Installing and Patching WebLogic Server

3

Objectives

After completing this lesson, you should be able to:

- Determine supported configurations for WebLogic Server
- Install WebLogic Server
- Apply a patch to WebLogic Server

ORACLE

Determining Supported System Configurations

1. Know your system (operating system, processor).
2. Download the *System Requirements and Supported Platforms* spreadsheet for the version of FMW you plan to use.
3. Start on the "FMW on WLS - System" sheet. Find your operating system in the "OS Version" column.
   – Which version of FMW? Which JDK? What DB and version?

Installation Type	Version Supported	Processor Type	OS Version	Oracle FM 32/64 bit	JDK Vendor Version 11*g*R1 (11.1.1.6)	JDK 32/64 bit	Oracle Database
ALL	11*g*R1 (11.1.1.6+)	x64	Oracle Linux 6 (UL1+)	64	Oracle JDK 1.7.0_02+	64	…Oracle 11.2.0.1+

ORACLE

Ensuring Your System Meets Requirements

1. Ensure that your system meets the minimum requirements for WebLogic Server:

    –   At least a 1 GHz CPU

    –   Sufficient disk space (~3.9 GB for a complete installation)

        –   At installation, 2.5 x 3.9 GB of temporary space is needed.

    –   Sufficient memory (1 GB of RAM is minimum, 2 GB is recommended)

2. If using other FMW components, ensure that your system meets their added requirements:

    –   For example, Oracle SOA Suite requires a dual-core processor 1.5 GHz or better, 15 GB of disk space, and a minimum of 2 GB of physical memory with 4 GB of available memory.

ORACLE

When Not All FMW Is the Same Version

1. If not everything is the same version, download the *System Requirements and Supported Platforms* spreadsheet for the WebLogic Server version you plan to use.

2. Start on the "System" sheet. Find your operating system in the "OS Version" column.

Installation Type	Version Supported	Processor Type	OS Version	Oracle FM 32/64 bit	JDK Vendor Version 12*c* (12.1.2.0.0)	JDK 32/64 bit	Oracle Database
Oracle WebLogic Server	12*c* (12.1.2.x)	x64	Oracle Linux 5 (UL6+)	64	Oracle JDK 1.7.0_02+	64	… Oracle 11.2.0.3+

3. Use the "WLS - WebServer" sheet for the OHS version.

4. Use the "Id&Access" sheet for OID & OAM versions.

ORACLE

WebLogic Server Installers

- Generic installer
  - JAR file
  - Choose the generic installer with the features you require:
    - WebLogic Server Core
    - Fusion Middleware Core
  - Requires you to first download and install an appropriate Java Development Kit (JDK) or Java Runtime Environment (JRE)
    - Choose a supported one for your operating system.

- ZIP installer
  - A ZIP file
  - JDK included
 - Only good for 32-bit operating systems
  - Cannot be used for production

ORACLE

Generic Installers

- The WebLogic Server core installer (`wls_generic.jar`) contains:
  - WebLogic Server
  - Coherence
  - Administrative tools
  - Database support
  - Examples
- The FMW core installer (`wls_jrf_generic.jar`) contains all of the above, plus:
  - Repository Creation Utility (RCU)
  - Java Required Files (JRF) and Enterprise Manager

ORACLE

What Is Oracle Coherence?

Oracle Coherence:

