

# HP Service Automation Reporter

for the Solaris, Red Hat Enterprise Linux, and  
Windows operating systems

Software Version: 7.50

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## *Installation Guide*

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# Preface

Welcome to the Service Automation Reporter (SAR), the first configuration management database (CMDB) that offers seamless change automation. Leveraging the Server Automation (SA), Network Automation (NA), Operations Orchestration (OO), and the Application Storage Automation System (ASAS) products, SAR automatically populates and maintains all the infrastructure configuration items (CIs), their detailed attributes, and interdependencies. After SAR is populated with the data, customers can easily execute changes to configure and remediate the IT infrastructure.

## Overview of this Guide

This guide describes installing, uninstalling, migrating, and upgrading SAR and SAR Data Miners, and how to perform SAR administrative tasks.

## Contents of this Guide

This guide contains the following chapters and appendices:

**Chapter 1: Supported Platforms:** Describes the supported operating systems for a SAR core, SAR Database, and the SAR Client.

**Chapter 2: Pre-Installation Requirements:** Describes SAR pre-installation requirements.

**Chapter 3: Installing SAR:** Describes how to install SAR Core and Database instances, and how to configure SA groups to permit access to SAR.

**Chapter 4: Post-Installation Requirements:** Describes SAR post-installation requirements

**Chapter 5: Installing SAR Data Miners:** Describes how to install SAR Data Miners.

**Chapter 6: Migrating SAR:** Describes how to migrate SAR.

**Chapter 7: Upgrading SAR:** Describes how to upgrade SAR and SAR Data Miners.

**Chapter 8: Uninstalling SAR:** Describes how to uninstall SAR.

**Chapter 9: Administration:** Describes the SAR filesystem layout, viewing and setting SAR permissions, creating and assigning security boundaries, the SAR start script, and

enabling actionability of Reports and OO Flows.

# Chapter 1: Supported Platforms

## IN THIS CHAPTER

This chapter discusses the following topics:

- Supported Operating Systems for SAR Core Servers
- Supported Operating Systems for the SAR Client
- Supported Databases for SAR Database Servers
- Supported Data Sources for SAR Data Miners
- Hardware Requirements for SAR Core Servers

## Supported Operating Systems for SAR Core Servers

The following table lists the supported operating systems for the SAR core components.

*Table 1-1: SAR Core Supported Operating Systems*

SUPPORTED OS	VERSIONS	ARCHITECTURE	SAR COMPONENTS
Sun Solaris	Solaris 10	Sun SPARC	All components
Red Hat Linux	Red Hat Enterprise Linux 3 AS	32 bit x86	All components
Red Hat Linux	Red Hat Enterprise Linux 4 AS	64 bit x86	All components

## Supported Operating Systems for the SAR Client

The following table lists the operating systems supported for the SAR Client.

Table 1-2: SAR Client Supported Operating Systems

SUPPORTED OS	VERSIONS	ARCHITECTURE
Windows	Windows XP	32 bit x86
	Windows 2003	32 bit x86
	Windows 2000	32 bit x86
	Windows Vista	32 bit x86 and 64 bit x86

## Supported Databases for SAR Database Servers

The supported version of Oracle for SAR is 10g, either 10.2.0.2 or 10.2.0.4. If you have SAR installed with any other version of Oracle, you must migrate your Oracle database to a supported version of Oracle.

## Supported Data Sources for SAR Data Miners

See "Supported Data Sources for SAR Data Miners" on page 59.

## Hardware Requirements for SAR Core Servers

See the *SA Planning and Installation Guide* for information on the hardware requirements.

# Chapter 2: Pre-Installation Requirements

## IN THIS CHAPTER

This chapter discusses the following topics:

- Installing SA
- Pre-Install Script Requirements
- Open Ports

### **Installing SA**

Using the supplied Server Automation install DVD, install an SA 7.50 core.

For more information, see the *SA Planning and Installation Guide*.

### **Pre-Install Script Requirements**

Before you begin installing SAR, you should have the following two pieces of information:

- The fully qualified domain name or IP address of the server on which the Command Center (OCC) core component is installed.
- The password for the `admin` user of the SA installation (the `cast.admin_pwd` parameter value).

## Open Ports

The following table lists the ports required for SAR.

Table 2-1: SAR Required Ports

PORT NUMBER	PURPOSE	FROM	TO
25 (TCP)	SMTP	SAR Core	Mail Server
443 (TCP)	Web Services	SAR Client	SA OCC
443 (TCP)	Web Services	SAR Client	NA Server
1032 (TCP)	SA Twist	SAR Core	SA OCC
1521 (TCP)	Oracle TNS	SAR Core	SAR Database
8443 (TCP)	Web Services	<ul style="list-style-type: none"> <li>• SAR Client</li> <li>• Data Miner on a Managed Server</li> </ul>	SAR Core
8443 (TCP)	Web Services	<ul style="list-style-type: none"> <li>• SAR Client</li> </ul>	OO Server
8080 (TCP)	SAR Client Download	SAR Client	SAR Core
8873 (TCP)	RSYNC Data Miner	Data Miner on a Managed Server	SAR Core
14445 (TCP)	RMI Over SSL	SAR Client	SAR Core

On the SAR Core server, it is recommended to block port 1099 from external access to the SAR Core server.




---

Blocking port 1099 on the SAR Core server is recommended for the current release as well as all prior releases of SAR.

---



# Chapter 3: Installing SAR

## IN THIS CHAPTER

This chapter discusses the following topics:

- Compatibility
- Overview
- Installing SAR on a Single Server
- Installing SAR and SA on Separate Servers
- Installing the SAR Core, the SAR Database, and SA on Separate Servers
- Files Modified By the SAR Installer at Installation

## Compatibility

SAR 7.50 is compatible with the 7.50 version of Server Automation. In the SA Client, check the version by selecting the **Help ► About** menu item.

## Overview

This chapter describes the following installation scenarios:

- Installing SA, the SAR Core, and the SAR Database on a single server. SA and SAR share a single Oracle RDBMS. See “Installing SAR on a Single Server” for more information.
- Installing SA and SAR on two separate servers. SA and SAR have separate Oracle database instances.

- Installing SA on one server, the SAR Core on a second server, and the SAR database instance on a third server.

See "SAR Architecture and Components" in the *SAR User's Guide* for a description of the files installed by the SAR Installer and their locations.

## Installing SAR on a Single Server

This section describes the concurrent installation of the SAR Database and the SAR Core Services on the same server that SA is installed on. The SAR install process uses the same Installer application that you used to install SA, and you start it in the same manner. When running the Installer, press Ctrl+I at any time to display online help for the current step.

The SAR hardware requirements for installation are the same as the SA hardware requirements. For more information, see the *SA Planning and Installation Guide*.

### Installing SAR Using Simple Interview Mode

To install SAR using the Simple Interview Mode, complete the following steps:

- 1** Log in to the server that you installed SA on, and then launch a command prompt.
- 2** Mount the SAR install DVD using a command similar to `mount /dev/cdrom as appropriate`.
- 3** From the SAR install DVD, start the Installer using the following command:  
 `/<mnt_point>/opsware_installer/install_opsware.sh`



Start the Installer using the fully qualified path name. Do not start the Installer from the local directory.

---

The following prompt appears:

```
Install Type: "OMDB Installation"
```

```
Please select the interview mode. Simple mode uses default values for many of the configuration parameters. Advanced mode allows you to fully configure the installation.
```

- ```
1 - Simple Interview Mode
2 - Advanced Interview Mode
```

Please select the interview mode from the menu, type 'h' for help, 'q' to quit:

- 4** To select the Simple Interview mode, type 1, then press Enter. The following prompt appears:

The Opware Installer will now interview you to obtain the installation parameters it needs. You can use the following keys to navigate forward and backward through the list of parameters:

Control-P - go to the previous parameter  
Control-N - go to the next parameter  
Return - accept the default (if any) and go to the next parameter  
Control-F - finish parameter entry  
Control-I - show this menu, plus information about the current parameter

Press Control-F when you are finished. The Opware Installer will perform a final validation check and write out a response file that will be used to install the Opware components.

Parameter 1 of 11 (truth.oaPwd) Please enter the password for the opware\_admin user. This is the password used to connect to the Oracle database.:

- 5** Press Enter. The following prompt appears:

Parameter 2 of 11 (decrypt\_passwd) Please enter the password for the cryptographic material:

- 6** Type the cryptographic password to use.



The SAR crypto password is used to create an SAR keystore that secures communications between the Data Miner and the SAR Core Server. Because SAR does not need direct access to SA crypto information, the SAR crypto password is not required to match the SA crypto password.

---

The following prompt appears:

Parameter 3 of 11 (truth.servicename) Please enter the service name (aka TNS name) of the Model Repository instance in the facility where Opware Installer is being run [truth]:

- 7** Press Enter. The following prompt appears:

```
Parameter 4 of 11 (omdb.oracleHost) Please enter the hostname
of the server where the Oracle RDBMS will be installed.
[localhost]:
```

- 8** To accept the default value localhost, press Enter. The following prompt appears:

```
Parameter 5 of 11 (omdb.oracleSid) Please enter the SID for
the OMDB Oracle database instance. [cmdb]:
```

- 9** To accept the default value cmdb for the Oracle SID, press Enter. The following prompt appears:

```
Parameter 6 of 11 (omcs.occHost) Please enter the hostname or
IP of the server where the SAS OCC service is running.:
```

- 10** Type the fully qualified domain name or IP address of the server that the Command Center (OCC) core component is installed on, then press Enter. The following prompt appears:

```
Parameter 7 of 11 (omcs.twistUser) Please enter the username
of a SAS admininstator for OMDB to use to connect to the
twist. [admin]:
```

- 11** To accept the default value admin, press Enter. The following prompt appears:

```
Parameter 8 of 11 (omcs.twistPwd) Please enter the password
for the SAS admin user for OMDB to use to connect to the
twist.:
```

- 12** Type the password for the admin account on the SA installation (the `cast.admin_passwd` parameter value), then press Enter. The following prompt appears:

```
Parameter 9 of 11 (omcs.host) Please enter the hostname or IP
of the server where the OMDB Core Services will be installed
(not localhost).:
```

- 13** Type the fully qualified domain name or IP address of the server that you are installing SAR on, then press Enter.



Do not type `localhost` for this parameter.

---

The following prompt appears:

```
Parameter 10 of 11 (omdb.adminPwd)Please enter the password
to use for the OMDB database administrator.:
```

- 14** Type the SAR database administrator password to use, then press Enter.

The following prompt appears:

```
Parameter 11 of 11 (omcs.smtpHost)Please enter the hostname
or IP address of your SMTP mail server. [localhost]:
```

- 15** Perform one of the following two actions:

- Type the name of the mail server that SAR should use, then press Enter.
- To accept the default value localhost, press Enter.

The following prompt appears:

```
All parameters have values. Do you wish to finish the
interview? (y/n):
```

- 16** To finish the interview, type `y`, then press Enter. The following prompt appears:

```
Concluding interview.
Interview complete.
Name of response file to write [/usr/tmp/oiresponse.omdb]:
```

- 17** To accept the default value `/usr/tmp/oiresponse.omdb`, press Enter. The following prompt appears:

```
Response file written to /usr/tmp/oiresponse.omdb.
Would you like to continue the installation using this
response file? (y/n):
```

- 18** To continue, type `y`, then press Enter. The following prompt appears:

```
Welcome to the Opware Installer.
Please select the components to install.
1 ( ) Oracle RDBMS for OMDB
2 ( ) Opware OMDB Database Instance
3 ( ) Opware OMDB Core Services
Enter a component number to toggle ('a' for all, 'n' for
none).
When ready, press 'c' to continue, or 'q' to quit.
Selection:
```



Because this installation is of SA, the SAR Core, and the SAR Database on a single server, selecting all components is appropriate. For more information, see “Installing SAR on a Single Server” on page 20.

---

**19** To select all, type `a`, then press Enter. The following prompt appears:

```
Welcome to the Opware Installer.
Please select the components to install.
1 (*) Oracle RDBMS for OMDB
2 (*) Opware OMDB Database Instance
3 (*) Opware OMDB Core Services
Enter a component number to toggle ('a' for all, 'n' for
none).
When ready, press 'c' to continue, or 'q' to quit.
Selection:
```

**20** To continue, type `c`, then press Enter. The following prompt appears:

```
Installing preliminary components
.....
Database with cryptographic material not found. Would you
like Opware Installer to generate new database of
cryptographic material? [y/n]
```

**21** Perform one of the following two actions:

- Type `y`, then Enter.
- To use existing cryptographic information, contact Technical Support for more information.

The following prompt appears:

```
Invoking OCT, this may take a while...

>>>>Installing component Oracle RDBMS for OMDB
.....
>>>>Installing component Opware OMDB Database Instance
.....
>>>>Installing component Opware OMDB Core Services
.....
Opware Installer ran successfully.
```

For more details, please see the following file:

```

/var/log/opsware/install_opsware/
install_opsware.2007-02-26.21:30:54_verbose.log

#####
WARNING: to make sure that no sensitive information is left
on this server, please remove, encrypt or copy to a secure
location
the following files and directories:
  -- /var/opt/opsware/install_opsware/resp/*
  -- /var/log/opsware/install_opsware/*
  -- /var/tmp/*.sh
Also, please encrypt or store in a secure location the
response file
that you used to install this core.
#####

Script done on Mon Feb 26 21:39:23 2007

```

You have completed installing SAR.

### Installing SAR Using Advanced Interview Mode

To install SAR using the Advanced Interview Mode, complete the following steps:

- 1** Log in to the server that you installed SA on, and then launch a command prompt.
- 2** Mount the SAR install DVD using a command similar to `mount /dev/cdrom as appropriate`.
- 3** From the SAR install DVD, start the Installer using the following command:  
`<mnt_point>/opsware_installer/install_opsware.sh`




---

Start the Installer using the fully qualified path name. Do not start the Installer from the local directory.

---

The following prompt appears:

```
Install Type: "OMDB Installation"
```

```
Please select the interview mode. Simple mode uses default
values for many of the configuration parameters. Advanced
mode allows you to fully configure the installation.
```

```
1 - Simple Interview Mode
```

## 2 - Advanced Interview Mode

Please select the interview mode from the menu, type 'h' for help, 'q' to quit:

- 4** To select the Advanced Interview mode, type 2, then press Enter. The following prompt appears:

The Opware Installer will now interview you to obtain the installation parameters it needs. You can use the following keys to navigate forward and backward through the list of parameters:

Control-P - go to the previous parameter

Control-N - go to the next parameter

Return - accept the default (if any) and go to the next parameter

Control-F - finish parameter entry

Control-I - show this menu, plus information about the current parameter

Press Control-F when you are finished. The Opware Installer will perform a final validation check and write out a response file that will be used to install the Opware components.

Parameter 1 of 22 (truth.oaPwd) Please enter the password for the opware\_admin user. This is the password used to connect to the Oracle database.:

- 5** Press Enter. The following prompt appears:

Parameter 2 of 22 (decrypt\_passwd) Please enter the password for the cryptographic material:

- 6** Type the cryptographic password to use.



The SAR crypto password is used to create an SAR keystore that secures communications between the Data Miner and the SAR Core Server. Because SAR does not need direct access to SA crypto information, the SAR crypto password is not required to match the SA crypto password.

---

The following prompt appears:



Parameter 3 of 22 (truth.servicename) Please enter the service name (aka TNS name) of the Model Repository instance in the facility where Opsware Installer is being run [truth]:

- 7** Press Enter. The following prompt appears:

Parameter 4 of 22 (omdb.oracleHost) Please enter the hostname of the server where the Oracle RDBMS will be installed. [localhost]:

- 8** To accept the default value localhost, press Enter. The following prompt appears:

Parameter 5 of 22 (omdb.oracleSid) Please enter the SID for the OMDB Oracle database instance. [cldb]:

- 9** Type the password for the Oracle SID, and then press Enter. The following prompt appears:

Parameter 6 of 22 (omdb.sysPwd) Please enter the password to use for the OMDB Oracle SYS user.:

- 10** Type the password for the Oracle system password, and then press Enter. The following prompt appears:

Parameter 7 of 22 (omdb.systemPwd) Please enter the password to use for the OMDB Oracle SYSTEM user.:

- 11** Type the password for the SYS user for the SAR Oracle database instance, and then press Enter. The following prompt appears:

Parameter 8 of 22 (omdb.pgaAggrTarget) Please enter the value to use for the PGA\_AGGREGATE\_TARGET for the OMDB Oracle instance (in Megabytes). [80]:

- 12** To accept the default value 80 for the Oracle sizing parameter, press Enter. The following prompt appears:

Parameter 9 of 22 (omdb.sgaTarget) Please enter the value to use for the SGA\_TARGET for the OMDB Oracle instance (in Megabytes). [150]:

- 13** To accept the default value 150 for the Oracle sizing parameter, press Enter. The following prompt appears

Parameter 10 of 22 (omcs.occHost) Please enter the hostname or IP of the server where the SAS OCC service is running.:

- 14** Type the fully qualified domain name or IP address of the server that the Command Center (OCC) core component is installed on, then press Enter. The following prompt appears:

Parameter 11 of 22 (omcs.twistUser) Please enter the username of a SAS administrator for OMDB to use to connect to the twist. [admin]:

- 15** To accept the default value admin, press Enter. The following prompt appears:

Parameter 12 of 22 (omcs.twistPwd) Please enter the password for the SAS admin user for OMDB to use to connect to the twist.:

- 16** Type the password for the admin account on the SA installation (the cast.admin\_passwd parameter value), then press Enter. The following prompt appears:

Parameter 13 of 22 (omcs.host) Please enter the hostname or IP of the server where the OMDB Core Services will be installed (not localhost).:

- 17** Type the fully qualified domain name or IP address of the server that you are installing SAR on, then press Enter.



Do not type localhost for this parameter.

---

The following prompt appears:

Parameter 14 of 22 (omcs.port) Please enter the port on which the OMDB Core Services will run. [8443]:

- 18** To accept the default value 8443, press Enter. The following prompt appears:

Parameter 15 of 22 (omcs.rsyncPort) Please enter the port on which the rsync service will run. [8873]:

- 19** To accept the default value 8873, press Enter. The following prompt appears:

Parameter 16 of 22 (omcs.rmiObjectPort) Please enter the port on which RMIObject should run. [14445]:

- 20** To accept the default value 14445, press Enter. The following prompt appears:

Parameter 17 of 22 (omcs.webServicesPort) Please enter the port on which WebServices should run. [8083]:

- 21** To accept the default value 8083, press Enter. The following prompt appears:

Parameter 18 of 22 (omdb.adminPwd) Please enter the password to use for the OMDB database administrator.:

- 22** Type the password, and then press Enter. The following prompt appears:

Parameter 19 of 22 (omdb.applPwd) Please enter the password to use for the OMDB database applications user.:  
Consider using a non-default password.

