

**Oracle® Configuration Manager**

Companion Distribution Guide

Release 10.0.1

**E14501-02**

July 2009

Oracle Configuration Manager Companion Distribution Guide Release 10.0.1

E14501-02

Copyright © 2009, Oracle and/or its affiliates. All rights reserved.

Primary Author: Jacqueline Gosselin

Contributor: Tina Boisvert, Guru Bv, Nestor Dutko, Nirav Gandhi, Magesh Swamy Thangiah Marthandam, Nitin Mittal, Shivaguru Nathan, Nathan Nellapalli, Sumit Pal, Prajna Parida, Venkatesh Ranganathan, Joshua Solomin

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this software or related documentation is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, duplication, disclosure, modification, and adaptation shall be subject to the restrictions and license terms set forth in the applicable Government contract, and, to the extent applicable by the terms of the Government contract, the additional rights set forth in FAR 52.227-19, Commercial Computer Software License (December 2007). Oracle USA, Inc., 500 Oracle Parkway, Redwood City, CA 94065.

This software is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications which may create a risk of personal injury. If you use this software in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure the safe use of this software. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software in dangerous applications.

Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

This software and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

---

---

# Contents

<b>Preface</b> .....	v
Audience .....	v
Documentation Accessibility .....	v
Related Documents .....	vi
Conventions .....	vi
<b>1 Introduction</b>	
1.1 What Is the Companion Distribution Kit? .....	1-1
1.1.1 Mass Deployment Utility .....	1-1
1.1.2 Oracle Support Hub Utility .....	1-2
1.2 How to Install the Companion Distribution Kit .....	1-2
<b>2 Mass Deployment</b>	
2.1 What Is Mass Deployment? .....	2-1
2.1.1 Prerequisites .....	2-2
2.2 Installing and Upgrading Mass Deployment .....	2-3
2.3 Configuring Mass Deployment .....	2-4
2.4 Running Mass Deployment .....	2-4
2.4.1 password.csv File .....	2-4
2.4.2 secure_password Utility .....	2-5
2.4.2.1 Help for secure_password Utility .....	2-6
2.4.2.2 Arguments for secure_password Utility .....	2-6
2.4.3 remote_op Utility .....	2-6
2.4.3.1 Help for remote_op Utility .....	2-7
2.4.3.2 Arguments for remote_op Utility .....	2-7
2.4.3.3 Results of Running remote_op Utility .....	2-7
2.4.4 Credentials .....	2-7
2.4.5 Input File .....	2-8
2.4.6 Mass Deployment Output File .....	2-11
2.4.7 Log File .....	2-12
2.4.8 Restrictions .....	2-12
2.5 Upgrading Mass Deployment .....	2-12
2.6 Troubleshooting - Errors That May Occur .....	2-14

### 3 Oracle Support Hub

3.1	What Is the Support Hub? .....	3-1
3.1.1	Prerequisites .....	3-2
3.2	Installing the Support Hub .....	3-2
3.2.1	OC4J Deployment .....	3-2
3.2.1.1	Preparing to Deploy .....	3-2
3.2.2	WebLogic Deployment .....	3-3
3.2.2.1	Preparing to Deploy .....	3-3
3.2.2.2	Using the Deployment Script.....	3-3
3.3	Managing the Support Hub.....	3-4
3.4	Configuring Oracle Configuration Manager Instances to Use the Support Hub.....	3-6
3.4.1	Restrictions .....	3-7
3.5	Troubleshooting - Errors That May Occur .....	3-7
3.6	Common Questions .....	3-7

### A Third-Party Licenses

A.1	Apaches Common CSV 2.0.....	A-1
A.2	Args4j 2.0.9.....	A-4
A.3	JSch 0.1.32.....	A-4

### B Setting Up SSH (SSHD) Server on Microsoft Windows

---

---

# Preface

The Companion Distribution kit is a mechanism by which to provide Oracle Configuration Manager to Oracle installations where it is not yet installed and configured. The Companion Distribution kit contains two utilities: Oracle Configuration Manager Mass Deployment and Oracle Support Hub.

## Audience

This document is intended for administrators who use Oracle software.

## Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible to all users, including users that are disabled. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Accessibility standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For more information, visit the Oracle Accessibility Program Web site at <http://www.oracle.com/accessibility/>.

### Accessibility of Code Examples in Documentation

Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

### Accessibility of Links to External Web Sites in Documentation

This documentation may contain links to Web sites of other companies or organizations that Oracle does not own or control. Oracle neither evaluates nor makes any representations regarding the accessibility of these Web sites.

### Deaf/Hard of Hearing Access to Oracle Support Services

To reach Oracle Support Services, use a telecommunications relay service (TRS) to call Oracle Support at 1.800.223.1711. An Oracle Support Services engineer will handle technical issues and provide customer support according to the Oracle service request process. Information about TRS is available at <http://www.fcc.gov/cgb/consumerfacts/trs.html>, and a list of phone numbers is available at <http://www.fcc.gov/cgb/dro/trsphonebk.html>.

## Related Documents

For more information, see the following documents in the Oracle Configuration Manager Release 10.3.1 documentation set:

- *Oracle Configuration Manager Installation and Administration Guide*
- *Oracle Configuration Manager Quick Start Guide*

## Conventions

The following text conventions are used in this document:

<b>Convention</b>	<b>Meaning</b>
<b>boldface</b>	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

---

---

# Introduction

Oracle Configuration Manager is a standalone utility, distributed with Oracle products, used to collect product configuration information and upload it to the Oracle repository. When the product configuration data is uploaded on a regular basis, customer support representatives can analyze this data and provide better service to customers.

Oracle Configuration Manager may not be installed in customer environments because of restricted connectivity to the Internet or it may not have been bundled with the product at the time of installation. Utilities are now available to solve these problems. The Oracle Support Hub provides a tunnelling service which enables many systems on a corporate intranet to access the Oracle server. The Mass Deployment Utility enables the installation or configuration of Oracle Configuration Manager into many homes from a central location. The two utilities comprise the Oracle Companion Distribution kit.

This chapter provides the following information:

- [What Is the Companion Distribution Kit?](#)
- [How to Install the Companion Distribution Kit](#)

## 1.1 What Is the Companion Distribution Kit?

The Companion Distribution kit contains two utilities:

- Oracle Configuration Manager Mass Deployment Utility

Installs the Oracle Configuration Manager into the homes of Oracle products that do not have Oracle Configuration Manager installed. This is done from a central location.

Updates and configures various systems from a single location

- Oracle Support Hub Utility

Enables access to sites that are not on the Internet or have limited Internet access.

### 1.1.1 Mass Deployment Utility

There are Oracle products that currently do not bundle Oracle Configuration Manager as part of their kit. Also, there are previous product installations where Oracle Configuration Manager was installed, but not configured. The manual installation of Oracle Configuration Manager in these environments can be tedious and time consuming. The Oracle Mass Deployment Utility can facilitate the deployment of Oracle Configuration Manager in these environments from a single location.

The Mass Deployment Utility enables you to:

- Install Oracle Configuration Manager into the home of Oracle products where Oracle Configuration Manager is not installed or configured
- Update Configuration Manager installations to the latest version
- Change the configuration of Oracle Configuration Manager in existing configurations

This distribution is accomplished from a single location to many systems where Configuration Manager is not installed, not configured, or running an older version of Configuration Manager.

[Chapter 2, "Mass Deployment"](#) explains the Mass Deployment Utility in detail.

### 1.1.2 Oracle Support Hub Utility

The Oracle Support Hub (formerly known as Oracle Configuration Manager Repeater) is an HTTP tunnel that enables the upload of the configuration data from individual Oracle Configuration Manager instances to the repository maintained at Oracle.

The Support Hub is deployed in the customer's network but it contains a connection to the external network. Therefore, the Support Hub becomes the only point of access needed between inside the network and the outside Internet.

[Chapter 3, "Oracle Support Hub"](#) explains the Support Hub in detail.

## 1.2 How to Install the Companion Distribution Kit

The Companion Distribution kit is a single zip file (`ocm_companion-10.0.1.0.0.zip`) available for download from both the Collector tab on My Oracle Support and patch download 8355285 from Automated Release Update (ARU). Copy the `ocm_companion-10.0.1.0.0.zip` file to the location where you want to install the companion distribution files.

