>Use this tab to make adjustments in the first transactional datasource. Typically, fields you may need to edit include:</p> <ul style="list-style-type: none"> <li>• <b>Supports global transactions should be checked</b>, with <b>Two phase commit</b></li> <li>• <b>DBMS name</b>: The name of the first database you created in <a href="#">Chapter 4, “Installing the Database”</a>. This is the same name you used in <b>wlng.localTX.datasource-1</b>.</li> <li>• <b>DBMS host</b>: Where the first database instance is located. This is the same value you used in <b>wlng.localTX.datasource-1</b></li> <li>• <b>DBMS port</b>: The port for contacting the first database instance. This is the same value you used in <b>wlng.localTX.datasource-1</b></li> <li>• <b>User name</b>: The Network Gatekeeper user name you created when you installed the database</li> <li>• <b>Password</b>: The Network Gatekeeper password you created when you installed the database. You must confirm the password.</li> </ul> <p><b>Note:</b> Do not change the <b>Name</b> or <b>JNDI name</b> fields.</p> <p>Click the <b>wlng.datasource - 2</b> tab to continue</p>
<b>RAC TAB FOUR</b> <b>wlng.datasource - 2</b>	<p>Use this tab to make adjustments in the second transactional datasource. You should enter the same values as in wlng.datasource-1 with the following exceptions:</p> <ul style="list-style-type: none"> <li>• <b>DBMS name</b>: The name of the second database instance you created in <a href="#">Chapter 4, “Installing the Database”</a>. This is the same name you used in <b>wlng.localTX.datasource-2</b>.</li> <li>• <b>DBMS host</b>: Where the second database instance is located. This is the same value you used in <b>wlng.localTX.datasource-2</b></li> </ul> <p>Click <b>Next</b> to continue</p>
<b>Review WebLogic Domain</b>	<p>Use this window to confirm that your domain is configured as it needs to be. The <b>Summary View</b> dropdown menu provides multiple views of the configuration</p> <p>Click <b>Next</b> to continue</p>

In this window...	Perform the following action...
<b>Create WebLogic Domain</b>	Use this window to change the domain name or the location in which the domain's configuration files will be stored. Usually the default values are acceptable. Make sure the installing user has write permission for this directory.  Click <b>Create</b> to generate your domain
<b>Creating Domain</b>	A status bar indicates the progress of domain creation.  When <b>Domain Created Successfully!</b> appears, click <b>Done</b> to exit the <b>Configuration Wizard</b> .

## The Console Configuration Wizard

Use the following instructions if you wish to use the Console-based Configuration Wizard to configure WebLogic Server for Network Gatekeeper. Specific instructions on launching the Wizard by platform are found after the next section.

### Using the Console Configuration Wizard

The Console Configuration Wizard is designed to mimic as closely as possible the choices available in the GUI version, but in a completely text-based form. The following images give you a sense of the way the Console Screen displays certain types of workflow choices.



Figure 7-5 Select Options

```

C:\ Command Prompt (2) - config -mode=console
<----- BEA WebLogic Configuration Wizard ----->
Configure Managed Servers:

Add or delete configuration information for Managed Servers. A typical
production environment has one or more Managed Servers. Each Managed Server
is an instance of WebLogic Server used to host enterprise applications.

 | Name* | Listen address | Listen port | SSL listen port | SSL enabled |
 |-----|-----|-----|-----|-----|
 1 | WLNG_NT1 | 127.0.0.1 | 8011 | N/A | false |
 2 | WLNG_AT1 | 127.0.0.1 | 8021 | N/A | false |

Use above value or select another option:
 1 - Add
 2 - Modify
 3 - Delete

Enter option number to select OR [Exit][Previous][Next]> 1

```

In Figure 7-5 above, the top of the *current* screen is marked by the BEA WebLogic Configuration Wizard banner. The top part of the screen displays the set of configuration parameters that can be set - in this case, configuration information for Managed Servers. The center of the screen indicates the range of options - in this case, Add a server, Modify a server, or Delete a server. The bottom part of the screen prompts for the user input that is available in this screen - in this case

```
Enter option number or [Exit][Previous][Next]>
```

Here the user can either enter an option (indicated by number) or choose to use one of the standard navigation commands. In this case, option 1, Add a server, has been chosen. The entry is confirmed by pressing the Enter key:

Figure 7-6 Add a Managed Server

```
c:\ Command Prompt (2) - config -mode=console
Enter option number to select OR [Exit][Previous][Next]> 1

<----- BEA WebLogic Configuration Wizard ----->
Configure Managed Servers:

Add or delete configuration information for Managed Servers. A typical
production environment has one or more Managed Servers. Each Managed Server
is an instance of WebLogic Server used to host enterprise applications.

 Name* Listen address Listen port SSL listen port SSL enabled

1 WLNG_NT1 127.0.0.1 8011 N/A false
2 WLNG_AT1 127.0.0.1 8021 N/A false

Enter name for a new OR [Exit][Previous][Next]> WLNG_NT2
```

In [Figure 7-6](#), the bottom of the screen displays the user input prompt:

```
Enter name for new OR [Exit][Previous][Next]>
```

The name for the new Managed Server to be added, WLNG\_NT2, has been filled in. Again the input is confirmed by pressing the Enter key.

Figure 7-7 Finish work on the selected item

```

CA Command Prompt (2) - config -mode=console

Configure Managed Servers:

Add or delete configuration information for Managed Servers. A typical
production environment has one or more Managed Servers. Each Managed Server
is an instance of WebLogic Server used to host enterprise applications.

 | Name* | Listen address | Listen port | SSL listen port | SSL enabled |
 |-----|-----|-----|-----|-----|
 1 | WLNG_NT1 | 127.0.0.1 | 8011 | N/A | false
 2 | WLNG_AT1 | 127.0.0.1 | 8021 | N/A | false
 3->| WLNG_NT2 | 127.0.0.1 | 7001 | N/A | false

Use above value or select another option:
 1 - Modify "Name"
 2 - Modify "Listen address"
 3 - Modify "Listen port"
 4 - Modify "SSL enabled"
 5 - Done

Enter option number to select OR [Exit][Previous][Next]> 5

```

In [Figure 7-7](#) the new Managed Server, WLNG\_NT2, has been added. Note the right arrow (->) next to the new Server's name. This indicates that this is the selected item, and that any options chosen will affect that item. To finish with this server and select another item in the list, enter 5 - Done and the Enter key.