**23** Type the password, and then press Enter. The following prompt appears:

```
Parameter 20 of 22 (omdb.reporterPwd) Please enter the
password to use for the OMDB database reporter user.:
```

**24** Type the password, and then press Enter. The following prompt appears:

```
Parameter 21 of 22 (omcs.smtpHost) Please enter the hostname
or IP address of your SMTP mail server. [localhost]:
```

**25** Perform one of the following two actions:

- Type the name of the mail server that SAR should use, then press Enter.
- To accept the default value localhost, press Enter.

The following prompt appears:

```
Parameter 22 of 22 (omcs.smtpPort) Please enter the port on
which your SMTP mail server is listening. [25]:
```

**26** To accept the default value 25, press Enter. The following prompt appears

```
All parameters have values. Do you wish to finish the
interview? (y/n):
```

To finish the interview, type `y`, then press Enter.

To complete the installation, see step 16 on page 23, and then complete step 17 to step 21.

## Installing SAR and SA on Separate Servers

This section describes the installation of the SAR Database and the SAR Core Services on a separate server that the SA server was installed on. The SAR install process uses the same Installer application that you used to install SA, and you start it in the same manner. The SAR hardware requirements for installation are the same as the SA hardware requirements.

For more information, see the *SA Planning and Installation Guide*.

### Installing SAR Using Simple Interview Mode

To install SAR using the Simple Interview Mode, complete the following steps:

- 1** Log in to the server you want to install the SAR Database and the SAR Core Services on.
- 2** Mount the SAR install DVD using a command similar to `mount /dev/cdrom as appropriate`.
- 3** From the SAR install DVD, start the Installer using the following command:  
`<mnt_point>/opsware_installer/install_opsware.sh`



Start the Installer using the fully qualified path name. Do not start the Installer from the local directory.

---

The following prompt appears:

```
Install Type: "OMDB Installation"
```

```
Please select the interview mode. Simple mode uses default values for many of the configuration parameters. Advanced mode allows you to fully configure the installation.
```

```
1 - Simple Interview Mode
2 - Advanced Interview Mode
```

```
Please select the interview mode from the menu, type 'h' for help, 'q' to quit:
```

- 4** To select the Simple Interview mode, type 1, then press Enter. The following prompt appears:

The Opware Installer will now interview you to obtain the installation parameters it needs. You can use the following keys to navigate forward and backward through the list of parameters:

Control-P - go to the previous parameter  
Control-N - go to the next parameter  
Return - accept the default (if any) and go to the next parameter  
Control-F - finish parameter entry  
Control-I - show this menu, plus information about the current parameter

Press Control-F when you are finished. The Opware Installer will perform a final validation check and write out a response file that will be used to install the Opware components.

Parameter 1 of 9 (decrypt\_passwd) Please enter the password for the cryptographic material:

- 5** Type the cryptographic password to use.



---

The SAR crypto password is used to create an SAR keystore that secures communications between the Data Miner and the SAR Core Server. Because SAR does not need direct access to SA crypto information, the SAR crypto password is not required to match the SA crypto password.

---

The following prompt appears:

Parameter 2 of 9 (omdb.oracleHost) Please enter the hostname of the server where the Oracle RDBMS will be installed.  
[localhost]:

- 6** To accept the default value localhost, press Enter. The following prompt appears:

Parameter 3 of 9 (omdb.oracleSid) Please enter the SID for the OMDB Oracle database instance. [cmdb]:

- 7** To accept the default value cmdb for the Oracle SID, press Enter. The following prompt appears:

Parameter 4 of 9 (omcs.occhost) Please enter the hostname or IP of the server where the SAS OCC service is running.:

- 8** Type the fully qualified domain name or IP address of the server that the Command Center (OCC) core component is installed on, then press Enter. The following prompt appears:

```
Parameter 5 of 9 (omcs.twistUser) Please enter the username of
a SAS admininstator for OMDB to use to connect to the twist.
[admin]:
```

- 9** To accept the default value admin, press Enter. The following prompt appears:
- ```
Parameter 6 of 9 (omcs.twistPwd) Please enter the password for
the SAS admin user for OMDB to use to connect to the twist.:
```

- 10** Type the password for the admin account on the SA installation (the `cast.admin_passwd` parameter value), then press Enter. The following prompt appears:
- ```
Parameter 7 of 9 (omcs.host) Please enter the hostname or IP
of the server where the OMDB Core Services will be installed
(not localhost).:
```

- 11** Type the fully qualified domain name or IP address of the server that you are installing SAR on, then press Enter.



Do not type `localhost` for this parameter.

---

The following prompt appears:

```
Parameter 8 of 9 (omdb.adminPwd) Please enter the password to
use for the OMDB database administrator.:
```

- 12** Type the SAR Administrator password to use, then press Enter.

The following prompt appears:

```
Parameter 9 of 9 (omcs.smtpHost) Please enter the hostname or
IP address of your SMTP mail server. [localhost]:
```

- 13** Perform one of the following two actions:

- Type the name of the mail server that SAR should use, then press Enter.
- To accept the default value localhost, press Enter.

The following prompt appears:

All parameters have values. Do you wish to finish the interview? (y/n):

- 14** To finish the interview, type `y`, then press Enter. The following prompt appears:
- ```
Concluding interview.
Interview complete.
Name of response file to write [/usr/tmp/oiresponse.omdb]:
```

- 15** To accept the default value `/usr/tmp/oiresponse.omdb`, press Enter. The following prompt appears:
- ```
Response file written to /usr/tmp/oiresponse.omdb.
Would you like to continue the installation using this
response file? (y/n):
```

- 16** To continue, type `y`, then press Enter. The following prompt appears:
- ```
Welcome to the Opware Installer.
Please select the components to install.
1 ( ) Oracle RDBMS for OMDB
2 ( ) Opware OMDB Database Instance
3 ( ) Opware OMDB Core Services
Enter a component number to toggle ('a' for all, 'n' for
none).
When ready, press 'c' to continue, or 'q' to quit.
```



Because this configuration is installing SA on one server and installing all of the SAR components on the current server, selecting all components is appropriate. For more information, see “Installing SAR and SA on Separate Servers” on page 30.

- 17** To select all, type `a`, then press Enter. The following prompt appears:
- ```
Welcome to the Opware Installer.
Please select the components to install.
1 (*) Oracle RDBMS for OMDB
2 (*) Opware OMDB Database Instance
3 (*) Opware OMDB Core Services
Enter a component number to toggle ('a' for all, 'n' for
none).
When ready, press 'c' to continue, or 'q' to quit.
Selection:
```

- 18** To continue, type `c`, then press Enter. The following prompt appears:
- ```
Installing preliminary components
.....
```

Database with cryptographic material not found. Would you like Opware Installer to generate new database of cryptographic material? [y/n]

**19** Perform one of the following two actions:

- Type y, then Enter.
- To use existing cryptographic information, contact Technical Support for more information.

The following prompt appears:

```
Invoking OCT, this may take a while...

>>>>Installing component Oracle RDBMS for OMDB
.....
>>>>Installing component Opware OMDB Database Instance
.....
>>>>Installing component Opware OMDB Core Services
.....
Opware Installer ran successfully.

For more details, please see the following file:
/var/log/opware/install_opware/
install_opware.2007-02-26.21:30:54_verbose.log

#####
WARNING: to make sure that no sensitive information is left
on this server, please remove,encrypt or copy to a secure
location
the following files and directories:
  -- /var/opt/opware/install_opware/resp/*
  -- /var/log/opware/install_opware/*
  -- /var/tmp/*.sh
Also, please encrypt or store in a secure location the
response file
that you used to install this core.
#####

Script done on Mon Feb 26 21:39:23 2007
```

You have completed installing SAR.



## Installing SAR Using Advanced Interview Mode

To install SAR using the Advanced Interview Mode, complete the following steps:

- 1** Log in to the server you want to install the SAR Database and the SAR Core Services on.
- 2** Mount the SAR install DVD using a command similar to `mount /dev/cdrom as appropriate`.
- 3** From the SAR install DVD, start the Installer using the following command:  
`<mnt_point>/opsware_installer/install_opsware.sh`



Start the Installer using the fully qualified path name. Do not start the Installer from the local directory.

The following prompt appears:

```
Install Type: "OMDB Installation"
```

```
Please select the interview mode. Simple mode uses default
values for many of the configuration parameters. Advanced
mode allows you to fully configure the installation.
```

```
1 - Simple Interview Mode
2 - Advanced Interview Mode
```

```
Please select the interview mode from the menu, type 'h' for
help, 'q' to quit:
```

- 4** To select the Advanced Interview mode, type 2, then press Enter. The following prompt appears:

```
The Opsware Installer will now interview you to obtain the
installation parameters it needs. You can use the following
keys to navigate forward and backward through the list of
parameters:
```

```
Control-P - go to the previous parameter
Control-N - go to the next parameter
Return - accept the default (if any) and go to the next
parameter
Control-F - finish parameter entry
Control-I - show this menu, plus information about the
current parameter
```

Press Control-F when you are finished. The Opsware Installer will perform a final validation check and write out a response file that will be used to install the Opsware components.

Parameter 1 of 20 (decrypt\_passwd) Please enter the password for the cryptographic material:

- 5** Type the cryptographic password to use.



---

The SAR crypto password is used to create an SAR keystore that secures communications between the Data Miner and the SAR Core Server. Because SAR does not need direct access to SA crypto information, the SAR crypto password is not required to match the SA crypto password.

---

The following prompt appears:

Parameter 2 of 20 (omdb.oracleHost) Please enter the hostname of the server where the Oracle RDBMS will be installed.  
[localhost]:

- 6** To accept the default value localhost, press Enter. The following prompt appears:

Parameter 3 of 20 (omdb.oracleSid) Please enter the SID for the OMDB Oracle database instance. [cldb]:

- 7** To accept the default value cldb for the Oracle SID, press Enter. The following prompt appears:

Parameter 4 of 20 (omdb.sysPwd) Please enter the password to use for the OMDB Oracle SYS user.:

- 8** Type the password for the Oracle system password, and then press Enter. The following prompt appears:

Parameter 5 of 20 (omdb.systemPwd) Please enter the password to use for the OMDB Oracle SYSTEM user.:

- 9** Type the password for the SYS user for the SAR Oracle database instance, and then press Enter. The following prompt appears:

Parameter 6 of 20 (omdb.pgaAggrTarget) Please enter the value to use for the PGA\_AGGREGATE\_TARGET for the OMDB Oracle instance (in Megabytes). [80]:

- 10** To accept the default value 80 for the Oracle sizing parameter, press Enter. The following prompt appears:

Parameter 7 of 20 (omdb.sgaTarget) Please enter the value to use for the SGA\_TARGET for the OMDB Oracle instance (in Megabytes). [150]:

- 11** To accept the default value 150 for the Oracle sizing parameter, press Enter. The following prompt appears

Parameter 8 of 20 (omcs.occHost) Please enter the hostname or IP of the server where the SAS OCC service is running.:

- 12** Type the fully qualified domain name or IP address of the server that the Command Center (OCC) core component is installed on, then press Enter. The following prompt appears:

Parameter 9 of 20 (omcs.twistUser) Please enter the username of a SAS admininstator for OMDB to use to connect to the twist. [admin]:

- 13** To accept the default value admin, press Enter. The following prompt appears:

Parameter 10 of 20 (omcs.twistPwd) Please enter the password for the SAS admin user for OMDB to use to connect to the twist.:

- 14** Type the password for the admin account on the SA installation (the cast.admin\_passwd parameter value), then press Enter. The following prompt appears:

Parameter 11 of 20 (omcs.host) Please enter the hostname or IP of the server where the OMDB Core Services will be installed (not localhost).:

- 15** Type the fully qualified domain name or IP address of the server that you are installing SAR on, then press Enter.

---

Do not type localhost for this parameter.

---



The following prompt appears:

Parameter 12 of 20 (omcs.port) Please enter the port on which the OMDB Core Services will run. [8443]:

- 16** To accept the default value 8443, press Enter. The following prompt appears:

Parameter 13 of 20 (omcs.rsyncPort) Please enter the port on which the rsync service will run. [8873]:

- 17** To accept the default value 8873, press Enter. The following prompt appears:

Parameter 14 of 20 (omcs.rmiObjectPort) Please enter the port on which RMIObject should run. [14445]:

- 18** To accept the default value 14445, press Enter. The following prompt appears:

Parameter 15 of 20 (omcs.webServicesPort) Please enter the port on which WebServices should run. [8083]:

- 19** To accept the default value 8083, press Enter. The following prompt appears:

Parameter 16 of 20 (omdb.adminPwd) Please enter the password to use for the OMDB database administrator.:

- 20** Type the password, and then press Enter. The following prompt appears:

Parameter 17 of 20 (omdb.applPwd) Please enter the password to use for the OMDB database applications user.:  
Consider using a non-default password.

- 21** Type the password, and then press Enter. The following prompt appears:

Parameter 18 of 20 (omdb.reporterPwd) Please enter the password to use for the OMDB database reporter user.:

- 22** Type the password, and then press Enter. The following prompt appears:

Parameter 19 of 20 (omcs.smtpHost) Please enter the hostname or IP address of your SMTP mail server. [localhost]:

- 23** Perform one of the following two actions:

- Type the name of the mail server that SAR should use, then press Enter.
- To accept the default value localhost, press Enter.

The following prompt appears:

Parameter 20 of 20 (omcs.smtpPort) Please enter the port on which your SMTP mail server is listening. [25]:

- 24** To accept the default value 25, press Enter. The following prompt appears

All parameters have values. Do you wish to finish the interview? (y/n):

To finish the interview, type y, then press Enter.

To complete the installation, see step 14 on page 33, and then complete steps step 15 to step 19.

## Installing the SAR Core, the SAR Database, and SA on Separate Servers

This section describes the installation of SA on one server, the SAR Core on a second server, and the SAR database instance on a third server. The SAR install process uses the same Installer application that you used to install SA, and you start it in the same manner. The SAR hardware requirements for installation are the same as the SA hardware requirements.

For more information, see the *SA Planning and Installation Guide*.

### Installing SAR Using Simple Interview Mode

To install SAR using the Simple Interview Mode, complete the following steps:

- 1** Log in to the server you want to install the SAR Database Services on. This server will be referred to as the SAR server.
- 2** Mount the SAR install DVD using a command similar to `mount /dev/cdrom as appropriate`.
- 3** From the SAR install DVD, start the Installer using the following command:  
`<mnt_point>/opsware_installer/install_opsware.sh`



Start the Installer using the fully qualified path name. Do not start the Installer from the local directory.

The following prompt appears:

```
Install Type: "OMDB Installation"
```

```
Please select the interview mode. Simple mode uses default
values for many of the configuration parameters. Advanced
mode allows you to fully configure the installation.
```

```
1 - Simple Interview Mode
2 - Advanced Interview Mode
```

```
Please select the interview mode from the menu, type 'h' for
help, 'q' to quit:
```

- 4** To select the Simple Interview mode, type 1, then press Enter. The following prompt appears:

The Opware Installer will now interview you to obtain the installation parameters it needs. You can use the following keys to navigate forward and backward through the list of parameters:

Control-P - go to the previous parameter  
Control-N - go to the next parameter  
Return - accept the default (if any) and go to the next parameter  
Control-F - finish parameter entry  
Control-I - show this menu, plus information about the current parameter

Press Control-F when you are finished. The Opware Installer will perform a final validation check and write out a response file that will be used to install the Opware components.

Parameter 1 of 9 (decrypt\_passwd) Please enter the password for the cryptographic material:

- 5** Type the cryptographic password to use.



---

The SAR crypto password is used to create an SAR keystore that secures communications between the Data Miner and the SAR Core Server. Because SAR does not need direct access to SA crypto information, the SAR crypto password is not required to match the SA crypto password.

---

The following prompt appears:

Parameter 2 of 9 (omdb.oracleHost) Please enter the hostname of the server where the Oracle RDBMS will be installed.  
[localhost]:

- 6** Type the fully qualified domain name or IP address of the server that you are installing the Oracle RDBMS on, then press Enter.



---

Do not type localhost for this parameter.

---

- 7** The following prompt appears:

Parameter 3 of 9 (omdb.oracleSid) Please enter the SID for the OMDB Oracle database instance. [cldb]:

- 8** To accept the default value cldb for the Oracle SID, press Enter. The following prompt appears:

Parameter 4 of 9 (omcs.occHost) Please enter the hostname or IP of the server where the SAS OCC service is running.:

- 9** Type the fully qualified domain name or IP address of the server that the Command Center (OCC) core component is installed on, then press Enter. The following prompt appears:

Parameter 5 of 9 (omcs.twistUser) Please enter the username of a SAS administrator for OMDB to use to connect to the twist. [admin]:

- 10** To accept the default value admin, press Enter. The following prompt appears:

Parameter 6 of 9 (omcs.twistPwd) Please enter the password for the SAS admin user for OMDB to use to connect to the twist.:

- 11** Type the password for the admin account on the SA server (the cast.admin\_passwd parameter value), then press Enter. The following prompt appears:

Parameter 7 of 9 (omcs.host) Please enter the hostname or IP of the server where the OMDB Core Services will be installed (not localhost).:

- 12** Type the fully qualified domain name or IP address of the server that you will install SAR Core Services on, then press Enter.



Do not type localhost for this parameter.

The following prompt appears:

Parameter 8 of 9 (omdb.adminPwd) Please enter the password to use for the OMDB database administrator.:

- 13** Type the SAR Administrator password to use, then press Enter.

The following prompt appears:

Parameter 9 of 9 (omcs.smtpHost) Please enter the hostname or IP address of your SMTP mail server. [localhost]:

**14** Perform one of the following two actions:

- Type the name of the mail server that SAR should use, then press Enter.
- To accept the default value localhost, press Enter.

The following prompt appears:

All parameters have values. Do you wish to finish the interview? (y/n):

**15** To finish the interview, type `y`, then press Enter. The following prompt appears:

Concluding interview.

Interview complete.

Name of response file to write [/usr/tmp/oiresponse.omdb]:

**16** To accept the default value `/usr/tmp/oiresponse.omdb`, press Enter. The following prompt appears:

Response file written to `/usr/tmp/oiresponse.omdb`.