Unzip the file as follows:

```
unzip -d <full_path> ocm_companion-10.0.1.0.0.zip
```

where `<full_path>` represents the full path where you want to locate the kit

For example:

```
unzip -d /scratch/jsmith/install/ ocm_companion-10.0.1.0.0.zip
```

As a result, the following will be placed in the `ocm_companion/distribution` destination directory:

- Mass Deployment Utility kit (`ocm_massdeployment-10.0.1.0.0.zip`)
- Support Hub kit (`oracle_support_hub-10.3.1.1.0.zip`)

Therefore the `ocm_companion/distribution` destination directory looks like the following:

```
ocm_companion/distributions
  ocm_massdeployment-10.0.1.0.0.zip (Mass Deployment Utility kit)
  oracle_support_hub-10.3.1.1.0.zip (Support Hub kit)
```

Copy these zip files to the location where you want to install them.



---

---

# Mass Deployment

There are Oracle products that currently do not bundle Oracle Configuration Manager as part of their kit. Also, there are previous product installations where Oracle Configuration Manager was installed, but not configured. The manual installation of Oracle Configuration Manager in these environments can be tedious and time consuming. Mass Deployment can facilitate the deployment of Oracle Configuration Manager in these environments, as well as update and configure various systems from a single location.

Mass Deployment was created to remedy these situations.

This chapter provides the following:

- [What Is Mass Deployment?](#)
- [Installing and Upgrading Mass Deployment](#)
- [Configuring Mass Deployment](#)
- [Running Mass Deployment](#)
- [Upgrading Mass Deployment](#)
- [Troubleshooting - Errors That May Occur](#)

## 2.1 What Is Mass Deployment?

The Oracle Configuration Manager Mass Deployment Utility (Mass Deployment) provides a mechanism by which you can distribute Oracle Configuration Manager to any Oracle home where the Oracle Configuration Manager is not installed, or installed but not configured. Mass Deployment also updates existing homes where Oracle Configuration Manager installations are out of date, reconfigures existing installations, and instruments the database located in that Oracle home.

Mass Deployment is made up of the following components:

- `secure_password` utility  
Manages the encryption of passwords in both the password file and the input file used in the deployment process.
- `password.csv` file  
Comma separated value file that maps username and password to a group name. The group name is then used in the input file rather than the username and password, therefore making the credentials more secure.
- `remote_op` utility  
Causes actions to be performed in an Oracle home at a remote site.

- `sample_input.csv` file  
Lists the fields used as input into the `remote_op` utility. Use this file as a template for your input file.
- Input file  
Comma separated file that provides a list of entries where each entry acts on a specified target and is input to the `remote_op` utility.
- Output file  
Results of running the `remote_op` utility. The format is comma separated value. Each entry from the input file will have an entry in the output file with the results of the operation.
- `.log` file  
Contains details of each action executed on the remote target home. The `.log` file is named like the output file but with `.log` appended.

### 2.1.1 Prerequisites

The following prerequisites are needed.

- To successfully use the Mass Deployment Utility, the `JAVA_HOME` environment variable can be set to any JDK greater than version 1.5.
- For target homes, you must ensure the availability of the required JDK version (1.2.2 or later on UNIX, and 1.3.1 or later on Windows). One of the following must be true:
  - The JDK is installed in the target home.
  - A symlink to a JDK installation is present in the target home.
  - The `JAVA_HOME` environment variable, defined in the `.kshrc` for the user, points to the appropriate JDK installation.
- The Mass Deployment Utility uses SSH to transfer files and execute remote commands (thus this installation method is not appropriate for environments that do not use, or block, SSH connections). SSH offers the following benefits:
  - The ability to transfer files
  - The ability to set/modify environments
  - The ability to remotely execute host commands
  - A high level of security compared to other remote execution methods (for example, `rsh`)

While SSH is typically present on most Linux/UNIX systems, Windows hosts do not usually support SSH access by default. To allow the Mass Deployment Utility to connect to Windows hosts, SSH services need to be installed. The Mass Deployment Utility needs this along with other software tools that come with the Cygwin suite. The full suite can be downloaded from:

<http://www.cygwin.com>

See [Appendix B, "Setting Up SSH \(SSHD\) Server on Microsoft Windows"](#) for information of how to do these installs.

- Decide if the Support Hub is required for the targets to connect to an Oracle server. See [Chapter 3, "Oracle Support Hub"](#) for information regarding the Support Hub. If the Support Hub is required by the targets, the Mass Deployment Utility must

be set up to configure the use of the Support Hub for *all* targets. To enable the configuration of the Support Hub, do the following:

1. Edit the `md.properties` file located at `<path>/ocm/md/config` directory.
2. Add the following line:

```
md.repeater.uri=http://<host_name>:port
```

where

```
<host_name> is the host where the Support Hub is deployed
port is the port used to access the Support Hub
```

When this property is set, all installations done by this utility will configure the Support Hub.

## 2.2 Installing and Upgrading Mass Deployment

The Companion Distribution kit is a single zip file (`ocm_companion-10.0.1.0.0.zip`) available for download from both the Collector tab on My Oracle Support and patch download 8355285 from Automated Release Update (ARU). Copy the `ocm_companion-10.0.1.0.0.zip` file to the location where you want to install the companion distribution files.

Unzip the file as follows:

```
unzip -d <full_path> ocm_companion-10.0.1.0.0.zip
```

where `<full_path>` represents the full path of where you want to locate the kit

For example:

```
unzip -d /scratch/jsmith/install/ ocm_companion-10.0.1.0.0.zip
```

As a result, the following will be placed in the `ocm_companion/distribution` destination directory:

- Mass Deployment Utility kit (`ocm_massdeployment-10.0.1.0.0.zip`)
- Support Hub kit (`oracle_support_hub-10.3.1.1.0.zip`)

Therefore the `ocm_companion/distribution` destination directory contains:

```
ocm_companion/distributions
  ocm_massdeployment-10.0.1.0.0.zip (Mass Deployment Utility kit)
  oracle_support_hub-10.3.1.1.0.zip (Support Hub kit)
```

Copy these zip files to the location where you want to install them.

Unzip the `ocm_massdeployment-10.0.1.0.0.zip` file. This will install Mass Deployment in `<your_directory>/ocm/md`.

The following components in `<your_directory>/ocm/md/bin` make up the Mass Deployment Utility:

- `remote_op`  
This component installs, updates, or configures the homes on remote systems with the appropriate Configuration Manager details.
- `secure_password`  
This component manages the encryption of passwords in the `password.csv` file and the input file.

## 2.3 Configuring Mass Deployment

All configurations for the Mass Deployment Utility are in the <your\_directory>/ocm/md/config/md.properties file. You can edit this file to modify configuration. The important properties follow.

### 1. md.win.tmp

Location of the temporary directory on the remote machine with any version of Windows operating system. All the files required for remote operations are copied at this location on the remote machine. Default value is C:\. If required you can modify the default.

Ensure that this directory is available on all the remote machines and all the users have read and write privilege on this directory.

---

---

**Note:** You must use a double slash (\\) in the md.properties file to configure the md.win.tmp file, for example,  
md.win.tmp=d:\\tmp\\md-tmp.

---

---

### 2. md.unix.tmp

Location of the temporary directory on the remote machine with an operating system other than Windows. All the files required for remote operations are copied at this location on the remote machine. Default value for this is /tmp. If required you can modify the default.

Ensure that this directory is available on all the remote machines and all the users have read and write privilege on this directory.

### 3. md.repeater.uri

Use this to provide the Support Hub URL if you need the Support Hub to connect to an Oracle server. See [Chapter 3, "Oracle Support Hub"](#) for information regarding the Support Hub. If this is set, all installations done by this utility will configure the Support Hub.

## 2.4 Running Mass Deployment

When you run either of the Mass Deployment utilities for the first time, you will be prompted for a password. This password will be required each time either the remote\_op or secure\_password utility is used. The password must be at least 8 characters long.

Since the purpose of the Mass Deployment Utility is to take action on remote target homes in your enterprise, you need a mechanism by which to provide input to the Mass Deployment Utility. The mechanism is an input csv file which contains the necessary data.

To facilitate the use of the input file, the Mass Deployment Utility contains a template (sample\_input.csv) for you to use to provide the field values.