Figure 7-8 Indicate your next configuration task

```
c:\ Command Prompt (2) - config -mode=console
<----- BEA WebLogic Configuration Wizard ----->
Configure Managed Servers:

Add or delete configuration information for Managed Servers. A typical
production environment has one or more Managed Servers. Each Managed Server
is an instance of WebLogic Server used to host enterprise applications.

 Name* Listen address Listen port SSL listen port SSL enabled

1 WLNG_NT1 127.0.0.1 8011 N/A false
2 WLNG_AT1 127.0.0.1 8021 N/A false
3-> WLNG_NT2 127.0.0.1 7001 N/A false

Use above value or select another option:
1 - Add
2 - Modify
3 - Delete
4 - Discard Changes

Enter option number to select OR [Exit][Previous][Next]> 2
```

In Figure 7-8 the center section again presents you with work options. In this case, additional modifications need to be done. The user enters 2 for Modify and then Enter to confirm.

Figure 7-9 Select the configuration to modify

```

CA\ Command Prompt (2) - config -mode=console
Enter option number to select OR [Exit][Previous][Next]> 2

<----- BEA WebLogic Configuration Wizard ----->

Configure Managed Servers:

Add or delete configuration information for Managed Servers. A typical
production environment has one or more Managed Servers. Each Managed Server
is an instance of WebLogic Server used to host enterprise applications.

 Name* Listen address Listen port SSL listen port SSL enabled

1 WLNG_NT1 127.0.0.1 8011 N/A false
2 WLNG_AT1 127.0.0.1 8021 N/A false
3-> WNLG_NT2 127.0.0.1 7001 N/A false

Enter row number to modify OR [Exit][Previous][Next]> 1

```

In Figure 7-9, the user input prompt asks which item needs modification. The row number of the Managed Server WLNG\_NT1 is chosen. Once Enter is pressed, WLNG\_NT1 will be the selected item.

There are a number of different options throughout the Wizard process, but in general they all follow this same pattern: the top of the screen indicates what is being configured; the center of the screen indicates the range of options; and the bottom of the screen prompts for user input.

## Launch the Console Configuration Wizard - Windows

To start the Console Configuration Wizard:

1. Log in to the target system
2. Open a command prompt window
3. Go to the `\common\bin` subdirectory. For example:  

```
cd c:\<beahome_dir>\wlng400\common\bin
```
4. At the prompt, type `config -mode=console` and Enter

5. The Configuration Wizard starts in console mode

## Launch the Console Configuration Wizard - UNIX/Linux

To start the Console Configuration Wizard:

- a. Log in to the target system
- b. Open a command shell window
- c. Go to the `/common/bin` subdirectory. For example:  

```
cd c:<beahome_dir>/wlng400/common/bin
```
- d. Invoke the following script:  

```
sh config.sh -mode=console
```
- e. The Configuration Wizard starts in console mode

## Respond to the Prompts

To create your domain, respond to the prompts in each section by entering the number associated with your choice, pressing Enter, or typing next (or n) to accept the current selection. For instructions on responding to the prompts during installation, see the following table.

**Note:** If you are going to be using any CORBA based functionality that in one way or another connects to a machine other than your own, you should not use the value “localhost” in any of your configuration choices.

The right arrow (->) indicates the value currently selected. To quit the Configuration Wizard, enter Exit in response to any prompt. To review or change your selection, enter Previous at the prompt.

**Note:** Instead of typing complete words when you want to enter [Exit], [Previous], and [Next], you can use the following one-letter shortcuts: x, p, and n, respectively.

On this screen...	Perform the following action...
<b>Welcome</b>	Select 1, <b>Create a new WebLogic Domain</b> . Type n to continue.
<b>Select a Domain Template</b>	<p>There are six standard domain templates included with Network Gatekeeper. Select the number of the template you wish to use:</p> <ol style="list-style-type: none"> <li data-bbox="586 758 1310 884"> <p><b>1. WLNG Basic HA configuration 9.0.0.0</b></p> <p>Creates a domain with two servers, each with an AT and an NT instance and a database. Replication of the database must be set up separately. This configuration can be expanded later in the process</p> </li> <li data-bbox="586 894 1310 1020"> <p><b>2. WLNG Domain with Access and Network Clusters 9.0.0.0</b></p> <p>Creates a basic distributed domain, with a two instance Access cluster and a two instance Network cluster. This configuration can be expanded later in the process.</p> </li> <li data-bbox="586 1031 1310 1178"> <p><b>3. WLNG Domain with Access, Network and PRM Clusters 9.0.0.0</b></p> <p>Creates a basic distributed domain, with a two instance Access cluster and a two instance Network cluster and adds the Partner Relationship Management interfaces. This configuration can also be expanded later in the process</p> </li> <li data-bbox="586 1188 1310 1398"> <p><b>4. WLNG Domain with Access, Network and PRM Clusters with Oracle RAC Configuration 9.0.0.0</b></p> <p>Creates a basic distributed domain, with a two instance Access cluster and a two instance Network cluster and adds the Partner Relationship Management interfaces. This configuration can also be expanded later in the process. It also creates the additional datasources required for use with an Oracle RAC based installation</p> </li> <li data-bbox="586 1409 1310 1587"> <p><b>5. WLNG Domain with Access and Network Clusters with Oracle RAC Configuration</b></p> <p>Creates a basic distributed domain, with a two instance Access cluster and a two instance Network cluster. This configuration can be expanded later in the process. It also creates the additional datasources required for use with an Oracle RAC based installation</p> </li> <li data-bbox="586 1598 1310 1724"> <p><b>6. Basic Weblogic Network Gatekeeper Domain 9.0.0.0</b></p> <p>Creates an all-in-one domain, with Access and Network Tier and Administration on a single machine. This configuration is common for development machines.</p> </li> </ol>