Would you like to continue the installation using this response file? (y/n):

**17** To continue, type `y`, then press Enter. The following prompt appears:

Welcome to the Opware Installer.

Please select the components to install.

1 ( ) Oracle RDBMS for OMDB

2 ( ) Opware OMDB Database Instance

3 ( ) Opware OMDB Core Services

Enter a component number to toggle ('a' for all, 'n' for none).

When ready, press 'c' to continue, or 'q' to quit.

Selection:

**18** To select Oracle RDBMS for SAR and SAR Database Instance, type `1`, then press Enter, and then type `2`, then press Enter. The following prompt appears:

Welcome to the Opware Installer.

Please select the components to install.

1 (\*) Oracle RDBMS for OMDB

2 (\*) Opware OMDB Database Instance

3 ( ) Opware OMDB Core Services

Enter a component number to toggle ('a' for all, 'n' for none).

When ready, press 'c' to continue, or 'q' to quit.



Selection:

**19** To continue, type c, then press Enter. The following prompt appears:

```
Installing preliminary components
.....
Database with cryptographic material not found. Would you
like Opware Installer to generate new database of
cryptographic material? [y/n]
```

**20** Perform one of the following two actions:

- Type y, and then Enter.
- To use existing cryptographic information, contact Technical Support for more information.

The following prompt appears:

```
Invoking OCT, this may take a while...
```

```
>>>>Installing component Oracle RDBMS for OMDB
.....
>>>>Installing component Opware OMDB Database Instance
.....
Opware Installer ran successfully.
```

```
For more details, please see the following file:
/var/log/opware/install_opware/
install_opware.2007-02-26.21:30:54_verbose.log
```

```
#####
WARNING: to make sure that no sensitive information is left
on this server, please remove, encrypt or copy to a secure
location
```

```
the following files and directories:
```

- ```
-- /var/opt/opware/install_opware/resp/*
-- /var/log/opware/install_opware/*
-- /var/tmp/*.sh
```

```
Also, please encrypt or store in a secure location the
response file
that you used to install this core.
```

```
#####
```

```
Script done on Mon Feb 26 21:39:23 2007
```

- 21** On the server that you intend to install SAR Core Services on, open a command prompt.
- 22** To copy the `oiresponse.omdb` file from the SAR Database server to the SAR Core server, enter the following command:
- ```
scp omdbdatabaseserver:/usr/tmp/oiresponse.omdb .
```
- 23** Mount the SAR install DVD using a command similar to `mount /dev/cdrom` as appropriate.
- 24** From the SAR install DVD, start the Installer using the following command:
- ```
/<mnt_point>/opsware_installer/install_opsware.sh -r /usr/  
tmp/oiresponse.omdb
```
- 25** To continue, type `y`, then press Enter. The following prompt appears:
- ```
Welcome to the Opsware Installer.  
Please select the components to install.  
1 ( ) Oracle RDBMS for OMDB  
2 ( ) Opsware OMDB Database Instance  
3 ( ) Opsware OMDB Core Services  
Enter a component number to toggle ('a' for all, 'n' for  
none).  
When ready, press 'c' to continue, or 'q' to quit.  
Selection:
```
- 26** To select SAR Core Services, type `3`, then press Enter. The following prompt appears:
- ```
Welcome to the Opsware Installer.  
Please select the components to install.  
1 ( ) Oracle RDBMS for OMDB  
2 ( ) Opsware OMDB Database Instance  
3 (*) Opsware OMDB Core Services  
Enter a component number to toggle ('a' for all, 'n' for  
none).  
When ready, press 'c' to continue, or 'q' to quit.  
Selection:
```
- 27** To continue, type `c`, then press Enter. The following prompt appears:
- ```
Installing preliminary components  
.....  
Database with cryptographic material not found. Would you  
like Opsware Installer to generate new database of  
cryptographic material? [y/n]
```
- 28** Perform one of the following two actions:

- Type y, then Enter.
- To use existing cryptographic information, contact Technical Support for more information.

The following prompt appears:

```

Invoking OCT, this may take a while...

>>>>Installing component Opware OMDB Core Services
.....
Opware Installer ran successfully.

For more details, please see the following file:
/var/log/opware/install_opware/
install_opware.2007-02-26.22:30:54_verbose.log

#####
WARNING: to make sure that no sensitive information is left
on this server, please remove,encrypt or copy to a secure
location
the following files and directories:
  -- /var/opt/opware/install_opware/resp/*
  -- /var/log/opware/install_opware/*
  -- /var/tmp/*.sh
Also, please encrypt or store in a secure location the
response file
that you used to install this core.
#####

Script done on Mon Feb 26 22:39:23 2007

```

You have completed installing SAR.

### Installing SAR Using Advanced Interview Mode

To install SAR using the Advanced Interview Mode, complete the following steps:

- 1** Log in to the server you want to install the SAR Database Services on.
- 2** Mount the SAR install DVD using a command similar to `mount /dev/cdrom as appropriate`.
- 3** From the SAR install DVD, start the Installer using the following command:  
`<mnt_point>/opware_installer/install_opware.sh`



---

Start the Installer using the fully qualified path name. Do not start the Installer from the local directory.

---

The following prompt appears:

```
Install Type: "OMDB Installation"
```

```
Please select the interview mode. Simple mode uses default values for many of the configuration parameters. Advanced mode allows you to fully configure the installation.
```

```
1 - Simple Interview Mode
2 - Advanced Interview Mode
```

```
Please select the interview mode from the menu, type 'h' for help, 'q' to quit:
```

- 4** To select the Advanced Interview mode, type 2, then press Enter. The following prompt appears:

The Opsware Installer will now interview you to obtain the installation parameters it needs. You can use the following keys to navigate forward and backward through the list of parameters:

```
Control-P - go to the previous parameter
Control-N - go to the next parameter
Return - accept the default (if any) and go to the next parameter
Control-F - finish parameter entry
Control-I - show this menu, plus information about the current parameter
```

Press Control-F when you are finished. The Opsware Installer will perform a final validation check and write out a response file that will be used to install the Opsware components.

```
Parameter 1 of 20 (decrypt_passwd)Please enter the password for the cryptographic material:
```

- 5** Type the cryptographic password to use.



The SAR crypto password is used to create an SAR keystore that secures communications between the Data Miner and the SAR Core Server. Because SAR does not need direct access to SA crypto information, the SAR crypto password is not required to match the SA crypto password.

The following prompt appears:

```
Parameter 2 of 20 (omdb.oracleHost) Please enter the hostname
of the server where the Oracle RDBMS will be installed.
[localhost]:
```

- 6** Type the fully qualified domain name or IP address of the server that you are installing the Oracle RDBMS on, then press Enter.



Do not type localhost for this parameter.

- 7** The following prompt appears:

```
Parameter 3 of 20 (omdb.oracleSid) Please enter the SID for
the OMDB Oracle database instance. [cldb]:
```

- 8** To accept the default value cldb for the Oracle SID, press Enter. The following prompt appears:

```
Parameter 4 of 20 (omdb.sysPwd) Please enter the password to
use for the OMDB Oracle SYS user.:
```

- 9** Type the password for the Oracle system password, and then press Enter. The following prompt appears:

```
Parameter 5 of 20 (omdb.systemPwd) Please enter the password
to use for the OMDB Oracle SYSTEM user.:
```

- 10** Type the password for the SYS user for the SAR Oracle database instance, and then press Enter. The following prompt appears:

```
Parameter 6 of 20 (omdb.pgaAggrTarget) Please enter the value
to use for the PGA_AGGREGATE_TARGET for the OMDB Oracle
instance (in Megabytes). [80]:
```

- 11** To accept the default value 80 for the Oracle sizing parameter, press Enter. The following prompt appears:

```
Parameter 7 of 20 (omdb.sgaTarget) Please enter the value to
use for the SGA_TARGET for the OMDB Oracle instance (in
Megabytes). [150]:
```

- 12** To accept the default value 150 for the Oracle sizing parameter, press Enter. The following prompt appears

```
Parameter 8 of 20 (omcs.occHost) Please enter the hostname or IP of the server where the SAS OCC service is running.:
```

- 13** Type the fully qualified domain name or IP address of the server that the Command Center (OCC) core component is installed on, then press Enter. The following prompt appears:

```
Parameter 9 of 20 (omcs.twistUser) Please enter the username of a SAS administrator for OMDB to use to connect to the twist. [admin]:
```

- 14** To accept the default value admin, press Enter. The following prompt appears:

```
Parameter 10 of 20 (omcs.twistPwd) Please enter the password for the SAS admin user for OMDB to use to connect to the twist.:
```

- 15** Type the password for the admin account on the SA installation (the cast.admin\_passwd parameter value), then press Enter. The following prompt appears:

```
Parameter 11 of 20 (omcs.host) Please enter the hostname or IP of the server where the OMDB Core Services will be installed (not localhost).:
```

- 16** Type the fully qualified domain name or IP address of the server that you are installing SAR on, then press Enter.

---

Do not type localhost for this parameter.

---



The following prompt appears:

```
Parameter 12 of 20 (omcs.port) Please enter the port on which the OMDB Core Services will run. [8443]:
```

- 17** To accept the default value 8443, press Enter. The following prompt appears:

```
Parameter 13 of 20 (omcs.rsyntaxPort) Please enter the port on which the rsyntax service will run. [8873]:
```

- 18** To accept the default value 8873, press Enter. The following prompt appears:

```
Parameter 14 of 20 (omcs.rmiObjectPort) Please enter the port on which RMIObject should run. [14445]:
```

- 19** To accept the default value 14445, press Enter. The following prompt appears:

Parameter 15 of 20 (omcs.webServicesPort) Please enter the port on which WebServices should run. [8083]:

- 20** To accept the default value 8083, press Enter. The following prompt appears:

Parameter 16 of 20 (omdb.adminPwd) Please enter the password to use for the OMDB database administrator.:

- 21** Type the password, and then press Enter. The following prompt appears:

Parameter 17 of 20 (omdb.applPwd) Please enter the password to use for the OMDB database applications user.:  
Consider using a non-default password.

- 22** Type the password, and then press Enter. The following prompt appears:

Parameter 18 of 20 (omdb.reporterPwd) Please enter the password to use for the OMDB database reporter user.:

- 23** Type the password, and then press Enter. The following prompt appears:

Parameter 19 of 20 (omcs.smtpHost) Please enter the hostname or IP address of your SMTP mail server. [localhost]:

- 24** Perform one of the following two actions:

- Type the name of the mail server that SAR should use, then press Enter.
- To accept the default value localhost, press Enter.

The following prompt appears:

Parameter 20 of 20 (omcs.smtpPort) Please enter the port on which your SMTP mail server is listening. [25]:

- 25** To accept the default value 25, press Enter. The following prompt appears

All parameters have values. Do you wish to finish the interview? (y/n):

To finish the interview, type y, then press Enter.

To complete the installation, see step 15 on page 42, and then complete step 16 to step 28.

## Files Modified By the SAR Installer at Installation

Table 3-1 presents the files modified when installing SAR.

Table 3-1: Files Modified By the SAR Installer at Installation

TOPIC	LOCATION AND DESCRIPTION
SAR properties	/etc/opt/opsware/omdb/ omdb.properties - twist security and scheduled reports settings
Core Services, default port 8443	<ul style="list-style-type: none"> <li data-bbox="843 716 1341 865">• /opt/opsware/omdb/omdb/conf/ http-invoker.sar/jboss- service.xml Two changes for InvokerURLSuffix</li> <li data-bbox="843 896 1341 1045">• /opt/opsware/omdb/omdb/ deploy/http-invoker.sar/META- INF/jboss-service.xml Two changes for InvokerURLSuffix</li> <li data-bbox="843 1076 1341 1224">• /opt/opsware/omdb/omdb/ deploy/jboss-ws4ee.sar/META- INF/jboss-service.xml One change for WebServicesSecurePort</li> <li data-bbox="843 1255 1341 1514">• /opt/opsware/omdb/omdb/ deploy/jbossweb-tomcat55.sar/ server.xml redirectPort connector port keystore password and file (keystoreFile, keystorePass)</li> </ul>
RMIOBJECTPort, default 14445	/opt/opsware/omdb/omdb/conf/ jboss-service.xml
SAR rsync	/etc/opt/opsware/omdb/ rsyncd.conf Change "port" value



Table 3-1: Files Modified By the SAR Installer at Installation (continued)

TOPIC	LOCATION AND DESCRIPTION
SAR Twist password	<p data-bbox="843 394 1310 459">/var/opt/opsware/crypto/omdb/twistpwd</p> <p data-bbox="843 473 1336 664">An obfuscated version of the twist password, created the same way as in SA. You can change the password by recreating the file using plaintext. Upon SAR restart, the password will be automatically obfuscated.</p>
SA Twist	<p data-bbox="843 689 1310 755">/opt/opsware/omdb/bin/enable_omdb_client.sh</p> <ul data-bbox="843 784 997 871" style="list-style-type: none"> <li>• omdb host</li> <li>• omdb port</li> </ul> <p data-bbox="843 900 1310 966">SA twist.conf changes must be changed manually or by running this script.</p>
Application Data Source configurations	<ul data-bbox="843 993 1275 1251" style="list-style-type: none"> <li>• /opt/opsware/omdb/deploy/cmdb-ds.xml</li> <li>• /opt/opsware/omdb/deploy/reporter-ds.xml</li> <li>• /opt/opsware/omdb/deploy/cmdb-admin-ds.xml</li> </ul> <p data-bbox="871 1263 1310 1329">Change the connection-url value for oracle sid, host, port changes.</p> <p data-bbox="871 1340 1310 1412">Change password for Oracle cmdb_app1 user password change.</p>
Cryptographic files (generated at install, including querying twist for the SA public certificate)	<ul data-bbox="843 1443 1336 1638" style="list-style-type: none"> <li>• /var/opt/opsware/crypto/omdb/server.keystore</li> <li>• /opt/opsware/omdb/dist/dmboot.pem</li> </ul> <p data-bbox="871 1611 1275 1644">Data Miner secure communication.</p>
Keystore password	<p data-bbox="843 1669 1325 1734">/opt/opsware/omdb/omdb/deploy/security-service.xml</p>

Table 3-1: Files Modified By the SAR Installer at Installation (continued)

TOPIC	LOCATION AND DESCRIPTION
Dataminer properties	<p data-bbox="843 394 1198 465">/opt/opsware/omdb/bin/ dmconfig.properties</p> <ul data-bbox="843 490 1336 730" style="list-style-type: none"> <li data-bbox="843 490 1002 517">• oracle host</li> <li data-bbox="843 548 920 575">• port</li> <li data-bbox="843 606 1048 633">• oracle omdbsid</li> <li data-bbox="843 664 1336 730">• omdb admin userid (cmdb_admin), but is usually not changed</li> </ul> <p data-bbox="843 755 1336 1025">The cmdb_admin password can be included here as password=xxx but is not included automatically by the SAR Installer. Including the cmdb_admin password will prevent prompting for the cmdb_admin password when running dmconfig.sh to install a Data Miner.</p>
Dataminer files	<p data-bbox="843 1051 1218 1108">/opt/opsware/omdb/dist/ dataminer.tar</p> <p data-bbox="843 1128 1330 1199">This directory includes dataminer.conf and dmboot.pem.</p>
Dataminer parameters	<p data-bbox="843 1224 1218 1282">/opt/opsware/omdb/dist/ dataminer.conf</p> <ul data-bbox="843 1302 1253 1431" style="list-style-type: none"> <li data-bbox="843 1302 987 1329">• rsync port</li> <li data-bbox="843 1360 1253 1431">• server (listed as RestartableCopyLocation)</li> </ul>

## Recovery From an SAR Failed Database Schema Installation

If the installation of the SAR database schema is interrupted and the SAR Installer is run again, the SAR installation can fail displaying SQL errors. An example of the error would be:

```
ERROR - DBInstallationException is caught when trying to process
upgrade
```

```
com.opsware.database.exceptions.DBInstallationException:
upgrade was interrupted when process file
upgrade\cmdb\data\cmdb_data-34.3.0.5-0.xml of step data at phase
cmdb. This file has ended with a unknown state. Execution of
commands in the file is finished but could not determine if has
committed. and database was able to rollback either
```

To correct this problem, perform the following steps:

- 1** Identify the name of the data file that the install or upgrade stopped at.  
To identify the data file name, read the log file in the `/var/log/opsware/install_opsware/` directory to find the error that resembles the above example. In this example, the data file name is `cmdb_data-34.3.0.5-0.xml`.
- 2** Open the data file you identified in step 1. Data files of an install are located in the `/opt/opsware/omdb/dbinstaller/install` directory. Data files of an upgrade are located in the `/opt/opsware/omdb/dbinstaller/upgrade` directory.
- 3** Find the last SQL command in the data file.
- 4** Log in to the SAR database.
- 5** Verify that the last command in the identified data file has committed successfully.
- 6** Using a text editor, open the status file  
`/var/log/opsware/omdb/dbinstall.status`
- 7** Search for `nocommit` in the status file.
- 8** Perform one of the following two actions:
  - If the result of the SQL command was successful, then edit `nocommit` to `complete`.

- If the result of the SQL command was not successful, then edit `nocommit` to `incomplete`.
- 9** Save the status file, and then exit the text editor.
  - 10** Restart the SAR installation or upgrade process.

# Chapter 4: Post-Installation Requirements

## IN THIS CHAPTER

This chapter discusses the following topics:

- Enabling the SAR Client
- Viewing SAR Permissions

### Enabling the SAR Client

For a user to see the SAR Client menu item in the SA Client, you must

- enable SAR on the SA server, and
- create an SAR group and add the user to that group.

The steps for enabling SAR in SA differ depending on whether SAR is installed on the same server as the twist, or if SAR is installed on a different server than the twist server. If SAR is installed on the same server as the twist, perform the steps in the task “Enabling SAR in SA Locally” on page 55. If SAR is not installed on the same server as the twist, perform the steps in “Enabling SAR in SA on a Separate Server” on page 56.