- Is a JVM process
- Provides a distributed, in-memory data caching solution
- Offers high performance and scalability
- Is based on a cluster of cache servers
- Automatically distributes (partitions) cached data across the Coherence cluster
- Can be installed and managed independently or as part of a WebLogic Server domain
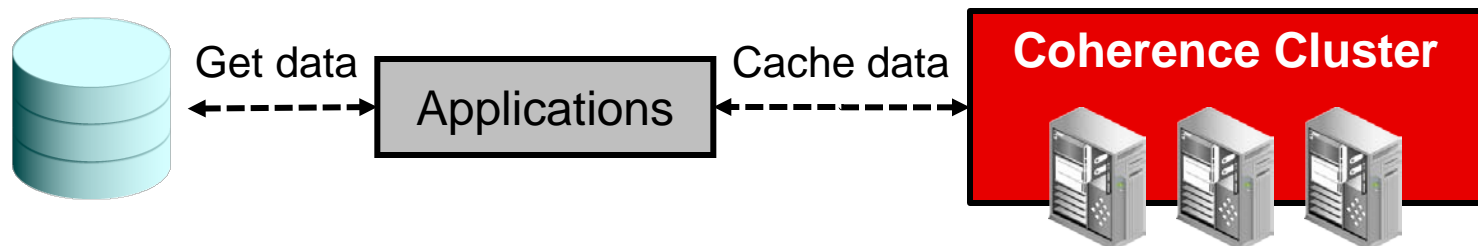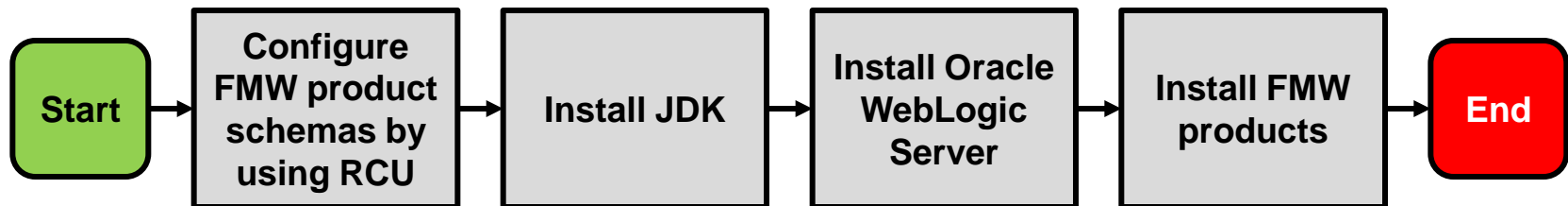
ORACLE

FMW Installation Flow

Installing Oracle Fusion Middleware products generally involves the following steps:

1. Create the database schemas required by the FMW products being installed by using the Oracle Repository Creation Utility (RCU).

2. Install the JDK.

3. Install Oracle WebLogic Server.

4. Install other Oracle Fusion Middleware products.

> If WebLogic Server is used "stand alone" (without FMW components running on it), only steps 2 and 3 are needed.

```
Start → Configure FMW product schemas by using RCU → Install JDK → Install Oracle WebLogic Server → Install FMW products → End
```

ORACLE

WebLogic Server Installation Modes

- Graphical:

  – An interactive, GUI-based method of installation

- Silent:

  – A noninteractive, command-line method of installation

  – Request silent mode with the `-silent` option

  – Installation configuration information must be placed in a file and referred to with the `-responseFile` option

```
$> java -d64 -jar wls_generic.jar
                      -silent
                      -responseFile /path/file.rsp
```

ORACLE

Installing WebLogic Server on Linux (Graphical Mode)

1. Determine that your system is supported and meets requirements.

2. Log in as the user you want to use for installation. (Do *not* use `root`.)

3. Download the appropriate JDK tarball file and the WebLogic Server generic installer.

4. Install the JDK.

   A. Create a directory for the JDK.

   B. Extract the JDK archive file into the new JDK directory.

```
$> mkdir /u01/app/fmw/jdk
$> mv /download/name.tar.gz /u01/app/fmw/name.tar.gz
$> cd /u01/app/fmw/jdk
$> tar -zxvf name.tar.gz
```

ORACLE

Installing WebLogic Server on Linux (Graphical Mode)

5. Run the WebLogic Server generic installer.

    A. Set file permissions.

    B. Set the `PATH` to include the `bin` directory of the JDK.

    C. Run the JAR installer.

```
$> umask 027
$> export JAVA_HOME=/u01/app/fmw/jdk
$> export PATH=$JAVA_HOME/bin:$PATH
$> cd /download
$> java -d64 -jar wls_generic.jar
```

ORACLE

Installing WebLogic Server on Linux (Graphical Mode)