### 2.4.1 password.csv File

The password.csv file is used to associate a group name with credentials (username/password pair). By defining a password group, you can use the name of the password group as input into the username field and leave the password field empty in the input file. This enables you to store all your passwords, in encrypted form, in one file.

When you add a password group for the first time:

1. Copy the `password.csv.template` file located in the `ocm/md/config` directory and name it `password.csv`

```
cp password.csv.template password.csv
```

2. Ensure the renamed file is in the `ocm/md/config` directory

3. Edit the `password.csv` file

The `password.csv` file is made up of the following fields: password group name, user name, and password. The password group name replaces the user name in the input csv file. For example, the first line in the `password.csv` file could look like:

```
<group name>,<user name>,<password>
where <group name> is the name of the group
      <user name> is the name of the user
      <password> is the password associated with the user name
```

For example, the first line of the `password.csv` file could be:

```
accounting,payables,myspwd
```

Therefore, a line within the input file that uses the password group could look like:

```
install,abc22,[accounting],,
where install is the action
      abc22 is the host
      [accounting] is the password group name which must be in brackets
      ,, denotes that the password field is left blank
```

Note the following:

- Name of the file is **password.csv**, all lower case
- `password.csv` file *must* be in the config directory, that is, `ocm/md/config/password.csv`
- All types of credentials are stored in this file, for example, MetaLink, proxy, database, and so on.
- The `password.csv` file is always encrypted whenever the `secure_password` or `remote_op` utilities are executed.

## 2.4.2 secure\_password Utility

The `secure_password` utility encrypts passwords located in the `password.csv` and input files. Consider running the `secure_password` utility when you create or modify the `password.csv` file. This encrypts the passwords immediately.

An example of the output follows:

```
prompt>ocm/md/bin/secure_password
OCM Mass Deployment Utility - Release: 10.0.1.0.0
Copyright (c) 2009, Oracle. All rights reserved.
Please enter the password for Mass Deployment Utility.
Password:
prompt>
```

Lines with errors are displayed with an explanation of the errors, for example, user name missing. On success, the prompt is displayed.

Note the following:

- Encrypted passwords in the password.csv and input files begin with ENCR\_
- Previously encrypted passwords are ignored
- Passwords are encrypted on lines without errors. When input lines contain errors, the passwords, if they are present on those lines, will be encrypted but these groups will not be considered for processing.
- Oracle provides a password.csv file template that contains only headers: group name, user name, password.
- Files that contain encrypted data are *not* portable. Encryption is tied to the Mass Deployment installation.

#### 2.4.2.1 Help for secure\_password Utility

There is a help option available for the secure\_password utility. To access help, type:

```
secure_password -help
```

For example:

```
secure_password -help
OCM Mass Deployment Utility - Release: 10.0.1.0.0
Copyright (c) 2009, Oracle. All rights reserved.
Usage: secure_password [-input_file]
  -help                : prints help for the command
  -input_file <input.csv> : input file to secure
Example: secure_password -input_file input.csv
         reads the config/password.csv file and input.csv.
         It will modify these files by encrypting all clear text passwords.
```

#### 2.4.2.2 Arguments for secure\_password Utility

The arguments for the secure\_password utility are:

- `-input_file`  
Name of the input file. Use this argument to encrypt the password in the input file without running remote\_op.

### 2.4.3 remote\_op Utility

Once the input file is created from the template, execute the Mass Deployment Utility using this file:

```
remote_op -input_file <input.csv> [-out_file <out_file.csv>] [-check]
```

for example:

```
bin/remote_op -input_file ~/md_scripts/install_soh_2dir.csv
```

You will then see the following text displayed on the screen:

```
OCM Mass Deployment Utility - Release: 10.0.1.0.0
Copyright (c) 2009, Oracle. All rights reserved.
Please enter the password for Mass Deployment Utility.
Password: [Password must be correct or execution will not occur.]
Please be patient, process may take some time.
Log File: /scratch/jsmith/massdeploy/ocm_companion/ocm/md/out/output-2009-07-19_
04-32-43-PM-install_soh_2dir.csv.log
Please see the output file /scratch/jsmith/massdeploy/ocm_
companion/ocm/md/out/output-2009-07-19_04-32-43-PM-install_soh_2dir.csv
```

### 2.4.3.1 Help for remote\_op Utility

There is a help option available for the remote\_op utility. To access help, type:

```
remote_op -help
```

For example:

```
remote_op -help
OCM Mass Deployment Utility - Release: 10.0.1.0.0
Copyright (c) 2009, Oracle. All rights reserved.
Usage: remote_op -input_file <input.csv> [-out_file <out.csv>] [-check]
  -check          : actual remote operation is not performed
  -help          : prints help for the command
  -input_file <input.csv> : input from this file
  -out_file <output.csv> : output to this file
Example: remote_op -input_file input.csv
        reads the input.csv file and performs remote
        OCM operations like install, config, upgrade.
        It will also invoke secure_password command implicitly.
```

### 2.4.3.2 Arguments for remote\_op Utility

The arguments for the remote\_op utility are:

- -input\_file  
Name of the input file. There are no restrictions on the name of the file. For example, the name of the input file could be account\_payables.csv
- -out\_file  
Optional argument. If specified, this is the name of the output file. If this argument is not specified, the output file name will default to the input file name prepended by output- and the timestamp, for example, output-2009-07-21\_10-39-36-AM-account\_payables.csv and will be located in the ocm/md/out directory.
- -check  
Verifies that the information is correct in the input file without performing the actual remote operation.

### 2.4.3.3 Results of Running remote\_op Utility

The results of running the remote\_op utility are as follows:

- Output file  
Contains the commands that were executed and the resulting status of each execution. See [Section 2.4.6, "Mass Deployment Output File"](#).
- Log file  
Contains detailed information about the remote operation. See [Section 2.4.7, "Log File"](#).

## 2.4.4 Credentials

Credentials is the general term for the various user names and passwords in the input file (host credentials, MetaLink credentials, proxy credentials, and database credentials). There are 3 ways to provide credentials in the input file.

- Use the group name defined in the password.csv file. This file is located in the ocm/md/config directory.

- If you want to be prompted for the password as the `remote_op` utility processes the input file, type `__PROMPT__` in the password fields in the input file. For example: `install,host123,jsmith,__PROMPT__,`

The word `PROMPT` is case sensitive and *must* be in upper case. Otherwise, the word will be considered a password. Once processed, `__PROMPT__` is replaced with the encrypted password (starts with `ENCR_`) in the input file.

You can also use `__PROMPT__` instead of the password in the `password.csv` file. In this case, the user will be prompted for the password when `secure_password` (or `remote_op`) is executed.

Here is an example of the output when using `__PROMPT__`. (The prompting is in **bold**.)

```
OCM Mass Deployment Utility - Release: 10.0.1.0.0
Copyright (c) 2009, Oracle. All rights reserved.
Please enter the password for Mass Deployment Utility.
Password:
Password for user aime (host:abcd123):
Confirm Password:
Password for user joe.smith@example.com (metalink):
Confirm Password:
Encrypting input file /home/jsmith/md_scripts/instrument.csv
Please be patient, process may take some time.
Log File: /scratch/jsmith/massdeploy/ocm/md/out/output-2009-07-27_
07-07-44-AM-instrument_nt.csv.log
```

The input file no longer contains `__PROMPT__`, it now contains the encrypted password.

- Include the credentials in the input file and then run the `secure_password` utility on the input file. If you do not run `secure_password` on the input file, the first time you run the `remote_op` utility, the passwords are encrypted.

## 2.4.5 Input File

The input csv file is the input to the `remote_op` utility. The file contains a line for each action / host /target home combination. If a password group name is used rather than credentials, the group name in brackets replaces the user name and the password is left empty.

A template, named `sample_input.csv`, is available and looks like the following:

```
#Action,HostName,Host-user,Host-Password,Product Home Path,Oracle Config Home
Path,OCM Version,OCM Status,OCM Mode (connected/disconnected),Db SID,DB Type
(EM/Ebiz/db),ML-user (Metalink user
ID),ML-Pwd,Proxy-Host,Proxy-Port,Proxy-Pwd,DB-user (SYSDBA
user),DB-Pwd,DB-App-user (Ebiz user if db type is Ebiz),DB-App-Pwd (Ebiz user
password if db type is Ebiz or SYSMAN password if db type is EM),Cmd Status
(Status of the remote operation)
```

Note that the pound sign (`#`) in the template is used to denote a comment. The `remote_op` and `secure_password` commands ignore lines starting with a pound sign (`#`).