## Configuring the Domain for Network Gatekeeper

On this screen...	Perform the following action...
<b>Configure Administrator Username and Password</b>	<p>Specify the username of the main Administrative user. This name is used to boot the Administration Server and connect to it. For setup purposes, you should use “weblogic”. User names are case sensitive. Do not use commas or any characters in the following comma-separated list:</p> <p style="text-align: center;">\t, &lt; &gt;, #,  , &amp;, ?, ( ), { }</p> <p>Specify the password for the Administrative user. For setup purposes, you should use “weblogic”. You can change it later. A valid password is a string of at least 8 case-sensitive characters. The password value is encrypted. Re-enter the password.</p> <p>Optionally, enter a login description for this username.</p> <p>Type n to continue.</p>
<b>Domain Mode Configuration</b>	<p>Select the appropriate mode configuration for this domain.</p> <ul style="list-style-type: none"><li>• <b>Development Mode</b></li><li>• <b>Production Mode</b></li></ul> <p><b>Note:</b> If you select <b>Production Mode</b>, you should not enable SSL unless you have a trusted key. For more information on startup modes, see the <a href="#">Choose the Startup Mode</a> section in <i>Creating WebLogic Domains Using the Configuration Wizard</i>.</p> <p>Type n to continue.</p>
<b>Java SDK Selection</b>	<p>Select the appropriate SDK for your installation.</p> <p>Type n to continue.</p>
<b>Choose Configuration Option</b>	<p>Select 1, <b>Yes</b>. For more information on the values you might enter in the following screens in the general context of WebLogic Server, see the <a href="#">Customizing the Environment</a> chapter in <i>Creating WebLogic Domains Using the Configuration Wizard</i></p> <p>Type n to continue.</p>
<b>Configure the Administration Server</b>	<p>Modify the <code>Listen</code> address from <code>host-admin.bea.com</code> to the IP address or DNS name of the host in your installation that is to serve as the Administration Server. Make any other changes that are necessary.</p> <p>Type n to continue.</p>



On this screen...	Perform the following action...
<p><b>Configure Managed Servers</b></p> <p>This window contains no configuration information if you selected Create Basic Domain</p>	<p>Use this window to add or change connection information for Managed Servers. Each Managed Server is an instance of WebLogic Server. If you are configuring a basic distributed domain based on the <code>wlmg-access-network-domain.jar</code> or the <code>wlmg-access-network-prm-domain.jar</code> templates, some information is already filled in. Modify the <code>Listen</code> addresses of each of your instances. You can add more Managed Server instances you wish to include in your domain here, or you can use the Management Console later.</p> <p><b>Note:</b> The <code>Listen</code> address and <code>Listen port</code> per server combination must be unique. The values for the <code>Listen</code> address can include alphanumeric characters, dots [<code>.</code>], and dashes [<code>-</code>] only.</p> <p>Type <code>n</code> to continue.</p>
<p><b>Configure Clusters</b></p> <p>This window contains no configuration information if you selected Create Basic Domain</p>	<p>Use this window to modify connection information for clusters. Clusters are logical representations that for reasons of scalability and high availability allow multiple Managed Servers to act as if they were a single host. The <code>wlmg-access-network-domain.jar</code> templates create two clusters, with each cluster containing two Managed Server instances. The <code>wlmg-access-network-prm-domain.jar</code> templates add a third, PRM, cluster. Modify the <code>Cluster</code> address values to reflect the changes you made in the previous screen. Values should be comma-delimited, with no spaces. You can also change the <code>Multicast</code> address if your installation requires it.</p> <p>Type <code>n</code> to continue.</p>
<p><b>Assign Servers to Clusters</b></p> <p>This window does not appear if you selected Create Basic Domain</p>	<p>Use this window to add any additional Managed Servers you created in the <b>Configure Managed Servers</b> window to clusters configured in the <b>Configure Clusters</b> window. Select the number of the appropriate cluster, then indicate which servers you would like to assign by selecting or unselecting them, using the appropriate number. When you have finished making your assignments, hit <code>Enter</code> to accept your choices.</p>

On this screen...	Perform the following action...
<p><b>Configure Machines</b></p> <p>This window contains no configuration information if you selected Create Basic Domain</p>	<p>Use this window to add or change information about <b>Machines</b>. In the context of WebLogic Server, a <b>Machine</b> is the logical representation of the system that hosts one or more WebLogic Server instances, for the purposes of starting and stopping remote servers using the Node Manager. In a domain, machine definitions identify a particular, physical piece of hardware and are used to associate a computer with the Managed Servers it hosts.</p> <p>For more information about the various fields, see the <a href="#">Configure Machines</a> section in <i>Creating WebLogic Domains Using the Configuration Wizard</i></p> <p>Type n to continue.</p>
<p><b>Configure Unix Machines</b></p> <p>This window contains no configuration information if you selected Create Basic Domain</p>	<p>Use this window to add or change information about UNIX <b>Machines</b>. In the context of WebLogic Server, a <b>Machine</b> is the logical representation of the system that hosts one or more WebLogic Server instances. In a domain, machine definitions identify a particular, physical piece of hardware and are used to associate a computer with the Managed Servers it hosts. The Administration Server and the Node Manager application use this machine definition to start remote servers.</p> <p>For more information about the various fields, see the <a href="#">To configure UNIX machines</a> section in <i>Creating WebLogic Domains Using the Configuration Wizard</i></p> <p>Type n to continue.</p>
<p><b>Assign Servers to Machines</b></p> <p>This window does not appear if you selected Create Basic Domain</p>	<p>Use this window to assign Servers (either Administration or Managed) to their appropriate Machines, if necessary. Select the number of the appropriate Machine, then indicate which servers you would like to choosing to change by selecting or unselecting them, using the appropriate number. When you have finished making your assignments, hit Enter to accept your choices.</p> <p>Type n to continue.</p>

On this screen...	Perform the following action...
<p><b>Configure JDBC Datasource</b></p> <p>This window appears if you are installing a non-RAC based Gatekeeper.</p>	<p>Use this window to make adjustments to the Network Gatekeeper JDBC datasources if you are using a non-RAC database. A JDBC datasource contains a pool of database connections that are created when the data source instance is created—when it is deployed or targeted, or at server startup. Applications look up a datasource on the JNDI tree, and then request a connection.</p> <p>You must modify the <b>wlng.localTX.datasource</b>, used for local transactions, and the <b>wlng.datasource</b>, used for transactionally-based database access.</p> <p>Type <b>1</b> and Enter to Modify, and then the number of the datasource you wish to configure. Type Enter to continue.</p> <p><b>In a non-RAC configuration, you must configure two datasources using the two options in this window.</b></p>
<p><b>wlng.datasource</b></p> <p><b>Non-RAC Option 1</b></p>	<p>Use this window to make adjustments to the Network Gatekeeper transactional JDBC data source. A JDBC data source contains a pool of database connections that are created when the data source instance is created—when it is deployed or targeted, or at server startup. Applications look up a data source on the JNDI tree, and then request a connection.</p> <p>To edit the data source, enter <b>1 - Modify</b> and then <b>1 -&gt; wlng.datasource</b>. Typically, fields you may need to edit include:</p> <ul style="list-style-type: none"> <li>• <b>2 - Database type:</b> The default is Oracle</li> <li>• <b>3 - Driver:</b> The driver appropriate to the database type</li> <li>• <b>4 - DBMS name:</b> The name of the database you created in <a href="#">Chapter 4, “Installing the Database”</a></li> <li>• <b>5 - DBMS host:</b> Where the database is located</li> <li>• <b>6 - DBMS port:</b> The port for contacting the database.</li> <li>• <b>7 - User name:</b> The Network Gatekeeper user name you created when you installed the database</li> <li>• <b>8 - Password:</b> The Network Gatekeeper password you created when you installed the database (it will not be echoed on the screen)</li> <li>• <b>9 - Confirm user password:</b> Re-enter the password</li> <li>• <b>12 - Supports global transactions</b> should be selected, and either <b>Two phase commit</b> (Oracle) or <b>Emulate two phase commit</b> (MySQL) should be selected</li> </ul> <p><b>Note:</b> Do not change the <b>Name</b> or <b>JNDI name</b> fields.</p> <p>Type <b>n</b> to continue.</p>