6. On the Welcome screen, click **Next.**

7. On the Installation Location screen, select a location and click **Next.**

If this is the first Oracle product installed, the Specify Oracle Inventory Directory screen appears before the Welcome screen. Enter `<MW_HOME>/oraInventory` and click **Next**.
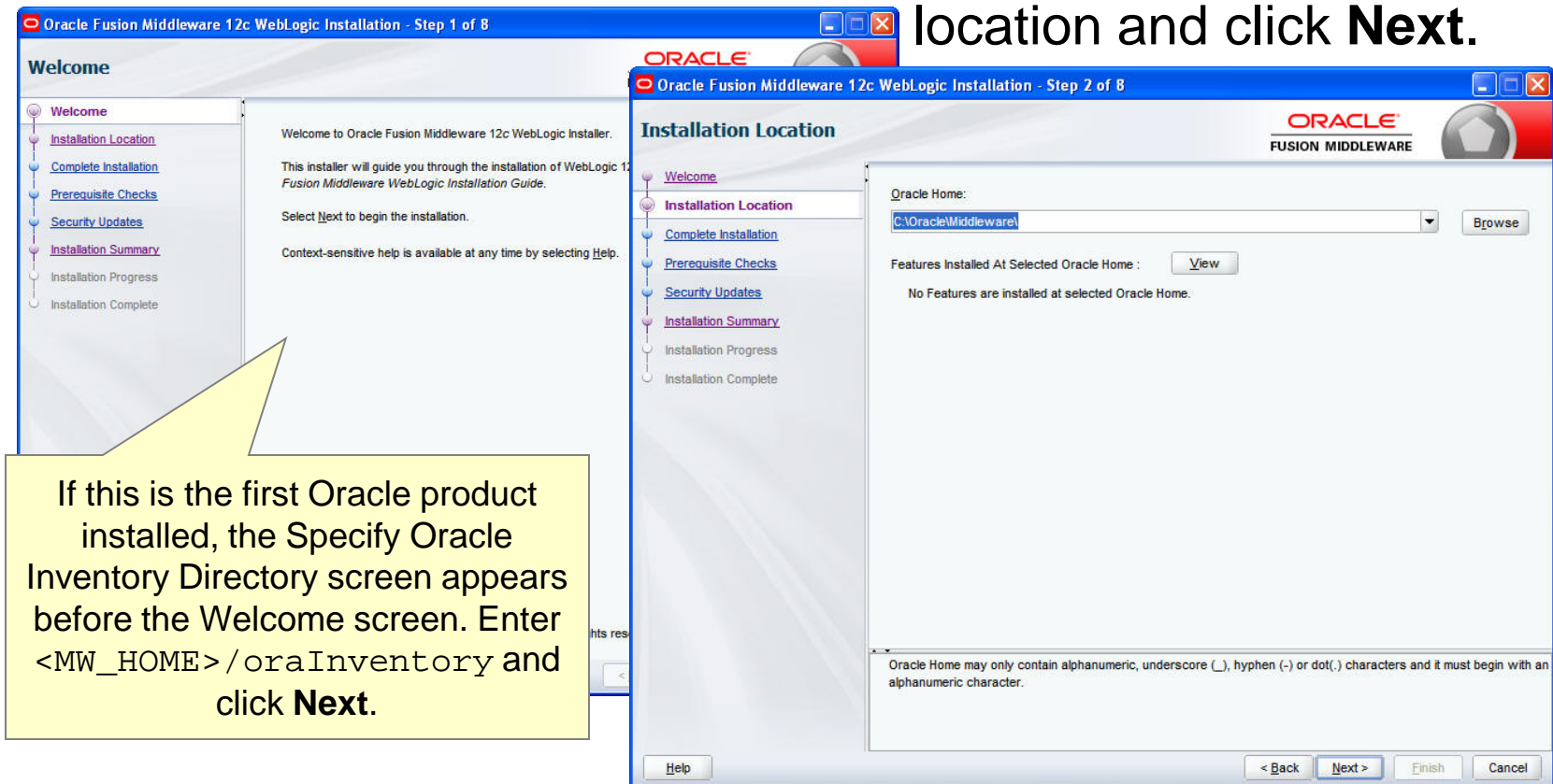
Installing WebLogic Server on Linux (Graphical Mode)