The following table describes the elements in the input file. The sample input file is located at `ocm/md/sample_input.csv`. You can use a spreadsheet for easier input.



**Table 2–1 Fields in the Input csv File**

Field	Description
Action	Mandatory field. Specifies what action is to be performed in the Oracle Home. Options are: <ul style="list-style-type: none"> <li>■ install (incorporates installation, registration, and configuration)</li> <li>■ upgrade</li> <li>■ chmod_con (change from disconnected mode to connected mode)</li> <li>■ config (reconfigure Oracle Configuration Manager)</li> <li>■ get_info (give the mode, status, version)</li> <li>■ instrument - Instruments the database so that configuration information is collected. The database type must be specified: db (standard database), EM (Enterprise Manager Repository) or Ebiz (E-Business Suite Repository).</li> </ul>
HostName	Mandatory field. Host domain name or host IP.
Host-User	Mandatory field. Host user or group name as input [group].
Host-Password	Host password or blank if group name is provided in the Host-User field. See <a href="#">Section 2.4.4, "Credentials"</a>
Product Home Path	Mandatory field. Location where the command will be executed
Oracle Config Home Path	Optional field. Specify if this is a shared Oracle home.
OCM Version	Output only. OCM version installed in an Oracle home.
OCM Status	Output only. OCM status.
OCM Mode	Output only. OCM connection mode: connected, connected (unauthenticated) for e-mail only registrations, or disconnected.
DB SID	Database system identifier. Used for install and instrument actions. If specified for Install action, the database will automatically be instrumented.
DB Type	EM, ebiz, db. Specify only for Install and Instrumentation actions.
ML-User	MetaLink User (can be a group name [group]). Required for install, config, and chmod_con actions.
ML-Pwd	MetaLink Password (blank if group name is provided in the ML-User field). This field is not mandatory. If the MetaLink password is not provided, the Oracle Configuration Manager is configured in unauthenticated registration mode. See <a href="#">Section 2.4.4, "Credentials"</a>
Proxy-Host	Proxy host (optional, only used if required)
Proxy-Port	Proxy port (optional, only used if required)
Proxy-User	Proxy user (or group) (optional, only used if required)
Proxy-Pwd	Proxy password (blank if group used) (optional, only used if required)
DB-User	SYSDBA user - This field is not required if OS Authentication is enabled on the database
DB-Pwd	Password for the SYSDBA user. This field is not required if OS Authentication is enabled on the database.
DB-App-User	When DB type is Ebiz, specify the Ebiz application user name.

**Table 2–1 (Cont.) Fields in the Input csv File**

Field	Description
DB-App-Password	Ebiz application user password if DB Type is Ebiz or SYSMAN password if DB type is EM.
Cmd Status	Output only. Status of the remote operation. Provides detailed error message for each operation.

The checks performed by the Oracle Configuration Manager operations are described in [Table 2–2](#).

**Table 2–2 Checks Performed By Oracle Configuration Manager Operations**

Oracle Configuration Manager Operation	Checks To Be Performed
install	<ol style="list-style-type: none"> <li>Utility can connect to the host.</li> <li>Host user has read / write / execute privileges on the Oracle home and is the owner of Oracle home.</li> <li>Network connectivity to Oracle repository or Support Hub is available (Direct connection or through proxy specified).</li> <li>MetaLink credentials are valid (if MetaLink password is provided).</li> </ol>
upgrade	<ol style="list-style-type: none"> <li>Utility can connect to the host.</li> <li>Oracle Configuration Manager is installed and configured.</li> <li>Host user has read / write / execute privileges on the Oracle home and is the owner of Oracle home.</li> </ol>
chmod_con	<ol style="list-style-type: none"> <li>Utility can connect to the host.</li> <li>Host user has read / write / execute privileges on the Oracle home and is the owner of Oracle home.</li> <li>Oracle Configuration Manager is installed and configured.</li> <li>Oracle Configuration Manager is in disconnected mode.</li> <li>Network connectivity to Oracle repository or Support Hub is available (Direct connection or through proxy specified).</li> <li>MetaLink credentials are valid (if MetaLink password is provided).</li> </ol>
config	<ol style="list-style-type: none"> <li>Utility can connect to the host.</li> <li>Host user has read / write / execute privileges on the Oracle home and is the owner of Oracle home.</li> <li>Oracle Configuration Manager is installed and configured.</li> <li>Network connectivity to Oracle repository or Support Hub is available (Direct connection or through proxy specified).</li> <li>MetaLink credentials are valid (if MetaLink password is provided).</li> </ol>

**Table 2–2 (Cont.) Checks Performed By Oracle Configuration Manager Operations**

Oracle Configuration Manager Operation	Checks To Be Performed
get_info	<ol style="list-style-type: none"> <li>1. Utility can connect to host.</li> <li>2. Oracle Configuration Manager is installed and configured.</li> <li>3. Determines the mode in which Oracle Configuration Manager has been installed: connected, connected (unauthenticated) for e-mail only registrations, or disconnected.</li> <li>4. Host user has read / write / execute privileges on the Oracle home and is the owner of Oracle home.</li> </ol>
instrument	<ol style="list-style-type: none"> <li>1. Utility can connect to the host.</li> <li>2. Host user has read / write / execute privileges on the Oracle home and is the owner of Oracle home.</li> <li>3. Oracle Configuration Manager is installed and configured.</li> <li>4. Database is present in the Oracle home.</li> <li>5. User has provided valid sys user credential.</li> <li>6. If the application is EM or Ebiz, then if user has provided valid application user credential or not.</li> </ol>

## 2.4.6 Mass Deployment Output File

After you run the input file through the Mass Deployment Utility (`remote_op`), the results are in the output file. If you specify the `-out_file` argument and provide a file name, that is the name of the file.

However, if you do not specify the `-out_file` argument, the output file name will default to the input file name prepended by `output-` and the timestamp, for example, `output-2009-07-21_10-39-36-AM-account_payables.csv` and located in the `ocm/md/out` directory.

The fields in the out csv file are the same as the fields in the input csv file with the following fields updated.

- **Action**  
Action name is replaced with a set of double quotes ("" ) if the action is successful.
- **OCM Version**  
Output only. OCM version installed in an Oracle home.
- **OCM Status**  
Output only. Current OCM status (for example, idle or scheduled collection running).
- **OCM Mode**  
Output only. OCM connection mode: connected, connected (unauthenticated) for e-mail only registrations, or disconnected
- **Cmd Status (Status of the remote operation)**  
Status of the remote operation. Provides detailed error message for each operation.

## 2.4.7 Log File

Along with the output CSV file, the Mass Deployment Utility also generates a log file. This file gives details of all the files copied and commands executed along with their output on the remote host.

The log file is located in the same directory as the output file and has the same name as the output file with `.log` appended, for example, `<output_file.csv>.log`

## 2.4.8 Restrictions

The following restrictions apply when you are working with Mass Deployment.

- For a specific user on a remote machine, only a single invocation of Mass Deployment Utility at any instance is supported. Attempting to invoke multiple instances of Mass Deployment simultaneously on a single remote machine for a specific user can result in unpredictable errors.

## 2.5 Upgrading Mass Deployment

When Oracle makes enhancements to the Mass Deployment Utility, Oracle suggests that you upgrade your version of the utility. To upgrade Mass Deployment, perform the following steps:

1. Download the Companion Distribution kit

Copy the `ocm_companion-10.0.1.0.0.zip` file to the location where you want to install the Companion Distribution kit.

Unzip the file as follows:

```
unzip -d <full_path> ocm_companion-10.0.1.0.0.zip
```

where `<full_path>` represents the full path where you want to locate the companion distribution kit

For example:

```
unzip -d /scratch/jsmith/install/ocm_companion-10.0.1.0.0.zip
```

As a result, the Mass Deployment Utility kit (`ocm_massdeployment-10.0.1.0.0.zip`) will be placed in the `ocm_companion/distribution` destination directory. For example,

```
ocm_companion/distributions
  ocm_massdeployment-10.0.1.0.0.zip (Mass Deployment Utility kit)
```

Copy the `ocm_massdeployment-10.0.1.0.0.zip` file to the location where you want to install the Mass Deployment Utility.