---

On this screen...	Perform the following action...
<b>wlng.localTX.datasource Non-RAC Option 2</b>	Use this window to make adjustments in the data source for local transactions. The values should be the same as in <b>wlng.datasource</b> with these differences: <ul style="list-style-type: none"><li>• <b>3 - Driver:</b> If you are using Oracle, you should select the non-XA driver for this data source</li><li>• <b>12 - Supports global transactions:</b> Select <b>4 - Unspecified</b></li></ul> Type <b>n</b> to continue.
<b>Configure JDBC Datasources</b>  This window appears if you are installing a RAC based Gatekeeper.	Use this window to make adjustments to the Network Gatekeeper JDBC datasources if you are using a RAC database. A JDBC datasource contains a pool of database connections that are created when the data source instance is created—when it is deployed or targeted, or at server startup. Applications look up a datasource on the JNDI tree, and then request a connection.  Use this window to modify each of the necessary datasources in order. The two <b>wlng.localTX.datasources</b> are used for local transactions. The two <b>wlng.datasources</b> are used for transactionally-based database access.  Type <b>1</b> and Enter to Modify, and then the number of the datasource you wish to configure. Type Enter to continue.  <b>In a RAC-based configuration, you must configure four datasources (two of each type) using the four options in this window.</b>

---

On this screen...	Perform the following action...
<b>wlng.localTX.datasourc-1</b> <b>RAC Option 1</b>	<p>Use this window to make adjustments to the first datasource for local transactions. A JDBC data source contains a pool of database connections that are created when the data source instance is created—when it is deployed or targeted, or at server startup. Applications look up a data source on the JNDI tree, and then request a connection.</p> <p>Enter the option you would like to modify by number. Typically, fields you may need to edit include:</p> <ul style="list-style-type: none"> <li>• <b>4 - DBMS name:</b> The name of the first database instance you created in <a href="#">Chapter 4, “Installing the Database”</a></li> <li>• <b>5 - DBMS host:</b> Where the first database instance is located</li> <li>• <b>6 - DBMS port:</b> The port for contacting the first database instance.</li> <li>• <b>7 - User name:</b> The Network Gatekeeper user name you created when you installed the database</li> <li>• <b>8 - Password:</b> The Network Gatekeeper password you created when you installed the database (it will not be echoed on the screen)</li> <li>• <b>9 - Confirm user password:</b> Re-enter the password</li> <li>• <b>12 - Supports global transactions:</b> Select <b>4 - Unspecified</b></li> </ul> <p><b>Note:</b> Do not change the <b>Name</b> or <b>JNDI name</b> fields.</p> <p>When you have completed your edits, type Enter to return to the selection window.</p>
<b>wlng.localTX.datasourc-2</b> <b>RAC Option 2</b>	<p>Use this window to make adjustments to the second datasource for local transactions. You should enter the same values as in wlng.localTX.datasourc-1 with the following exceptions:</p> <ul style="list-style-type: none"> <li>• <b>4 - DBMS name:</b> The name of the second database instance you created in <a href="#">Chapter 4, “Installing the Database”</a>.</li> <li>• <b>5 - DBMS host:</b> Where the second database instance is located</li> <li>• <b>6 - DBMS port:</b> The port for contacting the second database instance.</li> </ul> <p>When you have completed your edits, type Enter to return to the selection window.</p>

---

On this screen...	Perform the following action...
<b>wlng.datasource-1</b> <b>RAC Option 3</b>	<p>Use this window to make adjustments to the first transactional datasouce. A JDBC data source contains a pool of database connections that are created when the data source instance is created—when it is deployed or targeted, or at server startup. Applications look up a data source on the JNDI tree, and then request a connection.</p> <p>Enter the option you would like to modify by number. Typically, fields you may need to edit include:</p> <ul style="list-style-type: none"><li>• <b>4 - DBMS name:</b> The name of the first database instance you created in <a href="#">Chapter 4, “Installing the Database”</a>. This should be the same value you entered for <b>wlng.localTX.datasource-1</b>.</li><li>• <b>5 - DBMS host:</b> Where the first database instance is located. This should be the same value you entered for <b>wlng.localTX.datasource-1</b>.</li><li>• <b>6 - DBMS port:</b> The port for contacting the first database instance. This should be the same value you entered for <b>wlng.localTX.datasource-1</b>.</li><li>• <b>7 - User name:</b> The Network Gatekeeper user name you created when you installed the database</li><li>• <b>8 - Password:</b> The Network Gatekeeper password you created when you installed the database (it will not be echoed on the screen)</li><li>• <b>9 - Confirm user password:</b> Re-enter the password</li><li>• <b>12 - Supports global transactions and Two phase commit</b></li></ul> <p><b>Note:</b> Do not change the <b>Name</b> or <b>JNDI name</b> fields.</p> <p>When you have completed your edits, type Enter to return to the selection window.</p>