8. On the Installation Type screen, select a type and click **Next.**

9. On the Prerequisite Check screen, at 100% success, click **Next.**

ORACLE
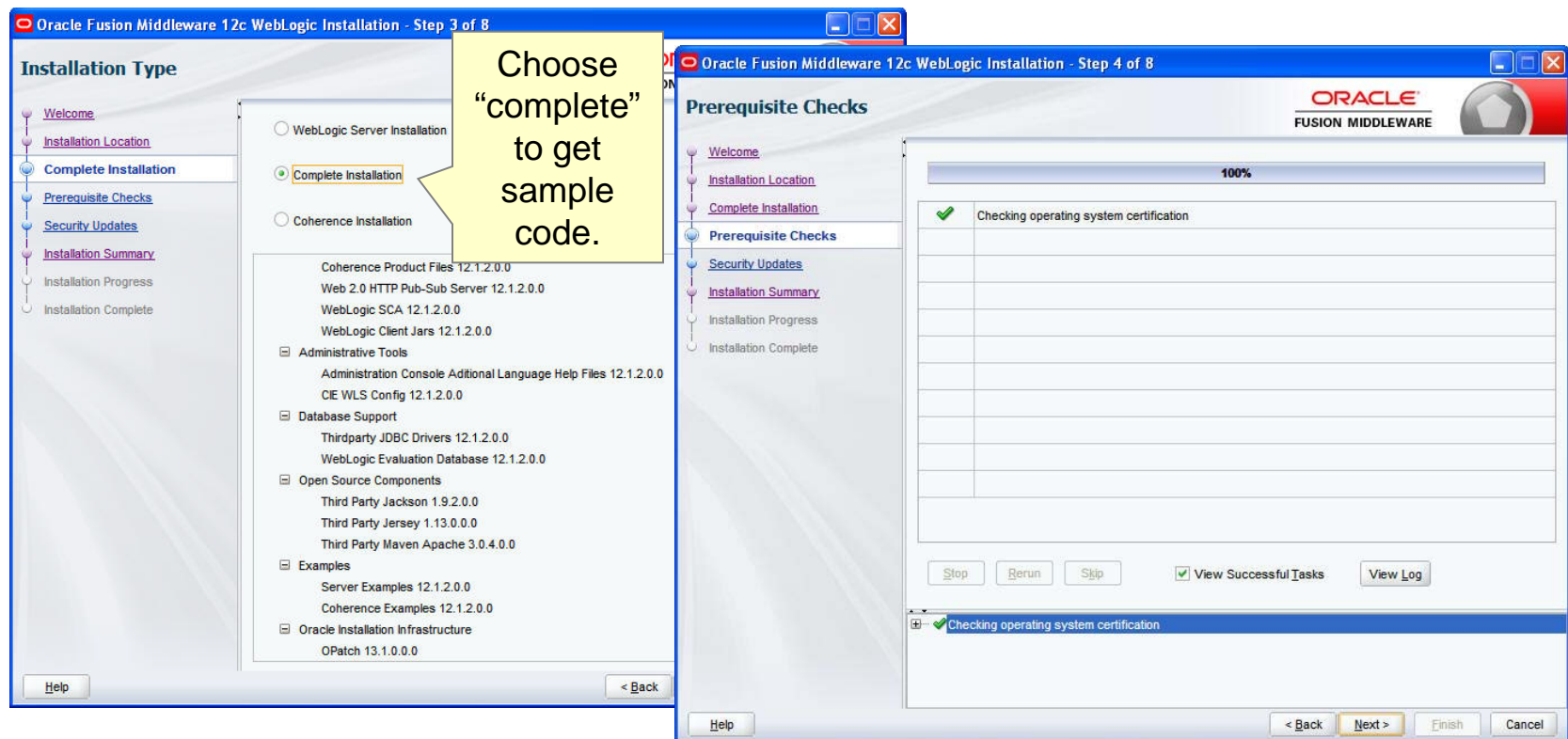
Installing WebLogic Server on Linux (Graphical Mode)