### Enabling SAR in SA Locally

To enable SAR in SA when SAR is installed on the same server as the twist, perform the following steps:

- 1** On the twist server, log in as root.
- 2** Enter the following command:  

```
/opt/opsware/omdb/bin/enable_omdb_client.sh
```
- 3** Restart the twist:  

```
/etc/init.d/opsware-sas restart twist
```

## Enabling SAR in SA on a Separate Server

If you did not install SAR on the server that the twist is installed on, perform the following steps:

- 1** On the twist server, log in as root.
- 2** Enter the following command:  

```
scp youromdbserver:/opt/opsware/omdb/bin/enable_omdb_client.sh /var/tmp
```
- 3** Enter the following command:  

```
/var/tmp/enable_omdb_client.sh
```
- 4** Restart the twist:  

```
/etc/init.d/opsware-sas restart twist
```

## Enabling the SAR Client Menu Item in the SA Client

To enable the SAR Client menu item in the SA Client, perform the following steps:

- 1** Log in to the SAS Web Client as admin.
- 2** In the Navigation panel, click Administration ► Users and Groups. The View Users pane appears.
- 3** Click the Groups tab.
- 4** Click **New Group**.
  1. Type a name for the group.
  2. (Optional) Type the Group description.
- 5** Click **Save**. The new group is displayed in the Groups pane.
- 6** Click the name of the group you just created.
- 7** In the Edit Group pane, assign the users to the new group.
- 8** Click the OMDB Features tab.
- 9** In the General Permissions section, select all five of the checkboxes.
- 10** Click **Save**.
- 11** Add the user to the new group.

## Viewing SAR Permissions

This section describes how to view SAR permissions for an existing group, and the definitions of the permission settings.

### Viewing SAR Permissions

To view the SAR permissions, perform the following steps:

- 1** Log in to the SAS Web Client as admin.
- 2** In the Navigation Panel, click Administration ► Users and Groups. The View Users pane appears.
- 3** Click the Groups tab.
- 4** Select a group. The group is displayed in the View Groups pane.
- 5** Click the OMDB Features tab.

If a user has no SAR permissions, the SA Client will not display the SAR Client item on the Tools menu.

### SAR Permissions

The General Permissions section has the following five checkboxes:

- Schedule Reports - Selecting Schedule Reports causes the SAR Client to display the **Scheduled Reports** item in the **View ► Reports** menu. It also enables the **Schedule** button when the user views a specific report.
- Manage Scheduled Reports - In addition to the permissions granted by selecting Schedule Reports, selecting Manage Scheduled Reports also causes the SAR Client to display the **Manage Scheduled Reports** item in the **View ► Opware Administration** menu. The user can see scheduled reports of other users, set the maximum number of scheduled reports per user, and set the maximum number of reports to be concurrently processed by a server. This permission grants access to only the report definitions of scheduled reports. If the user runs a report created by another user, the data displayed depends on the Data Access permissions. If the user runs a report that attempts to display data the user does not have access to, the report displays the following message: "There is no data that matches your criteria".
- Manage Security Boundaries -Selecting Manage Security Boundaries adds the **Security Boundaries** item on the menu **View ► Opware Administration** menu of the SAR Client to members of the group. The user can create security boundaries.

- Administer OMDB System - Selecting Administer OMDB System permits the user access to ETK-related APIs.
- All Data Access Permissions - Selecting All Data Access Permissions grants members of the group access to all data in SAR. Clear All Data Access Permissions, then use the Data Access section to grant data access to only selected categories.

### **Data Access**

The Data Access section of the OMDB Features tab has three sections:

- NAS Category and Permission
- SAS Category and Permission
- Other Category and Permission

Each section describes one row for each Configuration Item (CI) Type in that section. The Other Category and Permission section displays ASAS and OO permissions, and custom CI Types if defined in the SA installation.

For each CI Type, set the permission for the group by selecting either None, All, or Security Boundary. If you select the Security Boundary option, click **Select** to display the Select Security Boundaries window. For more information see “Creating and Assigning Security Boundaries for Search” in the *SAR User’s Guide*.



# Chapter 5: Installing SAR Data Miners

## IN THIS CHAPTER

This chapter discusses the following topics:

- Supported Data Sources for SAR Data Miners
- Pre-registering a Data Miner
- Installing and Configuring Data Miners for SA
- Installing and Configuring Data Miners for NA
- Installing and Configuring Data Miners for ASAS
- Installing and Configuring Data Miners for OO
- Listing and Unregistering Data Miners
- Starting or Stopping a Data Miner
- Uninstalling Data Miners and Transaction Mining Triggers

## Supported Data Sources for SAR Data Miners

The following list of data sources are supported for SAR Data Miners:

- SAS 6.5.1, SAS 7.0, SA 7.50
- ASAS 1.0, 7.50
- NAS 6.2.1, NA 7.0, NA 7.20, NA 7.50
  - Oracle 9i (9.2.0.7)
  - Oracle 10g (10.2.0.2)
  - SQL Server 2005
- PAS 7.0, OO 7.20
  - Oracle 10g (10.2.0.2)
  - SQL Server 2005



---

If you are installing a Data Miner on NAS 7.0, PAS 7.0 or OO 7.20, Java J2SE v 1.4.2\_15 JRE must be installed on the system that the SAR Data Miner is installed on to. To download this version of Java, go to [http://java.sun.com/products/archive/j2se/1.4.2\\_15/index.html](http://java.sun.com/products/archive/j2se/1.4.2_15/index.html).

---

## Pre-registering a Data Miner

You will need to pre-register your Data Miner on the SAR server. This will set up all of the information needed by a Data Miner to connect to its data source. As part of the process, a registration token is generated that you will need when configuring the Data Miner on the server you will install the Data Miner onto.

You can use one of two methods:

- Interactive mode - shown in “Pre-registering a Data Miner Interactively Using `dmconfig.sh`” on page 60.
- Command line - using the command line option all values can be entered on a single command line.

To avoid typing the SAR Administrator password in every `dmconfig.sh` command, you can add `password=omdb_admin_password` to the file `dmconfig.properties` located in `/opt/opsware/omdb/bin`.



---

The SAR Administrator password is stored in the file in clear text.

---

For details on the parameters, see “Setting Configuration Options Using `dmconfig.sh`” on page 63, or at a command prompt run the following command:

```
./dmconfig.sh --help
```

## Pre-registering a Data Miner Interactively Using `dmconfig.sh`

You need to pre-register your Data Miner on the SAR server. This will set up all of the information needed by a Data Miner to connect to its data source. As part of the process, a registration token is generated that you will need when configuring the Data Miner on

the server that you install the Data Miner onto. The example in this section displays pre-registering a Data Miner for SA. To pre-register a Data Miner interactively with `dmconfig.sh`, perform the following steps:

- 1** Run the Data Miner configuration tool `dmconfig.sh` with the following two commands:

```
cd /opt/opsware/omdb/bin
./dmconfig.sh
```

The following prompt should now be displayed:

```
[ DMConfigure <]
```

- 2** At the `[ DMConfigure <]` prompt, the following commands are supported:
  - **ADD**: Displays the prompts that enable you to generate a registration token.
  - **UPDATE**: Displays a list of properties, noting the required properties. Enter keyvalue pairs until done, and then press Enter to end.
  - **LIST**: Displays current Data Miner configurations.
  - **HELP**: Displays a list of available commands.
  - **QUIT**: Exits the configuration tool.
- 3** (Optional) You may be prompted for the database information for the SAR server. Unless you made changes during the installation, use the following values. (If not prompted for some or all of these, it is because the values were found in `dmconfig.properties`.)
  - Database `[host:port:sid]`: `localhost:1521:cmdb`
  - Userid: `cmdb_admin`
  - Password: the password set during the SAR install for the SAR database administrator
- 4** Type `add` and then press Enter.
- 5** Follow the prompts to generate a new registration token.
  - **Name**: Enter a short name for the data source you are planning to mine. Names are case-sensitive.  
Example: `saserver`
  - **Description**: Enter a meaningful name.  
Example: `SA on SAServer`

- **Connection Template ID:** Enter the number listed for Oracle Driver (typically 1).

Pick source ID: Enter the number for the appropriate data source type.

Example: 1.

The following example shows how this step should display:

```
[ DMConfigure <] add
Name : saserver
Description : SA on SAServer
ID          NAME
-----
1           Oracle Driver
2           SQL Server
Connection template ID : 1
ID          NAME
-----
1           SA
2           NA
3           ASAS
5           OO
Source type id : 1
REG TOKEN is WD2K5R
```



Write down the registration token. A registration token consists of upper-case alphanumeric characters. In this example the registration token is the string WD2K5R. You will need to enter it when configuring the Data Miner on the server you install the Data Miner onto.

Now that the initial add is complete, you need to update the specific database configuration for the Data Miner source.

- 6** At the [ DMConfigure # <] prompt type update and then press Enter. The following prompt appears:

```
[ DMConfigure # <] update
ID          NAME          DESCRIPTION          TOKEN
-----
100         saserver          SA on SAServer      WD2K5R

ID to update :
```

- 7** Select the configuration you want to update. Because there is only a single configuration at this point, select 100.

- 8** Set the connection information that the Data Miner (to be installed shortly on the SA server) will use to connect to its local source database. Each time you enter a value, the current values for the Data Miner source will display.

These values are for the database to be data mined, not the SAR database. Your values will look similar to the following example:

```
database=10.124.6.02:1521:truth (Note that database is of
the format host:port:sid)
user=opsware_admin
password=opsware_admin
```

- 9** When you are finished, press Enter to exit edit mode and return to the prompt.
- 10** Type quit, and then press Enter. The SAR server-side configuration for the Data Miner is now complete.

### Setting Configuration Options Using `dmconfig.sh`

The Data Miner periodically connects to SAR and retrieves miscellaneous configuration settings. You can set the following values:

Table 5-1: Data Miner Configuration Settings

PARAMETER	DEFINITION	DEFAULT
CollectionInterval	adjusts the frequency of the query mine, in milliseconds	5 minutes (300000)
VaultConfigFileDir	specifies the location of the vault configuration file	/etc/opt/opsware/vault/
InitialCollectionDate	the start date and time of a Data Miner. Set a future value to delay the start.	1980-01-01 12.00.00
DataFileChunkSize	the number of transactions in a Data Miner data file	1500
FileTransferGroupSize	the number of files per rsync transfer, per zip	250
FileTransferInterval	the frequency of file transfer tasks, in milliseconds	30 seconds (30000)

Table 5-1: Data Miner Configuration Settings (continued)

PARAMETER	DEFINITION	DEFAULT
DataFileUseClearText (Use for debugging only)	The Data Miner base64 encodes data to support both UTF8 and embedded CDATA. Set to true to use only CDATA.  Note: If true, data xml may fail to load, and some occurrences of UTF8 data may cause the data file to fail signature validation.	false
EtlTableOwnerOverride	ETL specified owner	SYSTEM
TriggerMineHistoryDays	Number of days of processed transaction history for the NA or OO trigger package to keep	2

To set these parameters, at a prompt enter the following command:

```
./dmconfig.sh --update --name {dm name} --settings
setting=value[, setting=value]
```

If NA is not installed with a user name of `system`, you must set the `EtlTableOwnerOverride` value to the name of the database user who owns the table. For example, if the database user name is `dbo`, add the following at the end of the command:

```
--settings EtlTableOwnerOverride=dbo
```

### Pre-registering a Data Miner on the Command Line

This section presents how to pre-register a Data Miner on the command line.

#### Pre-registering a Data Miner for SA and Oracle

To pre-register a Data Miner for SA and Oracle, perform the following steps:

- 1** Log in to the SAR server.
- 2** `cd /opt/opsware/omdb/bin`

```

3 ./dmconfig.sh --add --name SAServer --desc SA on SAServer
    --type SAS --driver Oracle Driver --properties
    database=SAServer.example.com:1521:<SID>,user=<user>,
    password=<password>

```

The database and user/password information in this example are for the SA database, not SAR.



Write down the registration token. A registration token consists of upper-case alphanumeric characters. You will need to enter it when configuring the Data Miner on the SA server you install the Data Miner onto.

### **Pre-registering a Data Miner for NA and Oracle**

To pre-register a Data Miner for NA and Oracle, perform the following steps:

```

1 Log in to the SAR server.
2 cd /opt/opsware/omdb/bin
3 ./dmconfig.sh --add --name NA --desc NA on NAserver --type
    NAS --driver Oracle Driver --properties
    database=NAserver.example.com:1521:<SID>,user=<user>,password=<password>
    [--settings EtlTableOwnerOverride=database_
    username]

```



Write down the registration token. A registration token consists of upper-case alphanumeric characters. You will need to enter it when configuring the Data Miner on the NA server you install the Data Miner onto.

- The database and user/password information in this example are for the NA database, not SAR.
- If you are prompted for a user name, enter `cmdb_admin`.
- If you are prompted for a password, enter `omdb_admin_password` (the password set during the SAR install for the SAR database administrator).

If NA is not installed with a user name of `system`, you must set the `EtlTableOwnerOverride` value as shown in step 3. Set the value to the name of the database user who owns the table. For example, if the database user name is `dbo`, add the following at the end of the command:

```
--settings EtlTableOwnerOverride=dbo
```

### **Pre-registering a Data Miner for NA and SQL Server 2005**

To pre-register a Data Miner for NA and SQL Server 2005, perform the following steps:

- 1** Log in to the SAR server.
- 2** `cd /opt/opsware/omdb/bin`
- 3** `./dmconfig.sh --add --name sqlserver05b --desc NA on MSSQL 2005 --type NAS --driver SQL Server --properties database=sqlserver05b.example.com:1433/NAdatabasename,user=opsware,password=password [ --settings EtlTableOwnerOverride=database_username]`



---

Write down the registration token. A registration token consists of upper-case alphanumeric characters. You will need to enter it when configuring the Data Miner on the NA server you install the Data Miner onto.

---

- The database `NAdatabasename` and user/password information in this example are for the NA database, not SAR.
- If you are prompted for a user name, enter `cmdb_admin`.
- If you are prompted for a password, enter `omdb_admin_password` (the password set during the SAR install for the SAR database administrator).

If NA is not installed with a user name of `system`, you must set the `EtlTableOwnerOverride` value as shown in step 3. Set the value to the name of the database user who owns the table. For example, if the database user name is `dbo`, add the following at the end of the command:

```
--settings EtlTableOwnerOverride=dbo
```

### **Pre-registering a Data Miner for OO and SQL Server 2005**

To pre-register a Data Miner for OO and SQL Server 2005, perform the following steps:



- 1** Log in to the SAR server.
- 2** `cd /opt/opsware/omdb/bin`
- 3** `./dmconfig.sh --add --name sqlserver05b --desc OO on MSSQL  
2005 --type PAS --driver SQL Server --properties  
database=sqlserver05b.example.com:1433/  
OOdatabasename,user=opsware,password=password [ --settings  
EtlTableOwnerOverride=database_username]`



Write down the registration token. A registration token consists of upper-case alphanumeric characters. You will need to enter it when configuring the Data Miner on the OO server you install the Data Miner onto.

- The database `OOdatabasename` and user/password information in this example are for the OO database, not SAR.
- If you are prompted for a user name, enter `cmdb_admin`.
- If you are prompted for a password, enter `omdb_admin_password` (the password set during the SAR install for the SAR database administrator).

If OO is not installed with a user name of `system`, you must set the `EtlTableOwnerOverride` value as shown in step 3. Set the value to the name of the database user who owns the table. For example, if the database user name is `dbo`, add the following at the end of the command:

```
--settings EtlTableOwnerOverride=dbo
```

### **Pre-registering a Data Miner for OO and Oracle**

To pre-register a Data Miner for OO and Oracle, perform the following steps:

- 1** Log in to the SAR server.
- 2** `cd /opt/opsware/omdb/bin`
- 3** `./dmconfig.sh --add --name nc34.pas --desc nc34 OO Db --type  
PAS --driver Oracle Driver --properties  
database=oo.nc34.ncdev.opsware.com:1521:<SID>,user=pas,password=cmdb_admin [ --settings  
EtlTableOwnerOverride=database_username]`



Write down the registration token. A registration token consists of upper-case alphanumeric characters. You will need to enter it when configuring the Data Miner on the OO server you install the Data Miner onto.

---

The database and user/password information in this example are for the OO database, not SAR.

If OO is not installed with a user name of `pas`, you must set the `EtlTableOwnerOverride` value as shown in step 3. Set the value to the name of the database user who owns the table. For example, if the database user name is `dbo`, add the following at the end of the command:

```
--settings EtlTableOwnerOverride=dbo
```

## Installing and Configuring Data Miners for SA

SA by default retains transactions for seven days. If the Data Miner remains inactive for longer than the retention period it is possible that SA transactions will not be mined. You should:

- monitor that the Data Miner remains active on the SA server
- set the monitoring interval to less than the SA retention period



The Data Miner installation task uses `/opt/opsware/dataminer` as an example of a destination directory.

---

## Enabling Mesh Vault Mining For an SA Multimaster Mesh

A Data Miner collects data continuously for both local and remote transactions in a SA multimaster mesh. Only one Data Miner is needed to connect a specific SAR server to a SA multimaster mesh, you do not need to install Data Miners on more than one server in the multimaster mesh. You must install the Data Miner to an SA server in the mesh that a vault daemon runs on.

To enable SA mesh vault mining, the following steps must be performed before installing the Data Miner:

- 1** Using the SAS Web Client, log in to a server in the multimaster mesh.



Log in as a user that has the “Configure Opsware” permission.

- 2** In the Navigation Panel, click **Server ► Managed Servers**.
- 3** In the main pane, find the row for the server where you intend to install the SA Data Miner onto in “Installing a Data Miner on a SA Server” on page 69, then note the value in the Facility column of that row.
- 4** In the Navigation Panel, click **Administration ► System Configuration**, and then click the Facility name that matches the value you noted in step 3.
- 5** Set the `cmdbshareddirectory` parameter to `/var/opt/opsware/vault/spool`.
- 6** Set the `cmdbbufferflushsize` parameter to `15360`.
- 7** Set the `cmdbbufferflushtimeout` parameter to `2000`.
- 8** Set the `cmdbmaxfileage` parameter to `3`.
- 9** Click **Save**.
- 10** Restart the vault daemon on the server that the Data Miner is installed on.

### Installing a Data Miner on a SA Server

To copy the Data Miner files to the SA server and install the Data Miner on the SA server, perform the following steps:

- 1** Log in to the SA server.
- 2** Do a remote copy of `dataminer.tar` from `/opt/opsware/omdb/dist` on the SAR server to a local directory such as `/opt/opsware/dataminer`. The commands used for this step are shown in the following example:
 

```
mkdir -p /opt/opsware/dataminer
cd /opt/opsware/dataminer
scp yourombserver:/opt/opsware/omdb/dist/dataminer.tar .
```
- 3** Untar the file:
 

```
tar -xvf dataminer.tar
```
- 4** Run the `dataminer` setup using the following command:
 

```
./dmsetup.sh
```

The following prompt appears:

Please enter the registration token provided after this dataminer was configured on the OMDB server: []

- 5** Enter the registration token that was generated on the SAR server. The following prompt appears:

Updating token in dataminer.conf

Would you like to have this dataminer automatically start up when the system reboots? y/n:

- 6** Type *y*, then press Enter. The following prompt appears:

Dataminer is now configured for startup:

You can also use command-line parameters with `dmsetup.sh` to run non-interactively. See “Running `dmsetup.sh` Using Command-line Parameters” on page 70.