---

On this screen...	Perform the following action...
<b>wlmg.datasource-2</b> <b>RAC Option 4</b>	<p>Use this window to make adjustments to the second transactional datasource. You should enter the same values as in <b>wlmg.datasource-1</b> with the following exceptions:</p> <ul style="list-style-type: none"> <li>• <b>4 - DBMS name:</b> The name of the second database instance you created in <a href="#">Chapter 4, “Installing the Database”</a>. This should be the same value you entered for <b>wlmg.localTX.datasource-2</b>.</li> <li>• <b>5 - DBMS host:</b> Where the second database instance is located. This should be the same value you entered for <b>wlmg.localTX.datasource-2</b>.</li> <li>• <b>6 - DBMS port:</b> The port for contacting the second database instance. This should be the same value you entered for <b>wlmg.localTX.datasource-2</b>.</li> </ul> <p>When you have completed your edits, type Enter to return to the selection window. When you have completed making all your changes to datasources, type n to accept the changes you made and move on to the next task.</p>
<b>Select the target domain directory for this domain</b>	Use this window to change the location on the Administration Server in which the domain’s configuration files will be stored. Usually the default value is acceptable. The installing user must have write permission on this directory.
<b>Edit Domain Information</b>	Use this screen to edit the domain’s name. Usually the default value is acceptable.
<b>Creating Domain</b>	<p>A status bar indicates the progress of domain creation.</p> <p><b>Domain Created Successfully!</b> appears when the process is complete, and the <b>Configuration Wizard</b> exits.</p>

## The WebLogic Scripting Tool scripts

Use the following instructions if you wish to use scripts and the WebLogic Scripting Tool to configure WebLogic Server for Network Gatekeeper. The WebLogic Scripting Tool (WLST) is a command-line scripting interface that system administrators and operators can use to monitor and manage WebLogic Server instances and domains. The WLST scripting environment is based on the Java scripting interpreter, Jython. For more general information on WLST, see [WebLogic Scripting Tool](#), part of the WebLogic Server documentation set.

**Caution:** WLST is a powerful, flexible tool, and has a learning curve associated with its effective use. If you do not know how to use WLST and do not wish to spend the time

to become familiar with it, consider using one of the Configuration Wizards to set up your domains instead.

## Set Up Your Environment

You must set a number of environment variables for WLST to run properly. To simplify this, the Network Gatekeeper installer provides shell/cmd scripts that must be run before WLST is invoked. The scripts are found at `<beahome>/wlng400/server/bin`. There are both `setWLSEnv.sh` and `setWLSEnv.cmd` versions available. It is usually enough simply to run the appropriate script, but some shells may require using `source`, as in:

```
source <beahome>/wlng400/server/bin/setWLSEnv.sh
```

If this still does not work, you may need to change shells. There have been some issues reported with `bash`, particularly on HP-UX machines. If you are having problems with your shell, change to an `sh` shell before running the script.

## Choose from the Provided Scripts

Network Gatekeeper provides six possible WLST scripts from which you can select. The scripts are found in the `<beahome>/wlng400/common/templates/scripts/wlst/` directory:

- `basic-wlng-ha.py` uses the domain template `basic-wlng-ha-domain.jar` for its basic setup. This creates a domain with two servers, each with an AT and an NT instance and a database. Replication of the database must be set up separately.
- `wlng-cluster.py` uses the domain template `wlng-domain.jar` for its basic setup. This creates an all-in-one domain typical of development environments.
- `access-network-cluster.py` uses the domain template `wlng-access-network-domain.jar` for its basic setup. This creates a domain with separate Access and Network clusters.
- `access-network-cluster-prm.py` uses the domain template `wlng-access-network-prm-domain.jar` for its basic setup. This creates a domain with separate Access, Network, and PRM clusters.
- `access-network-prm-rac-cluster.py` uses the domain template `wlng-access-network-prm-rac-domain.jar` for its basic setup. This creates a domain with separate Access, Network, and PRM clusters with the additional datasources that a RAC installation requires.



- `access-network-rac-cluster.py` uses the domain template `wlmg-access-network-rac-domain.jar` for its basic setup. This creates a domain with separate Access and Network clusters with the additional datasources that a RAC installation requires.

## Edit the Scripts

- If you are using `wlmg-cluster.py` to set up a development machine, you can use the script as is.
- If you are using one of the other five scripts, you must set a few variables found at the top of the script, and, in some situations, edit a few other values. See [Multi-cluster standard](#)
- If you are using one of the two other scripts **and** you also wish to create additional servers, you must make more complex edits. See [Multi-cluster with additions](#)
- If you wish to keep any communication services from ever being deployed, you may edit whichever script you are using. See [Keep unused communication services from being deployed](#).

**Note:** It is also possible to remove communication services after the initial deployment. See the System Administration Guide for information on accomplishing this.

## Multi-cluster standard

If you are setting up the standard version of one of the multi-cluster domains, only a few variables need to be set at the top of the script, in the section called **Configuration (INPUT) Parameters**.

**Listing 7-1 The Configuration (INPUT) Parameters section from `access-network-rac.py`**

```

=====
Configuration (INPUT) Parameters
=====

listen address input parameters
example: hostname can be DNSName or IPAddress

AdminServerListenAddress = "host-admin.bea.com"

```

## Configuring the Domain for Network Gatekeeper

```
AdminServerListenPort = 7001
NT1ServerListenAddress = "host-nt1.bea.com"
NT1ListenPort = 8001
NT2ServerListenAddress = "host-nt2.bea.com"
NT2ListenPort = 8001
AT1ServerListenAddress = "host-at1.bea.com"
AT1ListenPort = 8001
AT2ServerListenAddress = "host-at2.bea.com"
AT2ListenPort = 8001

NTClusterAddress = "host-nt1.bea.com:8001,host-nt2.bea.com:8001"
ATClusterAddress = "host-at1.bea.com:8001,host-at2.bea.com:8001"

NTClusterMultiCastAddress = '237.0.0.101'
NTClusterMultiCastPort = 8050
ATClusterMultiCastAddress = '237.0.0.102'
ATClusterMultiCastPort = 8050

DataSource Settings

RAC Node-1 Settings

RACNode1URL = "SETME_URL"

RAC Node-2 Settings

RACNode2URL = "SETME_URL"
```

```
Database settings

OracleXADriver = "SETME_XADRIVER"
OracleNonXADriver = "SETME_nonXADRIVER"
DBUser = "SETME_USER"
DBPassword = "SETME_PASSWORD"
```

---

### Make these edits

1. Set the Listen Address and Listen Port for the Administration Server, the two Access Tier servers, and the two Network Tier servers.
  - Replace the `host*.bea.com` values with either the DNSName or the IP Address of the appropriate servers.
  - Replace the Listen Port values as necessary.
2. Fill in the appropriate Listen Address:Port combinations to assign the servers to the appropriate clusters. The entry should be comma delimited, with no spaces.
3. Fill in the appropriate Multicast Addresses per cluster.
4. Set the appropriate URLs for each of the RAC instances (only in RAC scripts)
5. Set the appropriate values for the transactional (XA) and localTX(nonXA) datasources (in RAC scripts).