10. On the Security Updates screen, enter a support email and password, and click **Next.**

11. On the Installation Summary screen, click **Install.**
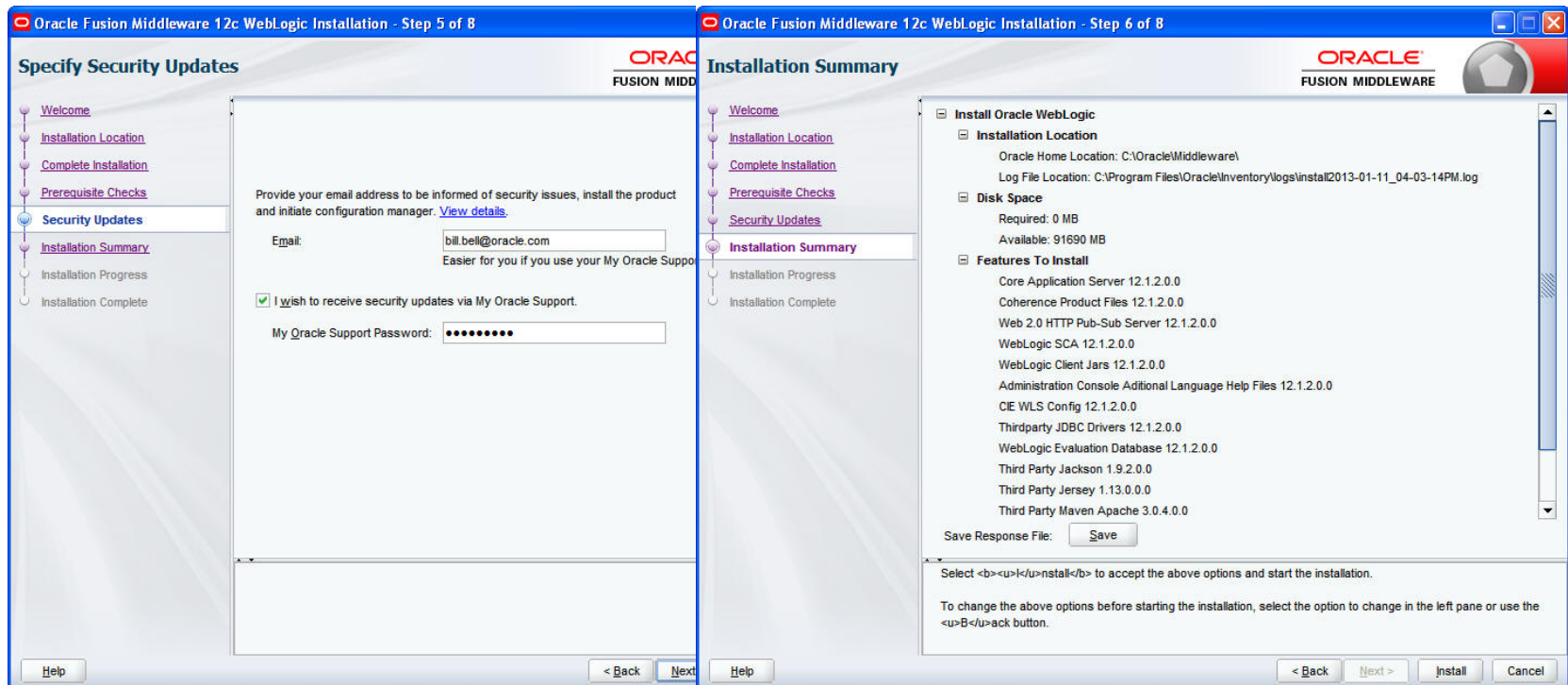
Installing WebLogic Server on Linux (Graphical Mode)