2. Install the Mass Deployment Utility

Unzip the `ocm_massdeployment-10.0.1.0.0.zip` file. This will install the Mass Deployment Utility in `<your_directory>/ocm/md` directory.

3. In the Mass Deployment input file, enter the information for your Oracle Home locations.
4. To identify which of your Oracle Homes have the unauthenticated Oracle Configuration Managers, use the Mass Deployment action `get_info`. In the output file, check the value of the **OCM Mode** field for any homes with the value of "Connected (unauthenticated)" and check the MetaLink User field which

indicates the MetaLink User who can access the authentication mode. See [Example 2-1](#) and [Example 2-2](#).

#### **Example 2-1 Input File**

```
#Action,HostName,Host-user,Host-Password,Product Home Path,Oracle Config Home
Path,OCM Version,OCM Status,OCM Mode (connected/disconnected),Db SID,DB Type
(EM/Ebiz/db),ML-user (Metalink user
ID),ML-Pwd,Proxy-Host,Proxy-Port,Proxy-user,Proxy-Pwd,DB-user (SYSDBA
user),DB-Pwd,DB-App-user (Ebiz user if db type is Ebiz),DB-App-Pwd (Ebiz user
password if db type is Ebiz or SYSMAN password if db type is EM),Cmd Status
(Status of the remote operation)
get_info,mycompany.com,jsmith,ENCR
075ACDEB39C61A874BA0F6FD4B93BF52,/home/jsmith/db10g,,,,,,,,,,,,,
```

#### **Example 2-2 Output File**

```
#Action,HostName,Host-user,Host-Password,Product Home Path,Oracle Config Home
Path,OCM Version,OCM Status,OCM Mode (connected/disconnected),Db SID,DB Type
(EM/Ebiz/db),ML-user (Metalink user
ID),ML-Pwd,Proxy-Host,Proxy-Port,Proxy-user,Proxy-Pwd,DB-user (SYSDBA
user),DB-Pwd,DB-App-user (Ebiz user if db type is Ebiz),DB-App-Pwd (Ebiz user
password if db type is Ebiz or SYSMAN password if db type is EM),Cmd Status
(Status of the remote operation)
,mycompany.com,jsmith,ENCR
075ACDEB39C61A874BA0F6FD4B93BF52,/home/jsmith/db10g,,10.3.1.0.0,idle,Connected
(unauthenticated),,,foo@bar.com,,,,,,,,,Success: get_info operation
```

5. To convert unauthenticated Oracle Configuration Managers to authenticated ones, use the Mass Deployment action config. See [Example 2-3](#) and [Example 2-4](#).

#### **Example 2-3 Input File**

```
#Action,HostName,Host-user,Host-Password,Product Home Path,Oracle Config Home
Path,OCM Version,OCM Status,OCM Mode (connected/disconnected),Db SID,DB Type
(EM/Ebiz/db),ML-user (Metalink user
ID),ML-Pwd,Proxy-Host,Proxy-Port,Proxy-user,Proxy-Pwd,DB-user (SYSDBA
user),DB-Pwd,DB-App-user (Ebiz user if db type is Ebiz),DB-App-Pwd (Ebiz user
password if db type is Ebiz or SYSMAN password if db type is EM),Cmd Status
(Status of the remote operation)
config,mycompany.com,jsmith,ENCR
075ACDEB39C61A874BA0F6FD4B93BF52,/home/jsmith/db10g,,,,,,joe.smith@example.com,EN
C
_8EBB07D9D486C17A4BA0F6FD4B93BF52,,,,,,,,,
```

#### **Example 2-4 Output File**

```
#Action,HostName,Host-user,Host-Password,Product Home Path,Oracle Config Home
Path,OCM Version,OCM Status,OCM Mode (connected/disconnected),Db SID,DB Type
(EM/Ebiz/db),ML-user (Metalink user
ID),ML-Pwd,Proxy-Host,Proxy-Port,Proxy-user,Proxy-Pwd,DB-user (SYSDBA
user),DB-Pwd,DB-App-user (Ebiz user if db type is Ebiz),DB-App-Pwd (Ebiz user
password if db type is Ebiz or SYSMAN password if db type is EM),Cmd Status
(Status of the remote operation)
,mycompany.com,jsmith,ENCR
075ACDEB39C61A874BA0F6FD4B93BF52,/home/jsmith/db10g,,10.3.1.0.0,idle,Connected,,,
oe.smith@example.com,ENCR_8EBB07D9D486C17A4BA0F6FD4B93BF52,,,,,,,,, Success:
config
operation
```

## 2.6 Troubleshooting - Errors That May Occur

You may see the following errors when running Mass Deployment:

- If a user moves a password or input file from one Mass Deployment installation to another, the encryption will not work (it is unique to the installation), the output file will contain the following error:

"Error in Decrypting credentials for host, metalink, proxy. This can happen if credentials are encrypted using a different password. Type the credentials in clear text and re-try the operation."

- If JAVA\_HOME is not set to jdk1.5, you will see an error like the following:

```
Java Version 1.4.2_14 is less than minimum required (1.5).  
JAVA_HOME does not contain a valid JDK/JRE.
```

---

---

## Oracle Support Hub

To upload the collected configuration data to Oracle, each Oracle Configuration Manager instance needs a connection to the Internet. Oracle Configuration Manager supports connecting either directly or through a proxy server. However, these techniques may be insufficient for network topologies in which systems have access to other internal systems but not to the Internet.

The Oracle Support Hub (formerly known as Oracle Configuration Manager Repeater) is designed to address this situation. It allows many Oracle Configuration Manager instances to connect to a single internal point (the Support Hub) and upload their configuration data, eliminating the need for each individual Oracle Configuration Manager instance to access the Internet.

The Support Hub currently ships with Enterprise Manager Grid Control release 10.2.0.5. Oracle is now making the Support Hub available outside of Grid Control 10.2.0.5 in the form of the Oracle Configuration Manager Companion Distribution kit.

This chapter provides the following:

- [What Is the Support Hub?](#)
- [Installing the Support Hub](#)
- [Managing the Support Hub](#)
- [Configuring Oracle Configuration Manager Instances to Use the Support Hub](#)
- [Troubleshooting - Errors That May Occur](#)
- [Common Questions](#)

### 3.1 What Is the Support Hub?

The Support Hub is an HTTP tunnel that conveys the configuration payload from individual Oracle Configuration Manager instances to the repository maintained at Oracle. The Support Hub is situated inside the customer network, so that it becomes the only point of access needed between inside the network and the outside Internet.

The Support Hub is not the same as a proxy server. If a proxy server can be used to connect from Oracle Configuration Manager instances to the Internet, then the Support Hub is not required. However, some network topologies do not even provide proxy server access from internal systems to the Internet; the proxy server (if available) only connects such a machine to the local intranet. In these cases, the proxy server can be used to access the Support Hub, which in turn accesses the Internet and Oracle.

Individual Oracle Configuration Manager instances communicate with a Support Hub using HTTP, whereas all communication from the Support Hub to Oracle (and thus across the Internet) is through HTTPS. The Support Hub does not interpret data

passing through it (other than destination information). The configuration details being uploaded are encrypted such that only the endpoint at Oracle can read it, not the tunnel through which it passes. Configuration uploads are immediately transmitted to Oracle; there is no storage or staging of uploads at the Support Hub for later uploading.

### 3.1.1 Prerequisites

The following prerequisites apply when you are working with the Support Hub.

- Supports WebLogic Server (WLS) 10.3.0 on both the Windows and Linux platforms.
- Supports Oracle Application Server 10.1.2 and 10.1.4 on both the Windows and Linux platforms.

## 3.2 Installing the Support Hub

Locate the output of the companion distribution kit installation described in [Chapter 1, "Introduction"](#). Unzip the <dist\_kit>/ocm\_companion/distribution/oracle\_support\_hub-10.3.1.1.0.zip file into an Application Server or WebLogic home (<OCM\_REPEATER\_HOME>). It creates the Support Hub directory structure: <OCM\_REPEATER\_HOME>/ocm/repeater/.