Set the appropriate values for the `wlmg.datasource` (in non-RAC scripts)

6. Set the appropriate values for the `wlmg.localTX.datasource`. The values should be non-XA.(only in non-RAC scripts)

The following changes may need to be made in other sections of the script:

7. If you want to be able to use the Administration Console and Node Manager to start remote servers, you must change the `NodeManager ListenAddress` values in the Configure

Managed Servers section. To do so edit the following line for each managed server `set('ListenAddress', 'localhost')` to change localhost to the correct ListenAddress.

## Multi-cluster with additions

If you want to use the WLST script to set up a multi-cluster domain and, at the same time, to add additional servers, you must first make the same edits as in the [Multi-cluster standard](#) case. You must also make the following additional kinds of edits. Exactly which edits you need to make depends on how your particular installation is set up.

WLST in offline mode, which is the mode that Network Gatekeeper scripts use, can access and update only those configuration objects that have been previously persisted to a configuration file. All the provided WLST scripts create this configuration file automatically as they run, but each adds only those objects that are specified in the domain templates. If you need to add more configuration objects, such as additional Managed Servers or Machines, you must add statements to the script to create them before you can configure them.

**Note:** You can also add servers and machines using the Administrative Console GUI after you set up your core domain. This is a simpler way of accomplishing the same goal.

## Create Machines

For example, if you need to add additional Machines, you must create them in the script *before* you assign Managed Servers to them.

Comment Section	Code to add	Value
<b>Configure managed servers</b>	<pre>cd('/') create('new_Machine_5', 'Machine') cd('Machine/new_Machine_5') create('new_Machine_5', 'NodeManager') )</pre>	Add as many of these statements as you need, replacing <code>new_Machine_5</code> with whatever value is appropriate

## Create Managed Servers

*After* you create the Machine, you can assign Managed Servers to them. You can also add new Managed Servers. In the code below, the new Managed Server `WLNG_NT3` is created and then assigned to `new_Machine_5`, created above.

Comment Section	Statement to edit	Value
<b>Configure managed servers</b>	<pre>cd('/') create('WLNG_NT3', 'Server') cd('Server/WLNG_NT3') set('ListenPort', 8001) set('ListenAddress', 'myserver5') set('Machine', 'new_Machine_5')</pre>	Create new servers as needed, and set the ListenAddress

### Set NodeManager Listen Address

You must also add a section to configure any new Machine (and its Node Manager) being added.:

Comment Section	Statement to add	Value
<b>Configure managed servers</b>	<pre>cd('/') cd('Machine/new_Machine_5') set('Name', 'new_Machine_5') set('Address', 'new_Machine_5') cd('NodeManager/new_Machine_5') set('ListenAddress', 'myserver5') set('ListenPort', 5556)</pre>	One section per added Machine.

### Assign New Managed Servers to the appropriate cluster

You must assign any newly-created managed servers to their appropriate cluster by adding an “assign server” line

Comment Section	Statement to add	Value
<b>Configure a cluster and assign the Managed Servers to that cluster.</b>	<pre>cd('/') [standard] assign('Server', 'WLNG_NT3', 'Cluster', 'WLNG_NT_Cluste r')</pre>	One line per added Managed Server.

## Keep unused communication services from being deployed

It is always possible to remove communication services after the initial deployment of Network Gatekeeper, if you know that your installation is not using one or more communication services and you prefer that they not be deployed at all in your system, you can add the following information to your configuration script. Remember that all communication services consist of two .ear files, an Access Tier version and a Network Tier version. You will need to address both files to completely remove the communication service.

For example, to keep the PX 3.0 Third Party Call communication service from being deployed, add the following to your script:

```

Unassign applications to target

cd('/')
unassign('Application', 'wlng_at_third_party_call_px30#4.0 ', 'Target',
'WLNK_AT_Cluster')
unassign('Application', 'wlng_nt_third_party_call_px30#4.0 ', 'Target',
'WLNK_NT_Cluster')
```

## Run the Script

Once you have made all necessary changes to the script, run it using the following command:

```
java weblogic.WLST <appropriate-version>.py
```

## Where to Go From Here

You must now:

- Complete post-installation
- Configure the Network Gatekeeper software

See [Chapter 8, “Completing Post-Installation”](#) for more information.

# Completing Post-Installation

This chapter describes the tasks you may have to complete after installing WebLogic Network Gatekeeper and configuring the WebLogic Server domain for use with it. These include

- [Complete Post-Install Tasks](#)
- [Configure Network Gatekeeper](#)

## Complete Post-Install Tasks

You may not need to do all of the following tasks depending on the type of installation with which you are working.

### Create JMS Servers for Any Additional NT Servers

If you have added any Network Tier servers to the initial two provided by the domain template, you must edit the configuration to add support for the EDR Service. Each server in the Network Tier requires its own JMS server in order for the EDR Service to work correctly.

For the following task, you must start the Administrative Server in your WebLogic Network Gatekeeper installation so that you can use the Management Console to make the necessary adjustments. Unless you are setting up an all in one domain, you will also need to start at least one Network Tier server (this prevents a null pointer error in initializing the Console). For more information on using the Console, please see the [System Administration Guide](#), a separate document in this set. The following is an overview only:

1. Start WebLogic Network Gatekeeper on the Administrative Server.

## Completing Post-Installation

In a command prompt window, go to the domain\bin directory. In the default installation, this would be <beahome>\user\_projects\domains\wlng-domain\bin. Run the startWebLogic script.

The Administrative Server will load.

2. Watch the command prompt window as the server loads. Wait until the prompt indicates that the server is in state RUNNING.

3. Start a Network Tier server.

In a separate command prompt window, go to the domain\bin directory. See step 1 above. Enter the following:

```
startManagedWebLogic networknode0-0 t3://adminhost:7001
```

replacing the first parameter with the name of the NT server and the second with the URL of the Administration Server.

**Note:** You can also log into the NT server, and run the startManagedWebLogic script from there.

4. Watch the command prompt window as the NT server loads. Wait until the prompt indicates that the server is in state RUNNING.

5. Once both servers are in state RUNNING, bring up the Administrative Console.

In your browser, enter the following address: http://<hostname>:<port>/console, where <hostname> is the Administrative Server and port is the ListenAddress assigned during Domain Configuration. The default value is 7001.

6. Login using your login credentials.

If this is the first time you have logged in, you should use username: weblogic; password weblogic. There are instructions in the *System Administration Guide* on changing these values once your system is fully configured.