12. On the Installation Progress screen, at 100%, click **Next.**

13. On the Installation Complete screen, click **Finish.**

ORACLE
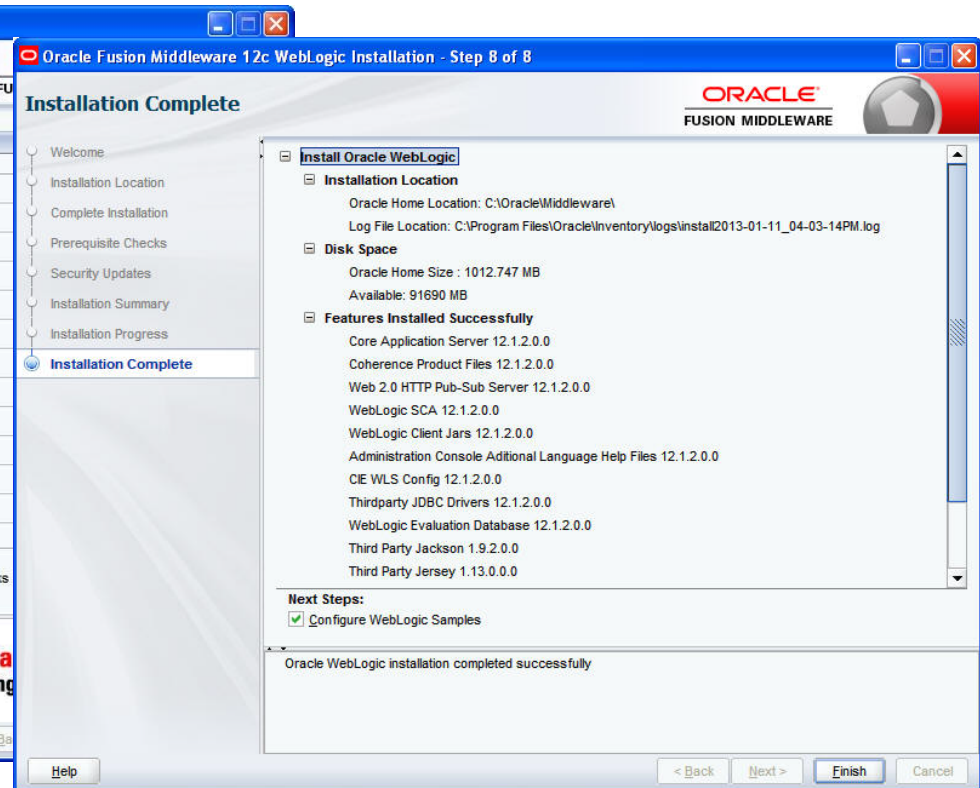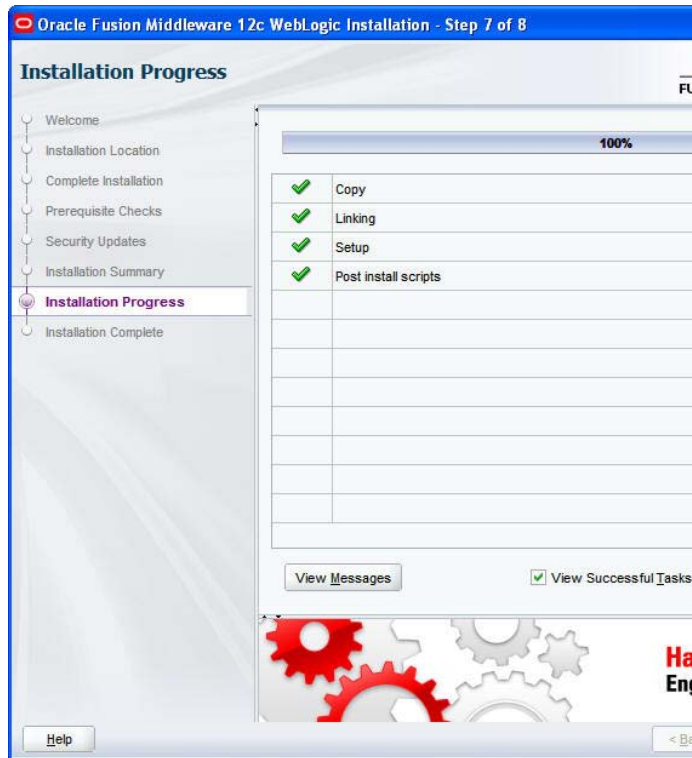
Installation Problems