### Running `dmsetup.sh` Using Command-line Parameters

You can use optional parameters when launching `dmsetup.sh` on a Solaris or Linux server. For example, entering the command

```
dmsetup.sh --help
```

on any Solaris or Linux server that a Data Miner is installed on displays the available parameters and the definitions of those parameters. Table 5-2 displays the available parameters and their definitions.

Table 5-2: `dmsetup.sh`

PARAMETER	USE
<code>--token <i>Token</i></code>	configure the dataminer to use the token <i>Token</i>
<code>--autostart</code>	Sets the Data Miner to start at system boot
<code>--noautostart</code>	Sets the Data Miner to not automatically start at system boot
<code>--unregister</code>	Removes the specified Data Miner from the list of Data Miners running on the server
<code>--register</code>	Adds the specified Data Miner to the list of Data Miners running on the server
<code>--help</code>	Displays the parameters usable with <code>dmsetup.sh</code> and their definitions

When you run `dmsetup.sh`, it creates or updates a file `/etc/opt/opsware/omdb/dataminers.conf` that includes information on all Data Miners installed on that server. If the `dataminers.conf` file exists when you install a new Data Miner, `dmsetup.sh` updates the file with the new information, and adds 1 to the `ConfiguredDataMiners` value. When uninstalling a Data Miner, `dmsetup.sh` comments out the specified Data Miner entry in `dataminers.conf`, and then decreases the `ConfiguredDataMiners` value by 1.

## Installing and Configuring Data Miners for NA

To install a Data Miner for NA, copy the Data Miner from the SAR server, install the Transaction Mining Triggers for the type of database the NA application uses, configure and install the Data Miner on the NA server, then start the Data Miner.

This section describes the following tasks:

- Installing and Configuring a Data Miner on an NA Server on Linux or Solaris
- Installing and Configuring the Data Miner Service on a NA Windows Server



---

The Data Miner installation task uses `/opt/opsware/dataminer` as an example of a destination directory.

---

### Installing and Configuring a Data Miner on an NA Server on Linux or Solaris

To install and configure a NA Data Miner on Linux or Solaris, perform the following tasks in this order:

- 1** “Copying Data Miner Files to the NA Server” on page 72
- 2** “Installing Transaction Mining Triggers for NA with Oracle on Linux or Solaris” on page 73
- 3** “Configuring the Data Miner on the NA Server” on page 74

#### **Copying Data Miner Files to the NA Server**

To copy the Data Miner files to the data source servers, perform the following steps:

- 1** Log in to the NA server.
- 2** Do a remote copy of `dataminer.tar` from `/opt/opsware/omdb/dist` on the SAR server to a local directory such as `/opt/opsware/dataminer`. The commands used for this step are shown in the following example:  

```
scp yoursarsserver:/opt/opsware/omdb/dist/dataminer.tar /opt/opsware/dataminer/.
```
- 3** Untar the file:  

```
cd /opt/opsware/dataminer
tar -xvf dataminer.tar
```

**Installing Transaction Mining Triggers for NA with Oracle on Linux or Solaris**

This section describes how to install transaction mining triggers for a NA installation on a Linux or Solaris server using Oracle.

You will need the following information before you begin:

- The Oracle SID of the NA database instance
- The Oracle database user owning the NA table
- An existing tablespace with 100MB available for SAR transaction data

The Oracle user `OPSW_OMDBXM` must have its disk quota setting set to unlimited to auto-extend the tablespace used for NAS database transaction triggers. If this user's disk quota setting is not set as unlimited, NA users may have problem logging in when `OPSW_OMDBXM` hits the quota limit.

To prepare for installing transaction mining triggers for NA with Oracle on a Linux or Solaris server, perform the following steps:

- 1** Log in to the NA database server as user `root`.
- 2** Type the following commands:

```
chmod 755 /opt/opsware/dataminer/  
chmod 755 /opt/opsware/dataminer/triggers  
chmod 755 /opt/opsware/dataminer/triggers/oracle
```
- 3** Type the following command:

```
chown oracle:dba /opt/opsware/dataminer/triggers/oracle/*
```

To install transaction mining triggers on a NA Linux or Solaris server, perform the following steps:

- 1** Open a command prompt and then log in as the user `oracle`.
- 2** Type the following command:

```
cd /opt/opsware/dataminer/triggers/oracle
```
- 3** Type the following command:

```
./deploy_nas_triggers.sh
```
- 4** Respond to all prompts.

### **Configuring the Data Miner on the NA Server**

To configure the Data Miner on the data source server, perform the following steps:

- 1** On the NA server, type the following command:

```
cd /opt/opsware/dataminer
```

- 2** Run the dataminer setup using the following command:

```
./dmsetup.sh
```

The following prompt appears:

```
Please enter the registration token provided after this  
dataminer was configured on the OMDB server: []
```

- 3** Enter the registration token that was generated on the SAR server. The following prompt appears:

```
Updating token in dataminer.conf
```

```
Would you like to have this dataminer automatically start up  
when the system reboots? y/n:
```

- 4** Type `y`, then press Enter. The following prompt appears:

```
Dataminer is now configured for startup:
```

- 5** (Optional) Start the Data Miner. See “Starting or Stopping a Data Miner” on page 88.

### **Installing and Configuring the Data Miner Service on a NA Windows Server**

To install and configure a NA Data Miner on Windows, perform the following tasks in this order:

- 1** “Copying the Data Miner Service Files to the NA Windows Server” on page 75.

- 2** Perform one of the following two actions:

- “Installing Transaction Mining Triggers for NA with Oracle on Windows” on page 75.  
Or

- “Preparing to Install Transaction Mining Triggers for NA with SQL Server on Windows” on page 75, and then “Installing Transaction Mining Triggers for NA with SQL Server on Windows” on page 76.

- 3** “Configuring the Data Miner Service on the NA Windows Server” on page 77.

- 4** “Installing the Data Miner Service on a NA Windows Server” on page 78.



### **Copying the Data Miner Service Files to the NA Windows Server**

To copy the Data Miner Service files to the NA Windows server, perform the following steps:

- 1** On the Windows NA server, create a directory, such as `C:\dataminer`.
- 2** Copy the `dataminer.zip` from `/opt/opsware/omdb/dist` on the SAR server to a local directory, such as `C:\dataminer`.
- 3** Unzip the `dataminer.zip` file. Keep the directory structure intact.

### **Installing Transaction Mining Triggers for NA with Oracle on Windows**

This section describes how to install transaction mining triggers for a NA installation on a Windows server using Oracle.

You will need the following information before you begin:

- The Oracle SID of the NA database instance
- The Oracle database user owning the NA table
- An existing tablespace with 100MB available for SAR transaction data

The Oracle user `OPSW_OMDBXM` must have its disk quota setting set to unlimited to auto-extend the tablespace used for NAS database transaction triggers. If this user's disk quota setting is not set as unlimited, NA users may have problem logging in when `OPSW_OMDBXM` hits the quota limit.

To install transaction mining triggers on a NA and Oracle on Windows server, perform the following steps:

- 1** Log in to the NA database server as a user that is a member of the `ORA_DBA` group.
- 2** Confirm the `sqlplus.exe` application is in the user's path.
- 3** In the `C:\dataminer\triggers\oracle` directory, run the following command:  
`deploy_nas_triggers.cmd`
- 4** Respond to all prompts.

### **Preparing to Install Transaction Mining Triggers for NA with SQL Server on Windows**

This section describes how to identify:

- The name of the NA application schema (the NA Database catalog)

- The name of the user account created during the NA installation (the NA Database user name)

You need these names to either install or uninstall transaction mining triggers for a NA installation on a Windows server using SQL Server.

To find these names, perform the following steps:

- 1** Start NA.
- 2** Select System Status in the Admin menu.
- 3** Select DatabaseMonitor.
- 4** In the Actions field, select View Details. The Monitor Details page displays.
- 5** Find and write down the values for
  - Database catalog
  - Database user name

### ***Installing Transaction Mining Triggers for NA with SQL Server on Windows***

This section describes how to install transaction mining triggers for a NA installation on a Windows server using SQL Server.

You will need the following information before you begin:

- The name of the NA application schema (the NA Database catalog)
- The name of the user account created during the NA installation (the NA Database user name)

To find these names, perform the steps in “Preparing to Install Transaction Mining Triggers for NA with SQL Server on Windows”.

To install transaction mining triggers on a NA and SQL Server on Windows server, perform the following steps:

- 1** In the C:\dataminer\triggers\sqlserver directory, run the following command:  
`deploy_nas_triggers.cmd`
- 2** The following prompt appears:  
Deployment will remove existing OMDB transaction data from previous deployments. Continue? [Y]
- 3** Type y, and then press Enter. The following prompt appears:

Which SQL Server instance contains the NAS database?  
[default]

- 4** To accept the default value of SQL Server, press Enter.

Or

Type the name of the SQL Server instance. For example, type `SQLExpress` to select SQL Server Express.

- 5** The following prompt appears:

Which SQL Server database contains the NAS application schema? [default]:

- 6** Type the value of the NA 'Database catalog' you wrote down in "Preparing to Install Transaction Mining Triggers for NA with SQL Server on Windows" on page 75, and then press Enter. The following prompt appears:

Which database user does the NAS application use to connect to the database? [nas]:

- 7** Type the value of the NA 'Database user name' you wrote down in "Preparing to Install Transaction Mining Triggers for NA with SQL Server on Windows" on page 75, and then press Enter. The following prompt appears:

Which database schema contains the NAS application tables?  
[dbo]:

- 8** To accept the default value `dbo`, press Enter.

### **Configuring the Data Miner Service on the NA Windows Server**

To configure the Data Miner Service on the NA Windows server, perform the following steps:

- 1** On the Windows NA server, using a text editor open the following file:

`jvm.properties`

- 2** Find the following line in the `jvm.properties` file:

`#JVM-Path=C:\Program Files\Java\j2re1.4.x_x\bin\client\jvm.dll`

- 3** Delete only the `#` to uncomment the line.

- 4** Update the JVM-Path value

`C:\Program Files\Java\j2re1.4.x_x\bin\client\jvm.dll`  
to the correct location of `JVM.DLL` for the Java Runtime Environment 1.4.2.

- 5** Save the `jvm.properties` file.

- 6 Edit the `dataminer.conf` file. Find the following line:  
`RegistrationToken=ToKeN`  
Set `ToKeN` to the token generated at registration on the SAR Server.

### **Installing the Data Miner Service on a NA Windows Server**

To install the Data Miner Service on a NA Windows server, perform the following steps:

- 1 Open a Windows command prompt.
- 2 Change directory to `C:\dataminer`.
- 3 To install the service, run the following command:  
`DataMinerService -install`
- 4 (Optional) Start the Data Miner. See “Starting or Stopping a Data Miner” on page 88.

The Data Miner Service will start automatically the next time the NA Windows server is restarted.

## **Installing and Configuring Data Miners for ASAS**

Data Miners for ASAS work differently than Data Miners for either SA or NA. To mine data from an ASAS system, you must:

- Create a database link and set up a scheduled ASAS-specific mining job. This scheduled job moves data from the ASAS source server to the SAR staging database.
- Install and configure a SA Data Miner for the SA server that ASAS is installed on.
- Register the ASAS Data Miner on SAR.
- Install the standard SAR Data Miner and configure it to communicate with the database on SAR. When the scheduled ASAS-specific job completes, it triggers the SAR data miner to then mine data from the SAR staging database to the SAR main database instance.

This section describes the following tasks:

- Configuring the SAR Database for the ASAS Data Miner
- Pre-registering a Data Miner for ASAS and Oracle
- Installing and Configuring a Data Miner for an ASAS Server
- Mining ASAS Data



The Data Miner installation task uses `/opt/opsware/dataminer` as an example of a destination directory. You must install each Data Miner in a separate uniquely named directory.

### Configuring the SAR Database for the ASAS Data Miner

To configure the SAR database instance for an ASAS Data Miner, you must create an entry in the Oracle hosts file `tnsnames.ora` for the ASAS source server and run a stored procedure in the Oracle database with parameters appropriate for your installation.

#### Creating the ASAS entry in the Oracle hosts file

To create the ASAS entry in the Oracle hosts file, perform the following steps:

- 1** Ensure that the desired ASAS source system is properly installed and operational.
- 2** Install and configure a SA Data Miner for the SA server that ASAS is installed on.
- 3** Log in to the SAR database server.
- 4** Using a text editor, open the file `/var/opt/oracle/tnsnames.ora`.
- 5** In `tnsnames.ora`, add an entry for the ASAS source database. For example:

```

asas1 =
    (DESCRIPTION =
        (ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCP) (HOST =
asashost.opsware.com) (PORT = 1521))
        )
        (CONNECT_DATA =
            (SERVICE_NAME = truth)
        )
    )

```

where *asas1* is the text string service name of the entry, and *asashost.opsware.com* is the hostname of the ASAS source server.

- 6** Save and exit the file `tnsnames.ora`.

#### Configuring the Oracle Stored Procedure

To configure the Oracle stored procedure with your parameters, perform the following steps:

- 1** Using SQL\*Plus or other database tool, connect to the SAR database.

- 2 As the user ASAS\_RPT\_USER, run the following command:  
etlinterface.registerPlatformDatabase  
with parameters appropriate to your installation.



---

The default password for ASAS\_RPT\_USER is cmdb\_admin. For more information see “Pre-registering a Data Miner for ASAS and Oracle”.

---

An example set of SQL\*Plus statements is as follows:

```
declare
-- Name of ASAS source database entry from tnsnames.ora
DbNetServiceName varchar2(30) := 'asas1';
-- The user name for connection to the ASAS source database
-- must match the hostname in the tnsnames.ora entry.
DbUserName varchar2(30) := 'opsware_admin';
-- The password for connection to the ASAS source database
DbPassword varchar2(30) := 'opsware_admin';
-- A description of this registered ASAS source
DbDescription varchar2(100) := 'ASAS Source 1';
-- A unique name for the Oracle database link
DbLinkName varchar2(30) := 'asas1_dblink';
-- The hostname of the ASAS source database server. This
-- must match the hostname in the tnsnames.ora entry.
DbHost varchar2(100) := 'asashost.opsware.com';
begin
etlinterface.registerPlatformDatabase( DbNetServiceName,
DbUserName, DbPassword, DbDescription, DbLinkName, DbHost );
end;
/
```

### Pre-registering a Data Miner for ASAS and Oracle

To pre-register a Data Miner for ASAS and Oracle, perform the following steps:

- 1 Log in to the SAR database server.
- 2 `cd /opt/opsware/omdb/bin`
- 3 `./dmconfig.sh --add --name ASAS --desc Local ASAS data  
--type ASAS --driver Oracle Driver --properties  
database=localhost:1521:cmdb,user=asas_rpt_  
user,password=cmdb_admin`



Write down the registration token. A registration token consists of upper-case alphanumeric characters.

The ASAS example uses localhost because the ASAS Data Miner is installed on the SAR Core server. You can specify the host name of the SAR Core server.

### Installing and Configuring a Data Miner for an ASAS Server

After the Data Miner is configured on the SAR server, you will copy Data Miner files and configure them on the data source machine—the SAR Core server.

- 1** Log in to the SAR Core server.
- 2** Copy `dataminer.tar` from `/opt/opsware/omdb/dist` to a working directory such as `/opt/opsware/dataminer`.

- 3** Untar the file:

```
cd /opt/opsware
tar -xvf dataminer.tar
cd dataminer
```

- 4** Run the `dataminer` setup using the following command:  
`./dmsetup.sh`

The following prompt appears:

```
Please enter the registration token provided after this
dataminer was configured on the OMDB server: []
```

- 5** Enter the registration token that was generated on the SAR server. The following prompt appears:

```
Updating token in dataminer.conf
```

```
Would you like to have this dataminer automatically start up
when the system reboots? y/n:
```

- 6** Type `y`, then press Enter. The following prompt appears:  
Dataminer is now configured for startup:
- 7** To exit `dmsetup.sh`, type `y`, then press Enter.

## Mining ASAS Data

An Oracle stored procedure on the ASAS server mines ASAS data from the ASAS server into a staging schema in the SAR database instance. A scheduled Oracle job runs this Oracle stored procedure against the registered ASAS server daily at midnight UTC.

You can run this process at other times, such as immediately after registering the ASAS server. To run the Oracle stored procedure, perform the following steps:

**1** On the SAR database server, start SQL\*Plus or other database tool.

**2** Run the following command:

```
begin
    dbms_scheduler.run_job(
        job_name=>'asas_rpt_user.asas_Run_etl',
        use_current_session=>>false
    );
end;
/
```

**3** Start the Data Miner.

## Installing and Configuring Data Miners for OO

To install a Data Miner for OO, copy the Data Miner from the SAR server, install the Transaction Mining Triggers for the type of database the OO application uses, configure and install the Data Miner on the OO server, then start the Data Miner.

This section describes the following tasks:

- Installing and Configuring a Data Miner on a Linux OO Server
- Installing and Configuring the Data Miner Service on the OO Windows Server



The Data Miner installation task uses `/opt/opsware/dataminer` as an example of a destination directory.

---



## Installing and Configuring a Data Miner on a Linux OO Server

To install and configure the OO Data Miner on Linux, perform the following tasks in this order:

- 1** “Copying Data Miner Files to the OO Server” on page 83
- 2** “Installing Transaction Mining Triggers for OO with Oracle on Linux” on page 83
- 3** “Configuring the Data Miner on the OO Server” on page 84



On NA and SA, Data Miner automatically detects JAVA\_HOME. For OO on Linux, JRE 1.4.2\_15 needs to be the system default, or JAVA\_HOME must be set prior to Data Miner startup. If unsure about configuration, contact SAR Support.