7. Before you can make any changes using the Console, you must click **Lock & Edit** in the **Change Center** on the left side of the window.

(In the example below, assume that the additional server WLNG\_NT3 was created.)

In the Management Console:

1. Select **Home > Services > Messaging > JMS Servers > New**
2. In the Name text box, enter the name of the JMS Server. In our example, this would be JMSServer-NT3



3. In the **Target** dropdown menu, select the appropriate server. In our example, this would be `WLNG_NT3`
4. Click **Finish**
5. Click **Activate Changes**

## Install Java Cryptography Extension (JCE) Unlimited Strength Jurisdiction Policy Files, if desired

WebLogic Network Gatekeeper 4.0 does *not* require the JCE files, but you can install them if you wish to use JCE providers. For more information, please see the [Using the nCipher JCE Provider with WebLogic Server](#) section in *Securing WebLogic Server*.

## Install and configure the necessary SIP integration software

If your installation is using SIP connectivity, there are Network Gatekeeper files that must be installed in your WebLogic SIP Server.

1. If necessary, install the SIP Server using the supplied installer, either into its own domain or into the same domain as the Network Gatekeeper Network Tier, but in a different cluster. For more information on installing the SIP Server, see [Installing BEA WebLogic SIP Server](#)

**Note:** If the SIP Server is in a separate domain, trust must be configured between the two domains. You must do this on both sides. Because WLSS runs on version 9.2 of WebLogic Server and Gatekeeper runs on version 10.0, you need to follow the instructions per the server you are configuring. For version 10.0 information can be found in [Enable trust between domains](#) in the *WLS Administration Console Online Help*. For version 9.2, instructions can be found in [Enable trust between domains](#) in that version. You will need to restart after you have completed.

2. Locate the three files you need to install on your SIP server. They are stored in the `wlss` directory of your domain directory. In the default installation this is `<bea_home>\user_projects\domains\wlng-domain\wlss\.`
3. Copy the first file, `wlng-integration-management.jar`, to `<beahome>\user_projects\domains\<sip-domain>\lib\`
4. Copy the second file, `wlng-integration-console-ext.war`, to `<beahome>\user_projects\domains\<sip-domain>\console-ext\`

5. Create a custom resource description file and place it in

`<beahome>\user_projects\domains\<sip-domain>\config\custom\`. [Listing 8-1](#) below is a sample of what you must create, although the contents will in each case be installation specific, and not all elements may exist in all files. All of these values can be changed using the Console Extension during the Network Gatekeeper configuration process. The possible elements for the file are as follows:

- `wlng-jndi-url`: The WLNG Network Tier JNDI lookup URL
- `wlng-jndi-username`: The WLNG Network Tier JNDI lookup username
- `wlng-jndi-password`: The WLNG Network Tier JNDI lookup password
- `call-notification-plugin-name`: The WLNG Network Tier call notification plugin RMI home interface JNDI name (you should not change the name shown in the sample unless you are developing a custom traffic path).
- `call-direction-plugin-name`: The WLNG Network Tier call direction plugin RMI home interface JNDI name (you should not change the name shown in the sample unless you are developing a custom traffic path).
- `third-party-call-manager`: The class name for the third party call manager component (you should not change the name shown in the sample unless you are customizing the third party call control implementation at the WLSS)
- `third-party-call-servlet`: The SIP servlet name for the third party call control (you should not change the name shown in the sample unless you are customizing the third party call control implementation at the WLSS)
- `third-party-call-controller-uri`: The controller SIP URI that is used to establish the third party call. By default, the value is "None", where no controller URI is used to establish the call. If this field is set to a URI other than "None", the call appears to the callee as if it comes from the controller URI rather than from the caller's URI.
- `presence-sip-subscribe-expiry-seconds`: Specifies a suggested lifetime for a subscription.

**Note:** This value might not be accepted by the Presence Server. In that case the Presence Server sets the expiry value it has chosen, which is the value that will be used, in the first NOTIFY sent to the WLSS plugin.

- `presence-sip-subscribe-target-address`: The address to which the subscribe messages are sent, which can be the presence server itself or a proxy. The value is a sip:URI.

**Listing 8-1 Sample custom resource description file**

---

```

<?xml version='1.0' encoding='UTF-8'?>

 <xt-resource xmlns="http://www.bea.com/wlcp/wlng/wlng-integration"
 xmlns:sec="http://www.bea.com/ns/weblogic/90/security"
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns:wls="http://www.bea.com/ns/weblogic/90/security/wls">

 <wlng-jndi-url>t3://hostname:7001</wlng-jndi-url>

 <wlng-jndi-username>weblogic</wlng-jndi-username>

 <wlng-jndi-password>weblogic</wlng-jndi-password>

 <call-notification-plugin-name>com.bea.wlcp.wlng.plugin.callnotification
 .ejb.CallNotificationPluginEJBHome</call-notification-plugin-name>

 <call-direction-plugin-name>com.bea.wlcp.wlng.plugin.callnotification
 .ejb.CallDirectionPluginEJBHome</call-direction-plugin-name>

 <third-party-call-manager>com.bea.wlcp.integration.tpc.impl.
 ThirdPartyCallManagerImpl</third-party-call-manager>

 <third-party-call-servlet>third-party</third-party-call-servlet>

 <third-party-call-controller-uri>sip:myname@localhost</third-party-call
 -controller-uri>

 <presence-sip-subscribe-expiry-seconds>60</presence-sip-subscribe-expiry
 -seconds>

 <presence-sip-subscribe-target-address>sip:172.23.81.52:5060</presence-sip-s
 ubscribe-target-address>

 </xt-resource>

```

---

6. The third provided file, `wlss-int.ear`, should be deployed as a J2EE application in the SIP server.
7. Edit the `<beahome>\user_projects\domains\<sip-domain>\config\config.xml` file. You must add the following stanza:

**Listing 8-2 Custom resource stanza for config.xml**

---

```
<custom-resource>
 <name>wlng-integration</name>
 <target>SIPCluster</target>
 <descriptor-file-name>custom/wlng-integration.xml
 </descriptor-file-name>
 <resource-class>
 com.bea.wlcp.integration.management.descriptor.resource.XTResource
 </resource-class>
 <descriptor-bean-class>
 com.bea.wlcp.integration.management.descriptor.bean.XTResourceBean
 </descriptor-bean-class>
</custom-resource>
```

---

8. Change the `target` element to point to the server name or cluster name on which your WebLogic SIP Server is installed. Change the `descriptor-file-name` element to point to the custom resource description file you created in step 5) above.