Note the following:

- For Support Hub installation on WebLogic Server release 10.3, run the WebLogic deploy script. See [Section 3.2.2, "WebLogic Deployment"](#).
- For Support Hub installation on Oracle Application Server releases 10.1.2 and 10.1.4, run the OC4J deploy script. See [Section 3.2.1, "OC4J Deployment"](#).

### 3.2.1 OC4J Deployment

The Support Hub is an EAR file that is located in the `ocm/repeater/ears` directory. This EAR file is named `OCMRepeater.ear` and deployed with the use of the `ocm/repeater/bin/oc4j_OCMRepeaterDeploy.sh` file (on Linux systems) or the `ocm/repeater/bin/oc4j_OCMRepeaterDeploy.bat` file (on Windows systems). If the `ORACLE_HOME` variable is not set, it must be specified on the command line when deploying the Support Hub.

A singular configuration file, `ocmrepeater.properties`, is placed in the <OCM\_REPEATER\_HOME>/ocm/repeater/config directory.

The deployment of the Support Hub is independent of any Oracle Management Service deployment and configuration. The deployment of the Support Hub and creation of the OC4J component through the use of the `oc4j_OCMRepeaterDeploy` script automatically starts the Support Hub upon successful deployment.

#### 3.2.1.1 Preparing to Deploy

The following is an example of deploying the Support Hub.

```
[prompt]$ ocm/repeater/bin/oc4j_OCMRepeaterDeploy.sh <ORACLE_HOME>
```

```
opmnctl: stopping opmn managed processes...
```

```
=====
```

```
opmn id=sys26:6255
```

```
no processes matched this request
```

```
1
```



```

Application:      OCMRepeater
Component Name:  OCMRepeater
Component Type:  OC4J
Instance:        /scratch/test/oracle.abcde.us.oracle.com

opmnctl: starting opmn managed processes...

```

## 3.2.2 WebLogic Deployment

This section describes the deployment of the Support Hub in the WebLogic environment.

### 3.2.2.1 Preparing to Deploy

Deployment of the Support Hub is done to an existing WebLogic Server. No attempt is made to create and configure a Server by the deployment script. On Windows, the Support Hub install directory cannot contain spaces.

The server needs to be started with the following Java Option:

```
-Docm.repeater.home=<InstallRoot>
```

One way to add this option is to insert the following line in the `setDomainEnv.sh` script located under the domain directory of the Server and bouncing the Server.

```
JAVA_OPTIONS="${JAVA_OPTIONS} -Docm.repeater.home=/scratch/w12/ocmrepeater"
```

Note that the kit in the previous example is unzipped under the `/scratch/w12/ocmrepeater` directory.

### 3.2.2.2 Using the Deployment Script

The Support Hub is an EAR file that is present in the `ocm/repeater/ears` directory. This ear file is named `OCMRepeater.ear` and deployed with the use of the `ocm/repeater/bin/wls_OCMRepeaterDeploy.sh` file or the `ocm/repeater/bin/wls_OCMRepeaterDeploy.bat` file. The ear is deployed in a user-specified Server.

Usage:

```
wls_OCMRepeaterDeploy.{sh | bat} <Server> <DomainRoot> <AdminUrl> [<InstallRoot>]
where:
```

```
<Server>: WebLogic Server to which 'OCMRepeater' Application needs to be deployed
```

```
<DomainRoot>: Root Directory of the WLS Domain in which the Server resides
```

```
<AdminUrl>: URL of the AdminServer for the domain. [It must use t3 protocol in
place of http.]
```

```
<InstallRoot>: Root directory where the kit is unzipped.
```

An example of the deployment follows:

```

> /scratch/w12/ocmrepeater/ocm/repeater/bin/wls_OCMRepeaterDeploy.sh
   OCMRepeaterServer1 /scratch/product/wls2_10.3.0/user_projects/domains/base_
domain1 t3://example.com:7001 /scratch/w12/ocmrepeater
#####
# Note: /scratch/product/wls2_10.3.0/user_projects/domains/base_
domain1/bin/setDomainEnv.sh should include:
#       JAVA_OPTIONS="${JAVA_OPTIONS}
-Docm.repeater.home=/scratch/w12/ocmrepeater"
#####
Deploying OCMRepeater to OCMRepeaterServer1
Deprecated operation, activate, specified. Consider using deploy operation

```

```

instead.
weblogic.Deployer invoked with options:  -adminurl t3://example.com:7001 -activate
  -name OCMRepeater -source
  /scratch/wl2/ocmrepeater/ocm/repeater/ears/OCMRepeater.ear -targets
  OCMRepeaterServer1
Please enter username:weblogic
Please enter a password for the user "weblogic":
<Jul 30, 2009 8:24:45 AM PDT> <Info> <J2EE Deployment SPI> <BEA-260121>
<Initiating activate operation for application, OCMRepeater [archive:
  /scratch/wl2/ocmrepeater/ocm/repeater/ears/OCMRepeater.ear], to
  OCMRepeaterServer1 .>
Task 25 initiated: [Deployer:149026]activate application OCMRepeater on
OCMRepeaterServer1.
Task 25 completed: [Deployer:149026]activate application OCMRepeater on
OCMRepeaterServer1.
Target state: activate completed on Server OCMRepeaterServer1

```

---



---

**Note:** If using a secure protocol (https) to connect to the AdminServer, you will need to specify additional SSL arguments in the environment.

---



---

Set JAVA\_OPTIONS to the appropriate arguments to use before invoking the deployer script. Details regarding the Java Options are available at:

<http://edocs.bea.com/wls/docs103/deployment/wldeployer.html>

The SSL Arguments include:

```

[ -Dweblogic.security.TrustKeyStore=DemoTrust ]
[ -Dweblogic.security.JavaStandardTrustKeystorePassPhrase=password ]
[ -Dweblogic.security.CustomTrustKeyStoreFileName=filename
  -Dweblogic.security.TrustKeystoreType=CustomTrust
  [ -Dweblogic.security.CustomTrustKeystorePassPhrase=password ]
]
[ -Dweblogic.security.SSL.hostnameVerifier=classname ]
[ -Dweblogic.security.SSL.ignoreHostnameVerification=true ]

```

The following configuration files are placed under the <OCM\_REPEATER\_HOME>/ocm/repeater/config directory after a successful deployment:

- ocmrepeater.properties required by the deployed Application
- ocm\_config.properties required by ocmrepeater.ctl

The Repeater application is Active after deployment as long as the Server to which it is deployed is running.

### 3.3 Managing the Support Hub

To manage the Support Hub, use the ocmrepeaterctl utility. This enables you to reconfigure or get status for the Support Hub. Prior to running this utility:

- For a Support Hub deployed using an Oracle Application Server, set the ORACLE\_HOME environment variable to the <OCM\_REPEATER\_HOME>.
- For a Support Hub deployed using a WebLogic Server, set the environment variable OCM\_REPEATER\_HOME to the <OCM\_REPEATER\_HOME>.

Also set the OCM\_DOMAIN\_PATH environment variable to the location of the corresponding WebLogic domain.

To check the status of the Support Hub, run the following command from the home where the Support Hub has been installed.

```
<OCM_REPEATER_HOME>/ocm/repeater/bin/ocmrepeaterctl status
```

This command provides useful information including any proxy settings being used by the Support Hub, the location of the log file, and whether the process is alive or not. Sample output for the OC4J environment:

```
[oracle@myhost oms10g]$ ocm/repeater/bin/ocmrepeaterctl status
Oracle Configuration Manager Repeater - Release: 10.3.1.1.0 - Production
Copyright (c) 2005, 2009, Oracle. All rights reserved.
Built 01/21/2009 07:14:57 PM
Install Root :/scratch/EMGC/OracleHomes/oms10g
Proxy Host :www-proxy.mycompany.com
Proxy Port :80
Proxy User :NONE
Logging Level :DEBUG, Rolling
Log File Location :/scratch/ EMGC/OracleHomes/oms10g/sysman/log/ocmrepeater.log
OCMRepeater | Alive
```