### Copying Data Miner Files to the OO Server

To copy the Data Miner files to the data source servers, perform the following steps:

- 1** Log in to the OO server.
- 2** Do a remote copy of `dataminer.tar` from `/opt/opsware/omdb/dist` on the SAR server to a local directory such as `/opt/opsware/dataminer`. The commands used for this step are shown in the following example:
 

```
scp youromdbserver:/opt/opsware/omdb/dist/dataminer.tar opt/opsware/dataminer/.
```
- 3** Untar the file:
 

```
cd /opt/opsware/dataminer
tar -xvf dataminer.tar
```

### Installing Transaction Mining Triggers for OO with Oracle on Linux

This section describes how to install transaction mining triggers for an OO installation on a Linux server using Oracle.

You will need the following information before you begin:

- The Oracle SID of the OO database instance
- The Oracle database user owning the OO table
- An existing tablespace with 100MB available for SAR transaction data

To prepare for installing transaction mining triggers on a OO Linux server, perform the following steps:

- 1** Log in to the OO database server as root.
- 2** Type the following commands:

```
chmod 755 /opt/opsware/dataminer/  
chmod 755 /opt/opsware/dataminer/triggers  
chmod 755 /opt/opsware/dataminer/triggers/oracle
```
- 3** Type the following command:

```
chown oracle:dba /opt/opsware/dataminer/triggers/oracle/*
```

To install transaction mining triggers on the OO Linux server, perform the following steps:

- 1** Open a command prompt and then log in as the user `oracle`.
- 2** Type the following command:

```
cd /opt/opsware/dataminer/triggers/oracle
```
- 3** Type the following command:

```
./deploy_pas_triggers.sh
```
- 4** Respond to all prompts.

### **Configuring the Data Miner on the OO Server**

To configure the Data Miner on the data source server, perform the following steps:

- 1** On the OO server, type the following command:

```
cd /opt/opsware/dataminer
```
- 2** Run the dataminer setup using the following command:

```
./dmsetup.sh
```

The following prompt appears:

```
Please enter the registration token provided after this  
dataminer was configured on the OMDB server: []
```

- 3** Enter the registration token that was generated on the SAR server. The following prompt appears:

```
Updating token in dataminer.conf
```

```
Would you like to have this dataminer automatically start up  
when the system reboots? y/n:
```

- 4** Type `y`, then press Enter. The following prompt appears:

```
Dataminer is now configured for startup:
```
- 5** (Optional) Start the Data Miner. See “Starting or Stopping a Data Miner” on page 88.

## **Installing and Configuring the Data Miner Service on the OO Windows Server**

To install and configure a Data Miner on the OO Windows server, perform the following tasks in this order:

- 1** “Copying the Data Miner Service Files to the OO Server” on page 85.
- 2** “Installing Transaction Mining Triggers for OO with SQL Server on Windows” on page 85
- 3** “Configuring the Data Miner Service on the OO Windows Server” on page 86.
- 4** “Installing the Data Miner Service on the OO Windows Server” on page 87.

### ***Copying the Data Miner Service Files to the OO Server***

To copy the Data Miner files to the data source server, perform the following steps:

- 1** On the Windows OO server, create a directory, such as `C:\dataminer`.
- 2** Copy the `dataminer.zip` from `/opt/opsware/omdb/dist` on the SAR server to a local directory, such as `C:\dataminer`.
- 3** Unzip the `dataminer.zip` file. Keep the directory structure intact.

### ***Installing Transaction Mining Triggers for OO with SQL Server on Windows***

This section describes how to install transaction mining triggers for an OO installation on a Windows server using SQL Server.

You will need the following information before you begin:

- The name of the OO application schema
- The name of the user account created during the OO installation

To install transaction mining triggers on a OO and SQL Server Windows server, perform the following steps:

- 1** In the `C:\dataminer\triggers\sqlserver` directory, run the following command:  
`deploy_pas_triggers.cmd`
- 2** The following prompt appears:  
Deployment will remove existing OMDB transaction data from previous deployments. Continue? [Y]
- 3** Type `y`, and then press Enter. The following prompt appears:

Which SQL Server instance contains the PAS database?  
[default]

- 4 To accept the default value of SQL Server, press Enter.

Or

Type the name of the SQL Server instance. For example, type `SQLExpress` to select SQL Server Express.

- 5 The following prompt appears:

Which SQL Server database contains the PAS application schema? [default]:

- 6 Type the value of the OO 'Database catalog', and then press Enter. The following prompt appears:

Which database user does the PAS application use to connect to the database? [pas]:

- 7 Type the value of the OO 'Database user name', and then press Enter. The following prompt appears:

Which database schema contains the PAS application tables?  
[dbo]:

- 8 To accept the default value `dbo`, press Enter.

### **Configuring the Data Miner Service on the OO Windows Server**

To configure the Data Miner Service on the OO Windows server, perform the following steps:

- 1 On the Windows OO server, using a text editor open the following file:

`jvm.properties`

- 2 Find the following line in the `jvm.properties` file:

```
#JVM-Path=C:\Program Files\Java\j2re1.4.x_x\bin\client\jvm.dll
```

- 3 Delete only the `#` to uncomment the line.

- 4 Update the JVM-Path value

`C:\Program Files\Java\j2re1.4.x_x\bin\client\jvm.dll`  
to the correct location of `JVM.DLL` for the Java Runtime Environment 1.4.2.

- 5 Save the `jvm.properties` file.

- 6 Edit the `dataminer.conf` file. Find the following line:  
`RegistrationToken=ToKeN`  
Set `ToKeN` to the token generated at registration on the SAR Server.

### **Installing the Data Miner Service on the OO Windows Server**

To install the Data Miner Service on the OO Windows server, perform the following steps:

- 1 Open a Windows command prompt.
- 2 Change directory to `C:\dataminer`.
- 3 To install the service, run the following command:  
`DataMinerService -install`
- 4 (Optional) Start the Data Miner. See “Starting or Stopping a Data Miner” on page 88.

The Data Miner Service will start automatically the next time the OO Windows server is restarted.

## **Listing and Unregistering Data Miners**

This section shows how to list the Data Miners on a Solaris or Linux server, and how to unregister a Data Miner.

### **Listing Data Miners**

To list the Data Miners on a Solaris or Linux server, perform the following steps:

- 1 Log in to the server that the Data Miner is running on, and then start a command prompt.
- 2 Type the following command:

```
/etc/init.d/opsware-dataminer-1 list
```

The following is an example of the kind of output from the list option:

The following DataMiners are registered on this machine:

```
DataMiner #1 token:3M2C2 location /opt/opsware/dataminer
```

```
type:SAS
```

```
DataMiner #2 token:XXX123 location /opt/opsware/dataminerx
```

```
type:Not yet retrieved from OMDB Core
```

## Unregistering a Data Miner

To remove the startup information for a Data Miner from the list of Data Miners running on a Solaris or Linux server, perform the following steps:

- 1** Perform the steps in “Listing Data Miners”.  
Note the token value displayed for the Data Miner you want to remove.
- 2** Change directory to the location where the Data Miner is installed. By default, the first Data Miner installed on a system is installed to `/opt/opsware/dataminer`.
- 3** Enter the following command:  

```
./dmsetup.sh --unregister --token TOKEN
```

where *TOKEN* is the token value of the Data Miner you noted in step 1.

Unregistering a Data Miner comments out the entry for that Data Miner in `dataminers.conf`. For information on the `dataminers.conf` file, see “Reading the `dataminers.conf` File”.

## Reading the `dataminers.conf` File

When you run `dmsetup.sh`, it creates or updates a file `/etc/opt/opsware/omdb/dataminers.conf` that includes information on all Data Miners installed on that server. If the `dataminers.conf` file exists when you install a new Data Miner, `dmsetup.sh` updates the file with the new information, and adds 1 to the `ConfiguredDataMiners` value. When uninstalling a Data Miner, `dmsetup.sh` comments out the specified Data Miner entry in `dataminers.conf`, and then decreases the `ConfiguredDataMiners` value by 1.

## Starting or Stopping a Data Miner

This section presents how to start and stop a Data Miner from the Solaris, Linux, or Windows command line, and how to start and stop a Data Miner from the Windows graphical user interface (GUI).

If an error message appears when the Data Miner is started, do not rerun the `./dmconfig.sh --add` command. Instead, set the correct configuration for the Data Miner using the `./dmconfig.sh --update` command. See “Setting Configuration Options Using `dmconfig.sh`” on page 60 for more information.

## Starting a Data Miner From the Solaris or Linux Command Line

To start a Data Miner from the Solaris or Linux command line, perform the following steps:

**1** Log in to the Linux or Solaris server that the Data Miner is installed on.

**2** Change to the directory you installed the Data Miner to.

**3** Type the following command:

```
./dataminer.sh start
```

**4** Tail the dataminer.log to observe progress.

```
tail -f /opt/opsware/dataminer/dataminer.log
```

You should see the tail of the Data Miner log display content similar to the following example:

```
INFO - - - - - "Configuration Path = /opt/opsware/dataminer"
INFO - - - - - "Using configuration file /opt/opsware/
dataminer/dataminer.conf"
INFO - - - - - "Initializing..."
INFO - - - - - "Running on Linux"
INFO - - - - - "Cached Configuration file has been updated,
reloading"
INFO - - - - - "Boot certificate not found Attempt to import"
INFO - - - - - "Boot certificate successfully imported"
INFO - - - - - "DataMiner successfully registered"
```

**5** When you are satisfied that the Data Miner is correctly configured and collecting data, you can stop the tail command.

## Stopping a Data Miner From the Solaris or Linux Command Line

To stop a Data Miner from the Solaris or Linux command line, perform the following steps:

**1** Log in to the server that the Data Miner is running on, and then start a command prompt.

**2** Perform the steps in “Listing and Unregistering Data Miners” on page 87 to list the Data Miners on the server.

**3** Identify the Data Miner you want to stop by reading the list output, and note the number of that Data Miner.

**4** Type the following command:

```
/etc/init.d/opsware-dataminer-number stop
```

where *number* is the number you identified in the list.

- 5 To stop all of the Data Miners on a server, repeat step 4 for all Data Miner numbers shown in the list output.

### Starting a Data Miner From The Windows Command Line

To start a Data Miner from the Windows command line, perform the following steps:

- 1 Open a Windows command prompt.
- 2 Change directory to C:\dataminer.
- 3 To start the service, run the following command:  
`DataMinerService -start`

### Stopping a Data Miner From The Windows Command Line

To stop a Data Miner from the Windows command line, perform the following steps:

- 1 Open a Windows command prompt.
- 2 Change directory to C:\dataminer.
- 3 To start the service, run the following command:  
`DataMinerService -stop`

### Starting a Data Miner From The Windows GUI

To start a Data Miner from the Windows GUI, perform the following steps:

- 1 Using **Administrative Tools** in the Windows Control Panel, select **Services**.
- 2 Right-click on **Opware OMDB DataMiner**.
- 3 Select **Start**.

### Stopping a Data Miner From The Windows GUI

To stop a Data Miner from the Windows GUI, perform the following steps:

- 1 Using **Administrative Tools** in the Windows Control Panel, select **Services**.
- 2 Right-click on **Opware OMDB DataMiner**.
- 3 Select **Stop**.



## Uninstalling Data Miners and Transaction Mining Triggers

This section describes how to uninstall Data Miners and Transaction Mining Triggers. When uninstalling Data Miners on NA or OO, first uninstall the Data Miner, then uninstall the Transaction Mining Trigger.

### Uninstalling a SA or ASAS Data Miner on Linux or Solaris

To uninstall a SA or ASAS Data Miner on Linux or Solaris, perform the following steps:

- 1 Complete the steps in “Unregistering a Data Miner” on page 88.
- 2 Delete the directory you installed the Data Miner into.

### Uninstalling a NA Data Miner on Linux or Solaris

To uninstall a NA Data Miner on Linux or Solaris, perform the following steps:

- 1 Complete the steps in “Unregistering a Data Miner” on page 88.
- 2 Complete the steps in “Uninstalling Transaction Mining Triggers for NA with Oracle on Linux or Solaris” on page 92.
- 3 Delete the directory you installed the Data Miner into.

### Uninstalling an OO Data Miner on Linux

To uninstall an OO Data Miner on Linux, perform the following steps:

- 1 Complete the steps in “Unregistering a Data Miner” on page 88.
- 2 Complete the steps in “Uninstalling Transaction Mining Triggers for OO with Oracle on Linux” on page 95.
- 3 Delete the directory you installed the Data Miner into.

### Uninstalling a NA Data Miner Service on Windows

To uninstall a NA Data Miner Service on Windows, perform the following steps:

- 1 Open a Windows command prompt.
- 2 Change directory to C:\dataminer.
- 3 To stop the service, run the following command:  
`DataMinerService -stop`
- 4 To uninstall the service, run the following command:  
`DataMinerService -remove`

- 5** Perform one of the following two actions:
  - Complete the steps in “Uninstalling Transaction Mining Triggers for NA with Oracle on Windows” on page 93.
  - OR
  - Complete the steps in “Uninstalling Transaction Mining Triggers for NA with SQL Server on Windows” on page 93.

### **Uninstalling an OO Data Miner Service on Windows**

To uninstall a OO Data Miner Service on Windows, perform the following steps:

- 1** Open a Windows command prompt.
- 2** Change directory to C:\dataminer.
- 3** To stop the service, run the following command:  
`DataMinerService -stop`
- 4** To uninstall the service, run the following command:  
`DataMinerService -remove`
- 5** Complete the steps in “Uninstalling Transaction Mining Triggers for OO with SQL Server on Windows” on page 95.

### **Uninstalling Transaction Mining Triggers for NA with Oracle on Linux or Solaris**

This section describes how to uninstall transaction mining triggers for a NA installation on a Linux or Solaris server using Oracle.

You will need the following information before you begin:

- The Oracle SID of the NA database instance

To uninstall transaction mining triggers on a NA with Oracle on Linux or Solaris server, perform the following steps:

- 1** Stop the NA application.



You do not need to stop the NA Oracle instance to uninstall the Transaction Mining Trigger.

---

- 2** Stop the Data Miner associated with the Transaction Mining Trigger.

- 3** On the NA server, log in as the user `oracle`.
- 4** Type the following command:  
`cd /opt/opsware/dataminer/triggers/oracle`
- 5** Type the following command:  
`./undeploy_triggers.sh`
- 6** Respond to all prompts.
- 7** Restart the NA application.

### Uninstalling Transaction Mining Triggers for NA with Oracle on Windows

This section describes how to uninstall transaction mining triggers for a NA installation on a Windows server using Oracle.

You will need the following information before you begin:

- The Oracle SID of the NA database instance

To uninstall transaction mining triggers on a NA and Oracle on Windows server, perform the following steps:

- 1** Stop the NA application.




---

You do not need to stop the NA Oracle instance to uninstall the Transaction Mining Trigger.

---

- 2** Stop the Data Miner associated with the Transaction Mining Trigger.
- 3** Log in to the NA database server as a user that is a member of the `ORA_DBA` group.
- 4** In the `C:\dataminer\triggers\oracle` directory, run the following command:  
`undeploy_triggers.cmd`
- 5** Respond to all prompts.
- 6** Restart the NA application.

### Uninstalling Transaction Mining Triggers for NA with SQL Server on Windows

This section describes how to uninstall transaction mining triggers for a NA installation on a Windows server using SQL Server.

You will need the following information before you begin:

- The name of the NA application schema

To find this name, perform the steps in “Preparing to Install Transaction Mining Triggers for NA with SQL Server on Windows”.

To uninstall transaction mining triggers on a NA and SQL Server Windows server, perform the following steps:

- 1** Stop the NA application.



---

You do not need to stop the NA SQL Server instance to uninstall the Transaction Mining Trigger.

---

- 2** Stop the Data Miner associated with the Transaction Mining Trigger.
- 3** In the C:\dataminer\triggers\oracle directory, run the following command:  
`undeploy_triggers.cmd`
- 4** The following prompt appears:  
`Undeployment will remove all OMDB triggers for registered tables as well as the transaction data and supporting procedures. Continue? [N]`
- 5** Type y, and then press Enter. The following prompt appears:  
`Which SQL Server instance contains the OMDB source database?`
- 6** Type the name of the SQL Server instance. For example, type `SQLExpress` to select SQL Server Express.
- 7** The following prompt appears:  
`Which SQL Server database contains the application schema with the triggers?`
- 8** Type the value of the NA ‘Database catalog’ you wrote down in “Preparing to Install Transaction Mining Triggers for NA with SQL Server on Windows” on page 75, and then press Enter.
- 9** Restart the NA application.

## Uninstalling Transaction Mining Triggers for OO with Oracle on Linux

This section describes how to uninstall transaction mining triggers for a OO installation on a Linux server using Oracle.

You will need the following information before you begin:

- The Oracle SID of the OO database instance

To uninstall transaction mining triggers on a OO and Oracle Linux server, perform the following steps:

- 1** Stop the OO application.



---

Do not stop the OO Oracle instance to uninstall the Transaction Mining Trigger.

---

- 2** Stop the Data Miner associated with the Transaction Mining Trigger.

- 3** On the OO server, log in as the user `oracle`.

- 4** Type the following command:

```
cd /opt/opsware/dataminer/triggers/oracle
```

- 5** Type the following command:

```
./undeploy_triggers.sh
```

- 6** The following prompt appears:

```
Undeployment will remove all OMDB triggers for registered
tables as well as the transaction data and supporting
procedures. Continue? [N]
```

- 7** Type `y`, and then press Enter. The following prompt appears:

```
What is the desired Oracle SID?
```

- 8** Type the Oracle SID of the OO database instance, and then press Enter.

- 9** Restart the OO application.

## Uninstalling Transaction Mining Triggers for OO with SQL Server on Windows

This section describes how to uninstall transaction mining triggers for an OO installation on a Windows server using SQL Server.

You will need the following information before you begin:

- The name of the OO application schema

To uninstall transaction mining triggers on a OO and SQL Server Windows server, perform the following steps:

- 1** Stop the OO application.



Do not stop the OO SQL Server instance to uninstall the Transaction Mining Trigger.

---

- 2** Stop the Data Miner associated with the Transaction Mining Trigger.
- 3** In the C:\dataminer\triggers\oracle directory, run the following command:  
`undeploy_triggers.cmd`
- 4** The following prompt appears:  
`Undeployment will remove all OMDB triggers for registered tables as well as the transaction data and supporting procedures. Continue? [N]`
- 5** Type y, and then press Enter. The following prompt appears:  
`Which SQL Server instance contains the OMDB source database?`
- 6** Type the name of the SQL Server instance. For example, type `SQLExpress` to select SQL Server Express.
- 7** The following prompt appears:  
`Which SQL Server database contains the application schema with the triggers?`
- 8** Type the value of the OO 'Database catalog', and then press Enter.
- 9** Restart the OO application.