9. Update the WLSS system classpath with a Gatekeeper specific security module, `wlng-security.jar`. There are multiple ways to do this, but one way would be:

a. Copy the security module, found in

```
<bea_home>\user_projects\domains\wlng-domain\wlss\wlng-security.jar
to the SIP server,
<WLSS_HOME>\sipserver31\server\lib\wlss\wlng-security.jar.
```

b. Update the `commEnv.cmd(sh)` script, found in

```
<bea_home>\sipserver31\common\bin\commEnv.cmd(sh) to include the security
module:
```

```
set
WEBLOGIC_CLASSPATH=%PATCH_CLASSPATH%;%JAVA_HOME%\lib\tools.jar;%WL_HOME%
%\server\lib\weblogic_sp.jar;%WL_HOME%\server\lib\weblogic.jar;%SIP_CLA
SSPATH%;%WL_HOME%\server\lib\webservices.jar;%SIP_CLASSPATH%;%WL_HOME%\
server\lib\wlss\wlng-security.jar
```

Once these files are installed and configured, a `WLNG Integration` console extension will show up in the Domain Structure left navigation box when you run the WebLogic Server Administration Console on the SIP installation. Any further changes and modifications you may

need to do can be done using this tool. For more information on these changes, see the “Configuring WebLogic SIP Server Integration” in the *System Administrator’s Guide*, another document in this set.

## Run Migration Scripts, if upgrading

Some aspects of the way Network Gatekeeper stores information in the database have changed with this release. If you are upgrading from a 3.0 installation, you must run a set of migration scripts to upgrade your current data to 3.0 formats.

**Note:** Backing up your database before running these scripts is recommended.

The scripts include:

- [Database Migration](#)
- [PRM Data Migration](#)
- [Administrative and PRM User Migration](#)

**Note:** These scripts are located in the `migration.zip` file, which is found in `<bea_home>/wlng400/common/templates/scripts`.

### Database Migration

**WARNING:** Run this script before doing either of the other two migrations.

To run the script:

1. Create a `migration` directory under the `scripts` directory.
1. Unzip the `migration.zip` file into the `migration` directory.
2. Copy the jar file containing the driver for your database (`ojdbc14.jar` for Oracle, `mysql.jar` for MySQL) into the `lib` directory that is extracted when you unzip the migration file. In the default installation this would be `<bea_home>/wlng400/common/templates/scripts/migration/lib`.
3. Make sure the environment variables `JAVA_HOME` and `ORACLE_HOME` (for ORACLE DB) or `MYSQL_HOME` (for MySQL) are set properly.
4. Run the script with the required parameters, as follows (replace CAPS with appropriate values):

```
db_migration.sh <DB TYPE [oracle | mysql]> <DB HOST> <DB NAME | ORACLE
SERVICE NAME> <DB USERID> <PASSWORD>
```

## PRM Data Migration

PRM data must also be migrated. You can choose to migrate a single Service Provider, Application, or Application Instance account, or to migrate them as a group by type.

1. The script is part of the set in the `migration.zip` file that you unzipped in the first task.
2. The driver jar file must be in the `lib` directory just as it was in the first task.
3. Run the script with the required parameters, as follows:

- To migrate all SP accounts:

```
runPrmMigration.sh <DB type [oracle/mysql]> <DB HOST> <DB PORT ><DB
NAME/Oracle Service Name> <DB USERID> <PASSWORD> sp %
```

- To migrate a single SP account using the SPID:

```
runPrmMigration.sh <DB type [oracle/mysql]> <DB HOST> <DB PORT ><DB
NAME/Oracle Service Name> <DB USERID> <PASSWORD> sp [SPID]
```

- To migrate all APP accounts:

```
runPrmMigration.sh <DB type [oracle/mysql]> <DB HOST> <DB PORT ><DB
NAME/Oracle Service Name> <DB USERID> <PASSWORD> app %
```

- To migrate a single APP account using the APPID:

```
runPrmMigration.sh <DB type [oracle/mysql]> <DB HOST> <DB PORT ><DB
NAME/Oracle Service Name> <DB USERID> <PASSWORD> app [APPID]
```

- To migrate all APP Instances:

```
runPrmMigration.sh <DB type [oracle/mysql]> <DB HOST> <DB PORT ><DB
NAME/Oracle Service Name> <DB USERID> <PASSWORD> appInst %
```

- To migrate a single APP Instance using the appInstanceId:

```
runPrmMigration.sh <DB type [oracle/mysql]> <DB HOST> <DB PORT ><DB
NAME/Oracle Service Name> <DB USERID> <PASSWORD> appInst [appInstanceId]
```

## Administrative and PRM User Migration

Administrative and PRM users must also be migrated.

1. The script is part of the set in the `migration.zip` file that you unzipped in the first task.
2. The driver jar file must be in the `lib` directory just as it was in the first task.
3. Run the script with the required parameters, as follows:
  - To migrate all PRM users:

```
runPrmMigration.sh <DB type [oracle/mysql]> <DB HOST> <DB PORT ><DB
NAME/Oracle Service Name> <DB USERID> <PASSWORD> prmuser %
```

- To migrate Administrative users:

```
runMgmtUserMigration.sh <DB type [oracle/mysql]> <DB HOST> <DB PORT ><DB
NAME/Oracle Service Name> <DB USERID> <PASSWORD>
```

## Configure Network Gatekeeper

Once you have installed the software, configured the domain, and completed any necessary post-installation steps, you can proceed to configuring Network Gatekeeper itself. The specifics for doing these tasks are presented in the *System Administrator's Guide* and *Managing Accounts and SLAs*, but the following list gives you a general outline of the initial tasks you must perform:

- Create administrative user accounts
- Configure Network Gatekeeper Container Services
- Configure communication services
- Configure connections with OSA/Parlay gateways, as necessary
- Set up and configure Web Services Security and OAM (JMX) Security
- Configure the Partner Relationship Management interfaces, as necessary
- Configure geo-redundancy, if necessary
- Create service provider and application accounts
- Create service provider and application SLAs
- Create network SLAs
- Configure and deploy any backwards-compatible (Access, deprecated container services, etc.) modules as necessary. For more information, see the *Retired container services* section of the “[Deployment model](#)” chapter of the *System Administrator's Guide*, a separate document in this set.

## For Further Information

To learn more about installing WebLogic Server products in general, and about the installer program in particular in regard to WebLogic Server, see the WLS [Installation Guide](#).

## Completing Post-Installation