Sample output for the WebLogic environment:

```
Oracle Configuration Manager Repeater - Release: 10.3.1.1.0 - Production
Copyright (c) 2005, 2009, Oracle. All rights reserved.
Built 07/29/2009 06:02:41 PM

Install Root          :/scratch/sumit/bea/ocmrepeater
Proxy Host           :NONE
Proxy Port           :NONE
Proxy User           :NONE
Logging Level        :WARN, Rolling
Log File Location    :/scratch/bea/ocmrepeater/ocm/repeater/log/ocmrepeater.log
```

```
Initializing WebLogic Scripting Tool (WLST) ...
```

```
Welcome to WebLogic Server Administration Scripting Shell
```

```
Type help() for help on available commands
```

```
Please enter your username [weblogic] :weblogic
Please enter your password [weblogic] :
Connecting to http://mywlshost.us.oracle.com:7001 with userid weblogic ...
Successfully connected to Admin Server 'AdminServer' that belongs to domain 'base_
domain'.
```

```
Warning: An insecure protocol was used to connect to the
server. To ensure on-the-wire security, the SSL port or
Admin port should be used instead.
```

```
Current state of 'AdminServer' : RUNNING
Disconnected from weblogic server: AdminServer
```

```
Exiting WebLogic Scripting Tool.
```

This command can also be used to reconfigure the Support Hub by adding, removing, or changing any proxy server settings needed to connect to the Internet:

```
<OCM_REPEATER_HOME>/ocm/repeater/bin/ocmrepeaterctl configure
```

When using the `configure` parameter, you will be prompted for proxy server information. If a proxy server is not required, type **NONE** at the prompt. Otherwise enter the appropriate proxy server information, using the following format `[username@]host:port`. If a user name is specified, you will be prompted for a password.

Sample of running `ocmrepeaterctl configure` for OC4J follows:

```
> $ORACLE_HOME/ocm/repeater/bin/ocmrepeaterctl configure
Oracle Configuration Manager Repeater - Release: 10.3.1.1.0 - Production
Copyright (c) 2005, 2009, Oracle. All rights reserved.
Built 07/25/2009 06:10:29 PM
```

Enter the proxy server details in this format:

```
[<proxy-user>@]<proxy-host>[:<proxy-port>]
```

To specify no proxy, enter NONE

```
Proxy Specification:user1@www-proxy.mycompany.com:4321
```

Proxy Password:

Configuration saved to disk

Stopping Repeater...

```
opmnctl: stopping opmn managed processes...
```

Starting Repeater...

```
opmnctl: starting opmn managed processes...
```

```
OCMRepeater      | Alive
```

### 3.4 Configuring Oracle Configuration Manager Instances to Use the Support Hub

To use the Support Hub to upload configuration data to Oracle, those Oracle Configuration Manager instances must be a minimum version of Oracle Configuration Manager release 10.3.1. Configuring an Oracle Configuration Manager instance to use a Support Hub is done by first creating a response file using the `emocmrsp` utility, with the `-repeater` parameter and the URI at which the Support Hub can be accessed.

```
$ORACLE_HOME/ccr/bin/emocmrsp -repeater http://<hostname>[:<port>]
```

Specifying a port is optional; if none is selected, a default port of 80 is used. To use the Support Hub built into Enterprise Manager Grid Control, specify the same hostname and port used to access the Grid Control console in a web browser – however, make sure not to include any path information after the hostname and port (`"/em/"`, for instance).

Once the response file has been generated, it must be used to configure (or re-configure) the Oracle Configuration Manager instance. To do this, run the `setupCCR` (for initial configuration) or `configCCR` (for re-configuration) command with the `-R` parameter along with the name of the response file. For more information on using response files, see the *Oracle Configuration Manager Installation and Administration Guide*.

The response file is also used to re-configure an Oracle Configuration Manager instance when a Support Hub is no longer required to access the Internet. To do this, create a new response file using the `emocmrsp` command with the arguments

-repeater NONE, and use that response file with `configCCR -R` to re-configure the Oracle Configuration Manager instance.

Note that if you want to reconfigure Oracle Configuration Manager to change parameters other than Support Hub usage (the My Oracle Support credentials associated with that system, for instance), you need not use a response file. Once a Support Hub is configured, it is maintained throughout any reconfiguration until it is explicitly removed.

To verify the Support Hub is being used to upload configuration data to Oracle, execute the command `$ORACLE_HOME/ccr/bin/emCCR -verbose test`. The results of this command will identify the Support Hub being used.

### 3.4.1 Restrictions

The following restrictions apply when you are working with the Support Hub.

- You can only use one Support Hub in an OC4J installation or a WebLogic domain.
- OCM instance must be release 10.3.1 or higher to be configured to use the Support Hub.
- Oracle Configuration Manager instance running on IBM platforms cannot be configured to use the Support Hub.

## 3.5 Troubleshooting - Errors That May Occur

You may see the following errors when running Support Hub:

- When more than one Support Hub deployment is tried under the same domain, you will get the following warning message:

```
This repeater application is already deployed in another server AdminServer.
Continuing the deployment may result in the two repeaters interfering with each
other.
```

```
Recommended action is to ensure existing one is undeployed and then continue.
Do you want to proceed deploying in server AdminServer1 anyway? {Y/N} [N]:
```

- Support Hub configuration on Solaris is not possible with JDK other than release 1.4.2. With any other JDK release lower than 1.4.2, it gives the error.

```
ccr/bin/emocmrsp -repeater http://<hostname>[:<port>]
Failed to get Symmetric Key No such algorithm: AES
.
.
```

After prompting for the password, the Support Hub gives the previous error and again asks for the user name and password (optional). This happens on Solaris releases 5.8, 5.9, and 5.10.

## 3.6 Common Questions

**Q:** Does the Support Hub support proxy servers?

**A:** Yes, if there is no direct connection found from the Support Hub to Oracle, you can specify proxy server details (supported authentication methods are basic or digest), just as with an individual Oracle Configuration Manager instance connecting to Oracle in the no-Support Hub case.

**Q:** What is the difference between the Repeater and the Support Hub?

**A:** The Repeater is the implementation of the Support Hub.

**Q:** How does configuring an Oracle Configuration Manager instance to use a Support Hub differ from configuring Oracle Configuration Manager in disconnected mode?

**A:** When configured to use a Support Hub, an Oracle Configuration Manager instance is running in connected mode – the difference is that the connection to Oracle is through the Support Hub rather than a direct connection or a connection using a proxy server. Systems that would have run in disconnected mode because they lacked a connection to Oracle can now run in connected mode, using the Support Hub to connect to Oracle. If an Oracle Configuration Manager instance is configured in disconnected mode, it cannot make use of a Support Hub.

Oracle Configuration Manager instance (version 10.3.1 or later) in disconnected mode can be switched to connected mode and configured to use a Support Hub by running `configCCR -R` with a response file. If the response file used was created by specifying a Support Hub argument in the `emocmrsp` command, subsequent to the re-configuration of the Oracle Configuration Manager instance, will automatically start using the Support Hub.

---

---

## Third-Party Licenses

This appendix contains licensing information in the form of third-party dependency attribution requirements for products included with Oracle Configuration Manager release 10.0.1. Unless otherwise specifically noted, all license information herein is provided for notice purposes only.

Licensing information is included for the following products:

- [Apaches Common CSV 2.0](#)
- [Args4j 2.0.9](#)
- [JSch 0.1.32](#)

### A.1 Apaches Common CSV 2.0

Apache License  
Version 2.0, January 2004  
<http://www.apache.org/licenses/>

#### TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. **Definitions.** "License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is

included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. **Grant of Copyright License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.
3. **Grant of Patent License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.
4. **Redistribution.** You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:
  - a. You must give any other recipients of the Work or Derivative Works a copy of this License; and
  - b. You must cause any modified files to carry prominent notices stating that You changed the files; and
  - c. You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and



- d. If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.
  - e. You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.
- 5. Submission of Contributions.** Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.
- 6. Trademarks.** This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.
- 7. Disclaimer of Warranty.** Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.
- 8. Limitation of Liability.** In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.
- 9. Accepting Warranty or Additional Liability.** While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each

Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

## END OF TERMS AND CONDITIONS

### APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[ ]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at <http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and limitations under the License.

## A.2 Args4j 2.0.9

Copyright Kohsuke Kawaguchi 2003-2009. All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions: The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

## A.3 JSch 0.1.32

Copyright (c) 2002,2003,2004,2005,2006,2007,2008 Atsuhiko Yamanaka, JCraft,Inc. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. The names of the authors may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED ``AS IS" AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL JCRAFT, INC. OR ANY CONTRIBUTORS TO THIS SOFTWARE BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.