# Chapter 6: Migrating SAR

## IN THIS CHAPTER

This chapter discusses the following topics:

- Migration Requirements
- Migrating SAR on a Single Server
- Migrating the SAR Core Server
- Migrating the SAR Database Server

You can migrate SAR across an architecture change such as Solaris 9 to Solaris 10 or Red Hat Enterprise Linux 3 AS on a 32-bit architecture to Red Hat Enterprise Linux 4 AS on 64-bit architecture. Migrating SAR is not upgrading SAR: the version of SAR that you start these steps with is the version of SAR that you have when you complete the steps. For upgrading instructions, see “Upgrading SAR” on page 107.

The architecture and SAR versions supported for migration are:

- RHEL AS 32-bit to RHEL AS 64-bit: OMDB 1.0.2, OMDB 7.0, SAR 7.50.
- Solaris 9 to Solaris 10: OMDB 1.0.2, OMDB 7.0, SAR 7.50.

## Migration Requirements

Before you begin migrating SAR you need the following:

- The response file from the most recent installation or upgrade. The default location and file name of the SAR response file is `/var/tmp/oireponse.omdb`.
- The location of all Data Miners associated with the SAR Core.
- The current size of the contents of the `/var/opt/opsware/omdb/collect` directory. You can run the following command on the SAR database server:

```
du -sh /var/opt/opsware/omdb/collect
```

to report this value.

- The size of the SAR Database exported files. See “Estimating SAR Database Export Size”.

### Estimating SAR Database Export Size

To estimate the size of the SAR Database Export, you can enter the following command on the SAR database server:

```
du -sh /u02/oradata/cmdb/
```

The size of the active database files on the SAR database server is displayed.

For a more precise estimate of the size of the exported SAR database, you can use an SQL tool to run the following SQL command:

```
select round(sum(seg.bytes) / 1024 / 1024 / 1024, 1) data_gb
from dba_segments seg
where seg.owner in
('CMDB_META', 'CMDB_DATA', 'ASAS_RPT_USER', 'CMDB_CUSTOM')
```

This SQL displays the number of GB used by the data segments, but without the extent compression achieved during the export process. The resulting value is more than sufficient for the SAR Database export file.

### Errors Generated During Database Migration

When migrating the SAR Database, running the `import-omdb.sh` command to import the SAR database file can generate errors to STDOUT and to the log file. The following errors are part of the expected database migration output and do not indicate an error requiring action to correct:

- IMP-00017: following statement failed with ORACLE error 27477:, followed by  
IMP-00003: ORACLE error 27477 encountered, followed by  
ORA-27477: "ASAS\_RPT\_USER..." already exists, followed by a series of related error statements
- IMP-00041 warnings followed by CREATE FORCE VIEW messages



## Migrating SAR on a Single Server

To migrate SAR when the SAR Core and the SAR Database are installed on the same server, you will:

- 1** Prepare the SAR server for migration.
- 2** Configure the server on the new architecture.
- 3** Restore the migrated SAR files to the SAR server on the new architecture.

### Preparing the SAR Server For Migration

To prepare the SAR server and create the files needed to migrate the server, perform the following steps:

- 1** Shut down all Data Miners associated with the SAR Core.
- 2** On the SAR server, log in as root.
- 3** To shut down the SAR Core, enter the following command:  

```
/etc/init.d/opsware-omdb stop
```

Any pending data files will be saved and restored for loading after the migration completes.
- 4** Create a directory to store the SAR backup files and the database export. For these steps, the example directory is `/var/tmp/omdb/migrate`. The directory should be large enough to hold the database export and the files in the `/var/opt/opsware/omdb/collect` directory, plus 100MB for the other files.
- 5** Mount the SAR install DVD using a command similar to `mount /dev/cdrom` as appropriate.
- 6** To change to the root directory of the drive, enter the following command:  

```
cd /
```
- 7** To extract the SAR migration file from the DVD, enter the following command:  

```
rpm2cpio /<mnt_point>/packages/Linux/OPSWomdb_  
dbinstaller*.rpm | cpio -vid ./opt/opsware/omdb/omdb-  
migrate.tar.gz
```

---

Enter the above command as a single command.

---



- 8** To copy the extracted file to the directory, enter the following commands:  

```
cd /opt/opsware/omdb/  
cp omdb-migrate.tar.gz /var/tmp/omdb/migrate
```
- 9** Copy the `/var/tmp/oiresponse.omdb` file from the most recent SAR installation or upgrade to the `/var/tmp/omdb/migrate` directory.
- 10** To extract the files from `omdb-migrate.tar.gz`, enter the following command:  

```
gzip -cd /var/tmp/omdb/migrate/omdb-migrate.tar.gz | tar -  
xvf -
```
- 11** To create an export of the SAR database, enter the following command:  

```
/var/tmp/omdb/migrate/bin/export-omdb.sh
```
- 12** To create the SAR backup files, enter the following command:  

```
/var/tmp/omdb/migrate/bin/save-to-migrate.sh
```

### Configuring the New Architecture

Whether you are migrating SAR to a new server, or installing a new architecture on the existing server, perform the following steps:

- 1** Ensure the contents of `/var/tmp/omdb/migrate` are kept for use on the new architecture or server.
- 2** Set up the server according to the requirements in Chapter 2, “Pre-Installation Requirements”.  
To simplify reconfiguration, the new server should use the same IP address and host name as the prior server.
- 3** Install the SAR Core and Database using the response file copied to `/var/tmp/omdb/migrate/oiresponse.omdb` as shown in “Installing SAR on a Single Server” on page 20.
- 4** After you install SAR on the new server, SAR starts at the end of the installation. To shut down the SAR core, enter the following command:  

```
/etc/init.d/opsware-omdb stop
```



The version of SAR installed on the new server must match the version of SAR you worked with in “Preparing the SAR Server For Migration”. If the versions of SAR are not the same, the migration will fail.

---

## Restoring the SAR Files to the New Architecture

To restore the migrated files from the old architecture to the new architecture, perform the following steps:

- 1** On the SAR server, log in as root.
- 2** Copy the contents of `/var/tmp/omdb/migrate` to the same directory on the new server.
- 3** To extract the tar files to their appropriate locations, enter the following command:  
`/var/tmp/omdb/migrate/bin/restore-from-migrate.sh`
- 4** To import the SAR data from the migrated files to the new SAR database, enter the following command:  
`/var/tmp/omdb/migrate/bin/import-omdb.sh`
- 5** To start the SAR core, enter the following command:  
`/etc/init.d/opsware-omdb start`
- 6** Restart all Data Miners associated with the SAR Core.

## Migrating the SAR Core Server

This section describes how to migrate the SAR Core Server when the SAR Core Server and the SAR Database Server are installed on separate platforms.

### Preparing the SAR Core Server For Migration

To prepare the SAR Core Server and create the files needed to migrate the server, perform the following steps:

- 1** Shut down all Data Miners associated with the SAR Core.
- 2** On the SAR Core Server, log in as root.
- 3** To shut down the SAR Core, enter the following command:  
`/etc/init.d/opsware-omdb stop`  
Any pending data files will be saved and restored for loading after the migration completes.
- 4** Create a directory to store the SAR backup files. For these steps, the example directory is `/var/tmp/omdb/migrate`. The directory should be large enough to hold the files in the `/var/opt/opsware/omdb/collect` directory, plus 100MB for the other files.

- 5** Mount the SAR install DVD using a command similar to `mount /dev/cdrom` as appropriate.
- 6** To change to the root directory of the drive, enter the following command:  
`cd /`
- 7** To extract the SAR migration file from the DVD, enter the following command:  
`rpm2cpio /<mnt_point>/packages/Linux/OPSWomdb_dbinstaller*.rpm | cpio -vid ./opt/opsware/omdb/omdb-migrate.tar.gz`



---

Enter the above command as a single command.

---

- 8** To copy the extracted file to the directory, enter the following commands:  
`cd /opt/opsware/omdb/`  
`cp omdb-migrate.tar.gz /var/tmp/omdb/migrate`
- 9** To extract the files from `omdb-migrate.tar.gz`, enter the following command:  
`gzip -cd /var/tmp/omdb/migrate/omdb-migrate.tar.gz | tar -xvf -`
- 10** Copy the `/var/tmp/oiresponse.omdb` file from the most recent SAR installation or upgrade to the `/var/tmp/omdb/migrate` directory.
- 11** To create the SAR backup files, enter the following command:  
`/var/tmp/omdb/migrate/bin/save-to-migrate.sh`

### **Configuring the New Architecture for the SAR Core Server**

Whether you are migrating SAR to a new server, or installing a new architecture on the existing server, perform the following steps:

- 1** Ensure the contents of `/var/tmp/omdb/migrate` are kept for use on the new architecture or server.
- 2** Set up the server according to the requirements in Chapter 2, “Pre-Installation Requirements”.  
To simplify reconfiguration, the new server should use the same IP address and host name as the prior server.

- 3** Install the SAR Core Server using the response file copied to `/var/tmp/omdb/migrate/oiresponse.omdb` as shown in “Installing SAR on a Single Server” on page 20.
- 4** After you install SAR on the new server, SAR starts at the end of the installation. To shut down the SAR core, enter the following command:  

```
/etc/init.d/opsware-omdb stop
```



---

The version of SAR installed on the new server must match the version of SAR you worked with in “Preparing the SAR Server For Migration”. If the versions of SAR are not the same, the migration will fail.

---

### **Restoring the SAR Core Server Files to the New Architecture**

To restore the migrated SAR Core Server files from the old architecture to the new architecture, perform the following steps:

- 1** On the SAR Core Server, log in as root.
- 2** Copy the contents of `/var/tmp/omdb/migrate` to the same directory on the new server.
- 3** To extract the tar files to their appropriate locations, enter the following command:  

```
/var/tmp/omdb/migrate/bin/restore-from-migrate.sh
```
- 4** To start the SAR core, enter the following command:  

```
/etc/init.d/opsware-omdb start
```
- 5** Restart all Data Miners associated with the SAR Core.

## Migrating the SAR Database Server

This section describes how to migrate the SAR Database Server when the SAR Core Server and the SAR Database Server are installed on separate platforms.

### Preparing the SAR Database Server For Migration

To prepare the SAR Database Server and create the files needed to migrate the server, perform the following steps:

- 1** Shut down all Data Miners associated with the SAR Core.
- 2** On the SAR Core Server, log in as root.
- 3** To shut down the SAR Core, enter the following command:  

```
/etc/init.d/opsware-omdb stop
```

Any pending data files will be saved and restored for loading after the migration completes.
- 4** On the SAR Database Server, log in as root.
- 5** Create a directory to store the SAR database export. See “Estimating SAR Database Export Size” on page 98. For these steps, the example directory is `/var/tmp/omdb/migrate`.
- 6** Mount the SAR install DVD using a command similar to `mount /dev/cdrom as appropriate`.
- 7** To change to the root directory of the drive, enter the following command:  

```
cd /
```
- 8** To extract the SAR migration file from the DVD, enter the following command:  

```
rpm2cpio /<mnt_point>/packages/Linux/OPSWomdb_dbinstaller*.rpm | cpio -vid ./opt/opsware/omdb/omdb-migrate.tar.gz
```



---

Enter the above command as a single command.

---

- 9** To copy the extracted file to the directory, enter the following commands:  

```
cd /opt/opsware/omdb/  
cp omdb-migrate.tar.gz /var/tmp/omdb/migrate
```

- 10** To extract the files from `omdb-migrate.tar.gz`, enter the following command:  

```
gzip -cd /var/tmp/omdb/migrate/omdb-migrate.tar.gz | tar -xvf -
```
- 11** Copy the `/var/tmp/oireponse.omdb` file from the most recent SAR installation or upgrade to the `/var/tmp/omdb/migrate` directory.
- 12** To create an export of the SAR database, enter the following command:  

```
/var/tmp/omdb/migrate/bin/export-omdb.sh
```

### Configuring the New Architecture

Whether you are migrating SAR to a new server, or installing a new architecture on the existing server, perform the following steps:

- 1** Ensure the contents of `/var/tmp/omdb/migrate` are kept for use on the new architecture or server.
- 2** Set up the server according to the requirements in Chapter 2, “Pre-Installation Requirements”.  
To simplify reconfiguration, the new server should use the same IP address and host name as the prior server.
- 3** Install the SAR Database using the response file copied to `/var/tmp/omdb/migrate/oireponse.omdb` as shown in “Installing SAR on a Single Server” on page 20.



---

The version of SAR installed on the new server must match the version of SAR you worked with in “Preparing the SAR Server For Migration”. If the versions of SAR are not the same, the migration will fail.

---

### Restoring the SAR Database Server Files to the New Architecture

To restore the migrated files from the old architecture to the new architecture, perform the following steps:

- 1** On the SAR Database Server, log in as root.
- 2** Copy the contents of `/var/tmp/omdb/migrate` to the same directory on the new server.

- 3** To import the SAR data from the migrated files to the new SAR database, enter the following command:  
`/var/tmp/omdb/migrate/bin/import-omdb.sh`
- 4** On the SAR Core Server, log in as root.
- 5** To start the SAR Core, enter the following command:  
`/etc/init.d/opsware-omdb start`
- 6** Restart all Data Miners associated with the SAR Core.



# Chapter 7: Upgrading SAR

## IN THIS CHAPTER

This chapter discusses the following topics:

- Prerequisites for Upgrading
- Upgrading SAR on a Single Server
- Upgrading the SAR Database Server
- Upgrading the SAR Core Server
- Upgrading Data Miners

You can upgrade SAR to 7.50 from an earlier version of SAR. Upgrading SAR is not migrating SAR: upgrading SAR must be performed on the same architecture. You may need to migrate an earlier version of SAR if the architecture for the prior version of SAR is no longer supported. For SAR migration instructions, see “Migrating SAR” on page 97.

The SAR versions supported for upgrading are:

- OMDB 1.0.2 to SAR 7.50
- OMDB 7.0 to SAR 7.50

## Prerequisites for Upgrading

The following items are required before you upgrade SAR:

- If the SAR Core server is associated with a SA server, the SA server must be upgraded to 7.50 before you upgrade SAR to 7.50. See the SA documentation for instructions to upgrade the SA server.
- The SA upgrade deletes the SAR configuration in the SA twist.conf file. After SA is upgraded, you must perform the steps in either “Enabling SAR in SA Locally” on page 55 or “Enabling SAR in SA on a Separate Server” on page 56 as appropriate.

- The response file from the most recent SAR installation. The default location and file name of the SAR response file is `/var/tmp/oiresponse.omdb`.
- The location of all Data Miners associated with the SAR Core.

## Files Archived During an Upgrade

### Configuration Files Archived During an Upgrade

During an upgrade of SAR, a number of SAR configuration files are copied into the `/var/opt/opsware/install_opsware/config_file_archive` directory when the upgrade begins, and then these files are copied to their original locations at the end of the upgrade. Table 7-1 displays the archived files.

Table 7-1: Files Archived During An Upgrade

DIRECTORY	FILES
<code>/etc/opt/opsware/omdb/</code>	<ul style="list-style-type: none"> <li><code>omdb.properties</code></li> <li><code>rsyncd.xml</code></li> <li><code>rsyncd.secrets</code></li> <li><code>loader.xml</code></li> <li><code>loader-files.xml</code></li> <li><code>loader-transport.xml</code></li> </ul>
<code>/opt/opsware/omdb/deploy/</code>	<ul style="list-style-type: none"> <li><code>cmdb-ds.xml</code></li> <li><code>cmdb-admin-ds.xml</code></li> <li><code>omdb-reporter-ds.xml</code></li> </ul>
<code>/opt/opsware/omdb/deploy/birt.war</code>	<ul style="list-style-type: none"> <li><code>pas_actions.xml</code></li> <li><code>report_def.xml</code></li> <li><code>custom_def.xml</code></li> </ul>



The `cmdb-admin-ds.xml`, `custom_def.xml`, and `pas_actions.xml` files are not present in OMDB 1.0.2, and will not be present in an archive created during an upgrade from OMDB 1.0.2.

The files are archived in the `/var/opt/opsware/install_opsware/config_file_archive` directory with a date string appended to the file name. For example the file `cmdb-ds.xml` would be archived as `cmdb-ds.xml.20080428`. Adding a date to the file name in the archive identifies the files associated with a specific upgrade, so the archive directory can store multiple upgrades of configuration files.

All files in the `/var/opt/opsware/install_opsware/config_file_archive` directory are deleted during an uninstall of SAR.

### Upgraded Reports and Schema

Some reports that shipped with OMDB 1.0.2 were incompatible with data modeling schema changes in later versions of OMDB. In an upgrade, reports with the upgraded version of SAR are removed. All reports present after the upgrade work correctly.

It is recommended that you test any custom reports created with older versions of SAR with the upgraded SAR.

### Deployment Directory and Data Miner Collection Files Archived During an Upgrade

When the Installer is run to either install or upgrade SAR 7.50 or later, if a previous deploy directory at

`/var/opt/opsware/omdb/deploy`

or a previous Data Miner data collection directory at

`/var/opt/opsware/omdb/collect`

is present, that directory and its contents are archived to the `/var/opt/opsware/omdb/` directory using the file name `deploy.previous.date` or `collect.previous.date`, with `date` being a text string representing the date appended to the file name.

An example of the message that will appear in the Installer log file if a previous deployment directory is found as follows:

NOTE:

```
A model deployment directory exists from a previous OMDB
installation. The existing directory contents will be moved to /
var/opt/opsware/omdb/deploy.previous.2008-07-04T191926. If non-
opsware cmdb models have been previously installed, they should
be manually copied back into the deploy directory to be
redeployed in this version.
```

## Upgrading SAR on a Single Server

To upgrade SAR when the SAR Core and the SAR Database are installed on the same server, perform the following steps:

**1** Shut down all Data Miners associated with the SAR Core.

**2** On the SAR server, log in as root.

**3** To shut down the SAR Core, enter the following command:

```
/etc/init.d/opsware-omdb stop
```

Any pending data files will be saved and restored for loading after the migration completes.