- The "prerequisite check" of the installer checks if the operating system meets requirements and lists any issues.
  - If you have determined your system is supported ahead of time, there should be no problems.
- If the generic installer does not come up, ensure that you have set the `JAVA_HOME` environment variable to the correct JDK and added the `bin` directory under it to the `PATH`.
- If you are having problems installing, create a verbose log file during the installation with the `-logFile` option:

```
$> java -d64 -jar wls_generic.jar -logFile /path/fn.log
```
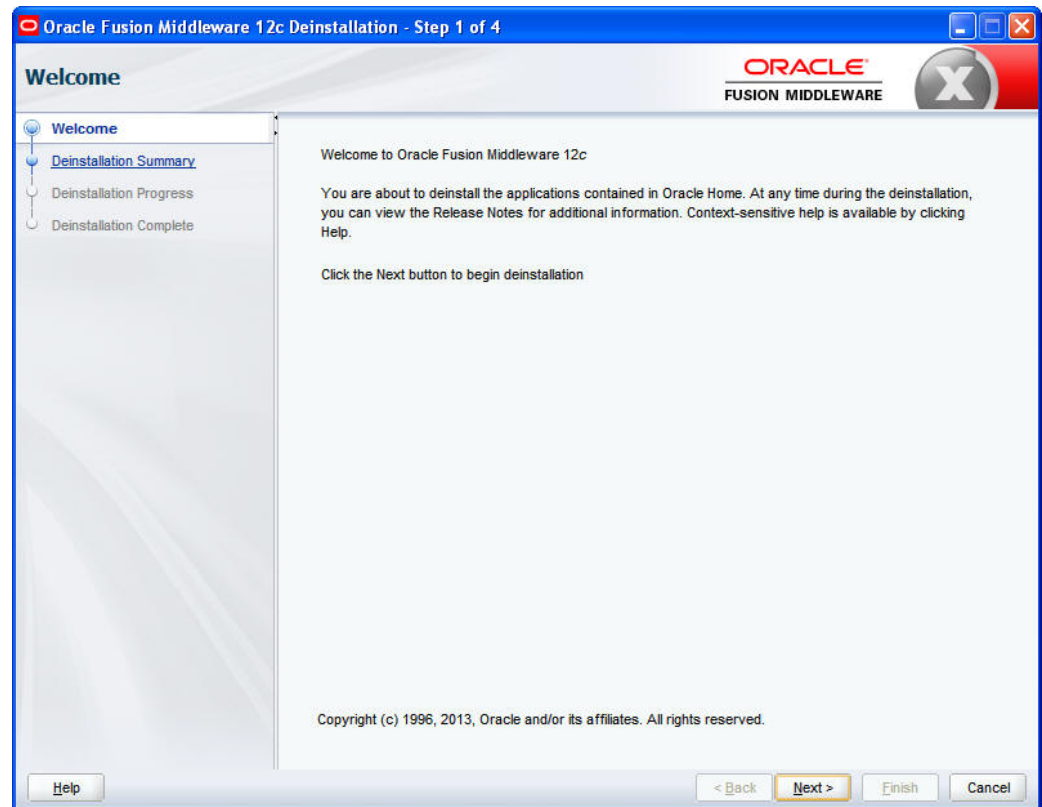
ORACLE

Sample Installation Directory Structure

Directory	Description
📂 u01/app	Oracle base
🗀 db11g	Database home
📂 fmw	Middleware home
🗀 coherence	Coherence home
🗀 jdk1.7.0_10	Java home
🗀 oracle_common	Oracle common home
🗀 web	Web home (OHS)
🗀 wlserver	WebLogic Server home

The Oracle Home you enter in the installer.(It is the "oracle home" of Fusion Middleware.)

Each Fusion Middleware product installed has its own "oracle home" directory under Middleware home. WebLogic Server's "oracle home" is here.

ORACLE

Uninstalling WebLogic Server

1. Shut down any running servers.

2. Run the uninstall script: `<MW_HOME>/ oui/bin/ deinstall.sh.`

3. Go through the screens, selecting the components to uninstall. By default, all are selected.

ORACLE

Applying Patches by Using OPatch

- Follow these steps to apply a patch:
    1. Contact Oracle Support.
    2. Check for existing patches.
    3. Obtain the necessary patch from Oracle Support.
    4. Determine the Oracle home.
    5. Read the patch README file.
    6. Apply the patch by using OPatch.
    7. Based on the patch README file, perform postinstallation steps.

    > OPatch is a utility to help you apply software patches.

- OPatch example:

```
$> opatch apply -jdk $JAVA_HOME
```

- You can use the OPatch `rollback` command to remove an existing patch.

ORACLE

Quiz

The ZIP installer is OK to use for production installation in a 32-bit system.

a. True
b. False

ORACLE

Quiz

The name of the WebLogic home directory is _____.

a. `wlserver_12.1`

b. `wlserver_12c`

c. `wlserver_12.1.2`

d. `wlserver`

ORACLE

Summary

In this lesson, you should have learned how to:

- Determine supported configurations for WebLogic Server
- Install WebLogic Server
- Apply a patch to WebLogic Server

ORACLE

Practice 3-1 Overview: Installing WebLogic Server

This practice covers the following topics:

- Installing the JDK
- Installing WebLogic Server

ORACLE

Practice 3-2 Overview: Patching WebLogic Server

This practice covers using OPatch to patch WebLogic Server.

ORACLE