---

---

## Setting Up SSH (SSHD) Server on Microsoft Windows

Before starting with the SSHD setup, ensure you are not using OpenSSH and MKSNT when using the Mass Deployment Utility. The Mass Deployment Utility uses the complete Cygwin suite (full collection of the software tools packaged in Cygwin). To get the complete collection of Cygwin, do the following:

1. Ensure OpenSSH\bin and mksnt are not in your %PATH%. If they are, remove them by doing the following:
  - a. Right-click on **My Computer** and go to **Properties**.
  - b. In the System Properties window that appears, click **Advanced**.
  - c. In this tab, click **Environment Variables**.
  - d. Here, search for the Path system variable, select it, and if the OpenSSH\bin and mksnt are present in the PATH, click **Edit**.
  - e. In the Edit System Variable dialog box that appears, delete these two values from the PATH, and click **OK**.
2. Now, stop the SSH Daemon if it is running from OpenSSH. To do this:
  - a. Right-click on **My Computer**, and select **Manage**.
  - b. In the Computer Management window that appears, go to **Services** under Services and Applications.
  - c. In the right-pane, select the SSH daemon service and click the **Stop Service** icon.

**Note:** Ensure you rename the installation directories of OpenSSH and MKSNT. Also remove the Cygnus Solutions Key (HKEY\_LOCAL\_MACHINE\SOFTWARE\Cygnus Solutions) from the Registry. To do it, go to a windows command prompt, type regedit. It will open the Registry Editor. Search for the Cygnus Solutions key under SOFTWARE, which is under HKEY\_LOCAL\_MACHINE). Right click **Cygnus Solutions** entry in the Registry tree, click **Delete** and confirm **yes**.

3. To install the full suite of Cygwin software, go to <http://www.cygwin.com>, and install Cygwin in your C:\cygwin directory.

While installing Cygwin, ensure you choose the following binaries:

- a. Zip, unzip binaries from the Archive package.
- b. OpenSSH and dependencies (automatically selected if you choose OpenSSH) from the Net package.

- 
4. Ensure that the `c:\cygwin\bin` path is before any other path in the `PATH` system environment variable.
  5. Once openSSH is installed, open a cygwin bash shell and invoke the following commands.

```
chmod +r /etc/passwd
chmod +r /etc/group
chmod 755 /var
```

6. Open a new command prompt and execute the following:

```
bash
ssh-host-config -y
```

The `-y` option will assume yes for all questions and proceed.

Choose the default option if asked for value for `CYGWIN` environment variable.

Choose the default option if asked for permission while overwriting `'/etc/sshd_config'`.

7. Create `passwd` and `group` entries by typing the following in cygwin bash shell:

```
mkgroup -d <DOMAIN_NAME> >> /etc/group
mkpasswd -u <USER> -d <DOMAIN_NAME> >> /etc/passwd
```

For local users, type:

```
mkpasswd -cl <USER> >> /etc/passwd
mkgroup --local >> /etc/group
```

8. Start the SSH daemon.

```
/usr/sbin/sshd
```

Alternatively, from the same `BASH` prompt, you can also execute:

```
cygrunsrv -S sshd
```

**Note:** Use `cygrunsrv -E sshd` to stop the SSH daemon.

9. You can now test your cygwin setup. To do this, go to a different machine (that has the `ssh` client), and execute the following command:

```
ssh -l <USERNAME> <your Windows machine name> 'date'
```

or from your Windows machine

```
ssh -l <USERNAME> <your Windows machine name> 'date'
```

For example,

```
ssh -l pjohn egal07.db.funds.com 'date'
```

This command will prompt you to specify the password. When you specify the correct password, the command should return the accurate date.

---

---

# Index

## A

---

action field  
    in Mass Deployment input csv file, 2-9  
Apaches Common CSV license, A-1  
Args4j license, A-4

## C

---

cmd status field  
    in Mass Deployment input csv file, 2-10  
Companion Distribution kit  
    installing, 1-2  
    utilities in, 1-1  
configuration data  
    using Support Hub to upload to Oracle, 3-6  
configuring  
    Mass Deployment, 2-4  
credentials  
    in Mass Deployment input file, 2-7  
Cygwin suite  
    used by Mass Deployment, B-1

## D

---

db fields in input csv file  
    db sid field, 2-9  
    db type field, 2-9  
    db-app-password field, 2-10  
    db-app-user field, 2-9  
    db-pwd field, 2-9  
    db-user field, 2-9  
db sid field, 2-9  
db type field, 2-9  
db-app-password field, 2-10  
db-app-user field, 2-9  
db-pwd field, 2-9  
db-user field, 2-9

## E

---

errors  
    in Mass Deployment, 2-14  
    in Support Hub, 3-7

## H

---

host fields in input csv file  
    hostname field, 2-9  
    host-password field, 2-9  
    host-user field, 2-9  
hostname field, 2-9  
host-password field, 2-9  
host-user field, 2-9

## I

---

input csv file  
    fields in, 2-9  
    input to remote\_op utility, 2-8  
input file  
    Mass Deployment, 2-2  
    Mass Deployment example, 2-13  
installing  
    Companion Distribution kit, 1-2  
    Mass Deployment, 2-3  
    Support Hub, 3-2

## J

---

JSch license, A-4

## L

---

licenses, third-party  
    Apaches Common CSV, A-1  
    Args4j, A-1  
    JSch, A-1  
log file, 2-2  
    Mass Deployment, 2-12

## M

---

Mass Deployment  
    components  
        input file, 2-2  
        log file, 2-2, 2-12  
        output file, 2-2, 2-11  
        password.csv file, 2-1  
        remote\_op utility, 2-1  
        sample\_input.csv file, 2-2  
        secure\_password utility, 2-1

- configuring, 2-4
- definition of, 1-1, 2-1
- features, 1-2
- installing, 2-3
- prerequisites, 2-2
- restrictions, 2-12
- running, 2-4
- troubleshooting, 2-14
- upgrading, 2-3, 2-12

Mass Deployment utility

- See Mass Deployment

metalink fields in input csv file

- ml-pwd, 2-9
- ml-user field, 2-9

ml-pwd field, 2-9

ml-user field, 2-9

## O

---

OC4J deployment, 3-2

ocm mode field

- in input csv file, 2-9

ocm status field

- in input csv file, 2-9

ocm version field

- in input csv file, 2-9

ocmrepeaterctl utility, 3-4

- managing Support Hub, 3-4

Oracle Application Server

- support for, 3-2

oracle config home path field

- in input csv file, 2-9

output file

- example in Mass Deployment, 2-13
- Mass Deployment, 2-2, 2-11

## P

---

password.csv file, 2-1, 2-4

prerequisites

- Mass Deployment, 2-2
- Support Hub, 3-2

product home path field

- in input csv file, 2-9

properties file

- Mass Deployment, 2-4

proxy fields in input csv file

- proxy-host field, 2-9
- proxy-port field, 2-9
- proxy-pwd field, 2-9
- proxy-user field, 2-9

proxy servers

- supported by Support Hub, 3-7

proxy-host field, 2-9

proxy-port field, 2-9

proxy-pwd field, 2-9

proxy-user field, 2-9

## R

---

reconfiguring

Support Hub, 3-4

remote\_op utility

- arguments for, 2-7
- definition of, 2-1, 2-6
- help for, 2-7
- results, 2-7

Repeater

- See Support Hub

## S

---

sample\_input.csv file, 2-2

- template for input file to Mass Deployment, 2-8

secure\_password utility

- arguments, 2-6
- definition of, 2-1, 2-5
- help option, 2-6

SSHD setup

- Support Hub, B-1

Stand Alone Repeater

- See Support Hub

Support Hub

- definition of, 1-1, 3-1
- deploying example, 3-2
- deployment in WebLogic environment, 3-3
- features, 1-2
- installing, 3-2
- managing, 3-4
- prerequisites, 3-2
- proxy servers, 3-7
- reconfiguring, 3-4
- using to upload configuration data, 3-6

Support Hub utility

- See Support Hub

## T

---

troubleshooting

- Mass Deployment, 2-14
- Support Hub, 3-7

## U

---

upgrading

- Mass Deployment, 2-3, 2-12

## W

---

WebLogic Server

- support for, 3-2