**4** From the SAR install DVD, start the Upgrader using the following command:

```
/<mnt_point>/opsware_installer/upgrade_opsware.sh -r  
<response_file>
```

The following prompt appears:

```
Install Type: "OMDB Installation"
```

```
Please select the interview mode. Simple mode uses default  
values for many of the configuration parameters. Advanced  
mode allows you to fully configure the installation.
```

```
1 - Simple Interview Mode  
2 - Advanced Interview Mode
```

```
Please select the interview mode from the menu, type 'h' for  
help, 'q' to quit:
```

**5** To select the Simple Interview mode, type 1, then press Enter. The following prompt appears:

```
The Opsware Installer will now interview you to obtain the  
installation parameters it needs. You can use the following  
keys to navigate forward and backward through the list of  
parameters:
```

```
Control-P - go to the previous parameter  
Control-N - go to the next parameter  
Return - accept the default (if any) and go to the next  
parameter  
Control-F - finish parameter entry  
Control-I - show this menu, plus information about the  
current parameter
```

Press Control-F when you are finished. The Opsware Installer will perform a final validation check and write out a response file that will be used to install the Opsware components.

Parameter 1 of 11 (truth.oaPwd) Please enter the password for the opsware\_admin user. This is the password used to connect to the Oracle database.:

**6** Press Ctrl+F to use the existing values for the parameters in the interview.

**7** The following prompt appears:

```
Welcome to the Opsware Installer.
Please select the components to upgrade.
1 ( ) Opsware OMDB Database Instance
2 ( ) Opsware OMDB Core Services
Enter a component number to toggle ('a' for all, 'n' for
none).
When ready, press 'c' to continue, or 'q' to quit.
Selection:
```

**8** To select all, type a, then press Enter. The following prompt appears:

```
Welcome to the Opsware Installer.
Please select the components to upgrade.
1 (*) Opsware OMDB Database Instance
2 (*) Opsware OMDB Core Services
Enter a component number to toggle ('a' for all, 'n' for
none).
When ready, press 'c' to continue, or 'q' to quit.
Selection:
```

**9** To continue, type c, then press Enter. The following prompt appears:

```
>>>>Installing bootstrap components...
>>>>Stopping Opsware components
.....
>>>>Upgrading component Opsware OMDB Database Instance.
.....
>>>>Installing component Opsware OMDB Database Instance
.....
>>>>Upgrading component Opsware OMDB Core Services.
.....
>>>>Installing component Opsware OMDB Core Services
.....
Opsware Installer ran successfully.
```

For more details, please see the following file:  
 /var/log/opsware/install\_opsware/upgrade\_opsware.2008-06-11.21:30:25\_verbose.log

```
#####
WARNING: to make sure that no sensitive information is left
on this server, please remove, encrypt or copy to a secure
location the following files and directories:
  -- /var/opt/opsware/install_opsware/resp/*
  -- /var/log/opsware/install_opsware/*
  -- /var/tmp/*.sh
Also, please encrypt or store in a secure location the
response file that you used to install this core.
#####
```

```
Script done, file is /var/log/opsware/install_opsware/
upgrade_opsware.2008-06-11.21:30:25.log
```

- 10** Perform the steps in “Upgrading Data Miners” on page 117 for each Data Miner associated with the SAR Core server.

You have completed upgrading SAR.

## Upgrading the SAR Database Server

This section describes how to upgrade the SAR Database Server when the SAR Core Server and the SAR Database Server are installed on separate platforms. You must upgrade the SAR Database server before upgrading the SAR Core server. For more information see “Upgrading the SAR Core Server” on page 114.

- 1** Shut down all Data Miners associated with the SAR Core
- 2** On the SAR Database server, log in as root.
- 3** From the SAR install DVD, start the Upgrader using the following command:
 

```
<mnt_point>/opsware_installer/upgrade_opsware.sh -r
<response_file>
```
- 4** The following prompt appears:
 

```
Welcome to the Opsware Installer.
Please select the components to upgrade.
1 ( ) Opsware OMDB Database Instance
Enter a component number to toggle ('a' for all, 'n' for
none).
When ready, press 'c' to continue, or 'q' to quit.
Selection:
```
- 5** To select the SAR Database server, type 1, then press Enter. The following prompt appears:
 

```
Welcome to the Opsware Installer.
```

```

Please select the components to upgrade.
1 (*) Opware OMDB Database Instance
Enter a component number to toggle ('a' for all, 'n' for
none).
When ready, press 'c' to continue, or 'q' to quit.
Selection:

```

- 6** To continue, type c, then press Enter. The following prompt appears:

```

>>>>Installing bootstrap components...
>>>>Stopping Opware components
.....
>>>>Upgrading component Opware OMDB Database Instance.
.....
>>>>Installing component Opware OMDB Database Instance
.....
Opware Installer ran successfully.

```

For more details, please see the following file:  
 /var/log/opsware/install\_opsware/upgrade\_opsware.2008-06-11.21:30:25\_verbose.log

```

#####
WARNING: to make sure that no sensitive information is left
on this server, please remove,encrypt or copy to a secure
location the following files and directories:
  -- /var/opt/opsware/install_opsware/resp/*
  -- /var/log/opsware/install_opsware/*
  -- /var/tmp/*.sh

```

Also, please encrypt or store in a secure location the response file that you used to install this core.

```
#####
```

```

Script done, file is /var/log/opsware/install_opsware/
upgrade_opsware.2008-06-11.21:30:25.log

```

- 7** Perform the steps in “Upgrading Data Miners” on page 117 for each Data Miner associated with the SAR Core server.

You have completed upgrading the SAR Database server.

## Upgrading the SAR Core Server

This section describes how to upgrade the SAR Core Server when the SAR Core Server and the SAR Database Server are installed on separate platforms.

You must upgrade the SAR Database server before you can upgrade the SAR Core server. For more information see "Upgrading the SAR Database Server" on page 112.

**1** Shut down all Data Miners associated with the SAR Core.

**2** On the SAR server, log in as root.

**3** To shut down the SAR Core, enter the following command:

```
/etc/init.d/opsware-omdb stop
```

Any pending data files will be saved and restored for loading after the migration completes.

**4** From the SAR install DVD, start the Upgrader using the following command:

```
/<mnt_point>/opsware_installer/upgrade_opsware.sh -r  
<response_file>
```

The following prompt appears:

```
Install Type: "OMDB Installation"
```

```
Please select the interview mode. Simple mode uses default  
values for many of the configuration parameters. Advanced  
mode allows you to fully configure the installation.
```

```
1 - Simple Interview Mode  
2 - Advanced Interview Mode
```

```
Please select the interview mode from the menu, type 'h' for  
help, 'q' to quit:
```

**5** To select the Simple Interview mode, type 1, then press Enter. The following prompt appears:

```
The Opsware Installer will now interview you to obtain the  
installation parameters it needs. You can use the following  
keys to navigate forward and backward through the list of  
parameters:
```

```
Control-P - go to the previous parameter  
Control-N - go to the next parameter  
Return - accept the default (if any) and go to the next  
parameter  
Control-F - finish parameter entry
```



Control-I - show this menu, plus information about the current parameter

Press Control-F when you are finished. The Opsware Installer will perform a final validation check and write out a response file that will be used to install the Opsware components.

Parameter 1 of 11 (truth.oaPwd) Please enter the password for the opsware\_admin user. This is the password used to connect to the Oracle database.:

**6** Press Ctrl+F to use the existing values for the parameters in the interview.

**7** The following prompt appears:

```
Welcome to the Opsware Installer.
Please select the components to upgrade.
1 ( ) Opsware OMDB Core Services
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
Selection:
```

**8** To select the SAR Core Services, type 1, then press Enter. The following prompt appears:

```
Welcome to the Opsware Installer.
Please select the components to upgrade.
1 (*) Opsware OMDB Core Services
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
Selection:
```

**9** To continue, type c, then press Enter. The following prompt appears:

```
>>>>Installing bootstrap components...
>>>>Stopping Opsware components
.....
>>>>Upgrading component Opsware OMDB Core Services.
.....
>>>>Installing component Opsware OMDB Core Services
.....
Opsware Installer ran successfully.
```

For more details, please see the following file:  
/var/log/opsware/install\_opsware/upgrade\_opsware.2008-06-11.21:30:25\_verbose.log

```
#####
WARNING: to make sure that no sensitive information is left
```

on this server, please remove, encrypt or copy to a secure location the following files and directories:

- /var/opt/opsware/install\_opsware/resp/\*
- /var/log/opsware/install\_opsware/\*
- /var/tmp/\*.sh

Also, please encrypt or store in a secure location the response file that you used to install this core.

#####

Script done, file is /var/log/opsware/install\_opsware/  
upgrade\_opsware.2008-06-11.21:30:25.log

You have completed upgrading the SAR Core server.

## Preserving Custom Reports in an OMDB 1.0.2 to SAR 7.50 Upgrade

In OMDB 1.0.2, custom report definitions were added to OMDB by editing the `report_def.xml` file. In OMDB 7.0 and later versions, custom report definitions are added to the `custom_def.xml` file. In an upgrade from OMDB 1.0.2 to SAR 7.50, the `report_def.xml` file is archived and replaced. To recover custom reports defined in the OMDB 1.0.2 installation, perform the following steps:

- 1** Using a text editor, open the following archived file:  
`/var/opt/opsware/install_opsware/config_file_archive/opt/opsware/omdb/deploy/birt.war/report_def.xml.date`  
where `date` is a timestamp.
- 2** Examine the archived `report_def.xml` for any custom report definitions that were added to the file.
- 3** Using a text editor, open the following file:  
`/opt/opsware/omdb/deploy/birt.war/custom_def.xml`



If the `custom_def.xml` file does not exist, you must create the file. For more information, see “Creating the `custom_def.xml` file” in the *SAR User’s Guide*.

---

- 4** Copy any custom report definitions present in the archived `report_def.xml` file to the `custom_def.xml` file.

- 5 Save the changes to `custom_def.xml`.

## Upgrading Data Miners

This section describes how to upgrade the Data Miners associated with the SAR Core server. You must upgrade the SAR Core server before upgrading the Data Miners associated with that SAR Core server. The Data Miner installation task uses `/opt/opsware/dataminer` and `C:\dataminer` as examples of a destination directory. Use the directory that the Data Miner you are upgrading is installed into in place of `/opt/opsware/dataminer`.



(OMDB 1.0.2 upgrade only) If the OMDB 1.0.2 server has an SA Data Miner mining data from an SA multimaster mesh, perform the steps in “Enabling Mesh Vault Mining For an SA Multimaster Mesh” on page 68 before upgrading the SA Data Miner.

### Upgrading a Data Miner on a Linux or Solaris Server

To upgrade a Data Miner on a Linux or Solaris server, perform the following steps:

- 1 Log in to the Linux or Solaris server that the Data Miner is installed on.
- 2 Stop the Data Miner by performing the steps in “Stopping a Data Miner From the Solaris or Linux Command Line” on page 89.
- 3 Copy `dataminer-upgrade.tar` from `/opt/opsware/omdb/dist` on the SAR server to a local directory such as `/opt/opsware/dataminer`. The commands used for this step are shown in the following example:
 

```
cd /opt/opsware/dataminer
scp youromdbserver:/opt/opsware/omdb/dist/dataminer-upgrade.tar .
```
- 4 Untar the file:
 

```
tar -xvf dataminer-upgrade.tar
```
- 5 Run the `dataminer` setup using the following command:
 

```
./dmsetup.sh
```

The following prompt appears:

```
Please enter the registration token provided after this
dataminer was configured on the OMDB server: []
```

- 6** Press Enter to accept the current token. The following prompt appears:  

```
Updating token in dataminer.conf
```

  

```
Would you like to have this dataminer automatically start up  
when the system reboots? y/n:
```
- 7** Type `y`, then press Enter. The following prompt appears:  

```
Dataminer is now configured for startup:
```
- 8** Start the Data Miner by performing the steps in “Listing and Unregistering Data Miners” on page 87.
- 9** Restart the SAR Core server.

### Upgrading a Data Miner on a Windows Server

To upgrade a Data Miner on a Windows server, perform the following steps:

- 1** Log in to the Windows server that the Data Miner is installed on.
- 2** To stop the Data Miner service, run the following command:  

```
DataMinerService -stop
```
- 3** Copy `dataminer-upgrade.zip` from `/opt/opsware/omdb/dist` on the SAR server to a local directory such as `C:\dataminer`.
- 4** Unzip the file.
- 5** Start the Data Miner by performing the steps in “Listing and Unregistering Data Miners” on page 87.

### Upgrading NA Data Miners

This section describes how to upgrade the NA Data Miners and Transaction Mining Triggers associated with the SAR Core server. You must upgrade the SAR Core server before upgrading the Data Miners associated with that SAR Core server.



---

The Data Miner installation task uses `/opt/opsware/dataminer` and `C:\dataminer` as examples of a destination directory. Use the directory that the Data Miner you are upgrading is installed into in place of `/opt/opsware/dataminer`.

---

## Upgrading a NA Data Miner with Oracle on a Linux or Solaris Server

This section describes how to upgrade a Data Miner and the associated transaction mining trigger for a NA installation on a Linux or Solaris server using Oracle.

You will need the following information before you begin:

- The Oracle SID of the NA database instance
- The Oracle database user owning the NA table

To upgrade a NA Data Miner and transaction mining trigger on a Linux or Solaris server with Oracle, perform the following steps:

- 1** Stop the NA application.
- 2** Log in to the Linux or Solaris server that the Data Miner is installed on.
- 3** Stop the Data Miner by performing the steps in “Stopping a Data Miner From the Solaris or Linux Command Line” on page 89.
- 4** Copy `dataminer-upgrade.tar` from `/opt/opsware/omdb/dist` on the SAR server to a local directory such as `/opt/opsware/dataminer`. The commands used for this step are shown in the following example:

```
cd /opt/opsware/dataminer
scp youromdbserver:/opt/opsware/omdb/dist/dataminer-
upgrade.tar .
```

- 5** Untar the file:
 

```
tar -xvf dataminer-upgrade.tar
```
- 6** Type the following command:
 

```
chown oracle:dba /opt/opsware/dataminer/triggers/oracle/*
```
- 7** Run the dataminer setup using the following command:
 

```
./dmsetup.sh
```

The following prompt appears:

```
Please enter the registration token provided after this
dataminer was configured on the OMDB server: []
```

- 8** Press Enter to accept the current token. The following prompt appears:
 

```
Updating token in dataminer.conf
```

```
Would you like to have this dataminer automatically start up
when the system reboots? y/n:
```

- 9** Type `y`, then press Enter. The following prompt appears:

Dataminer is now configured for startup:

- 10** Log in to the NA Linux or Solaris server as the user `oracle`.
- 11** Type the following command:  
`cd /opt/opsware/dataminer/triggers/oracle`
- 12** Type the following command:  
`./upgrade_nas_triggers.sh`
- 13** Respond to all prompts.
- 14** Start the Data Miner by performing the steps in “Listing and Unregistering Data Miners” on page 87.
- 15** Restart the SAR Core server.
- 16** Restart the NA application.

### Upgrading a NA Data Miner with Oracle on a Windows Server

This section describes how to upgrade a Data Miner and the associated transaction mining trigger for a NA installation on a Windows server using Oracle.

You will need the following information before you begin:

- The Oracle SID of the NA database instance
- The Oracle database user owning the NA table

To upgrade a NA Data Miner and transaction mining trigger on a Windows server with Oracle, perform the following steps:

- 1** Stop the NA application.
- 2** Log in to the Windows server that the Data Miner is installed on.
- 3** To stop the Data Miner service, run the following command:  
`DataMinerService -stop`
- 4** Log in to the NA database server as a user that is a member of the `ORA_DBA` group.
- 5** Confirm the `sqlplus.exe` application is in the user's path.
- 6** In the `C:\opsware\dataminer\triggers\oracle` directory, run the following command:  
`upgrade_nas_triggers.cmd`
- 7** Respond to all prompts.

- 8** Start the Data Miner by performing the steps in “Stopping a Data Miner From the Solaris or Linux Command Line” on page 89.
- 9** Restart the SAR Core server.
- 10** Restart the NA application.

### **Upgrading a NA Data Miner with SQL Server on a Windows Server**

This section describes how to upgrade a Data Miner and the associated transaction mining trigger for a NA installation on a Windows server using SQL Server.

You will need the following information before you begin:

- The name of the NA application schema
- The name of the user account created during the NA installation

To find these names, perform the steps in “Preparing to Install Transaction Mining Triggers for NA with SQL Server on Windows” on page 75.

To upgrade a NA Data Miner and transaction mining trigger on a Windows server with SQL Server, perform the following steps:

- 1** Stop the NA application.
- 2** Log in to the Windows server that the Data Miner is installed on.
- 3** To stop the Data Miner service, run the following command:  
`DataMinerService -stop`
- 4** In the `C:\opsware\dataminer\triggers\sqlserver` directory, run the following command:  
`upgrade_nas_triggers.cmd`
- 5** Respond to all prompts.
- 6** Start the Data Miner by performing the steps in “Stopping a Data Miner From the Solaris or Linux Command Line” on page 89.
- 7** Restart the SAR Core server.
- 8** Restart the NA application.





# Chapter 8: Uninstalling SAR

## IN THIS CHAPTER

This chapter discusses the following topics:

- Uninstall Basics
- Procedures for Uninstalling SAR
- Uninstalling a SAR Server
- Uninstalling a SAR Core Server
- Uninstalling a SAR Database Server

## Uninstall Basics

This chapter describes how to uninstall a SAR server. There are several reasons that you might choose to uninstall a SAR server.

- Removing test installations
- Removing demonstration installations



---

Before you uninstall a SAR server, it is recommended that you back up the Oracle database for that SAR server.

---

Like an SAR installation, the uninstall is done using a script that you run from the server hosting the SAR Core to be uninstalled.

## Procedures for Uninstalling SAR

You can perform any of the following four uninstallation procedures according to your requirements:

- Uninstalling a SAR Server

- Uninstalling a SAR Core Server
- Uninstalling a SAR Database Server

## Uninstalling a SAR Server

To uninstall a SAR server, perform the following steps:

- 1** Stop all Data Miners associated with the SAR server. For more information about stopping Data Miners, see “Listing and Unregistering Data Miners” on page 87.
- 2** On the SAR server to be uninstalled, log in as root.
- 3** Mount the SAR install DVD using a command similar to `mount /dev/cdrom` as appropriate.
- 4** From the SAR install DVD, start the Uninstaller using the following command:  

```
<mnt_point>/opsware_installer/uninstall_opsware.sh -r  
<response-file>
```



Start the Uninstaller using the fully qualified path name. Do not start the Uninstaller from the local directory.

---

- 5** At the components prompt, select one or more or all components to uninstall:

```
Welcome to the Opsware Installer.  
Please select the components to install.  
1 ( ) Opsware OMDB Core Services  
2 ( ) Opsware OMDB Database Instance  
3 ( ) Oracle RDBMS for OMDB  
Enter a component number to toggle ('a' for all, 'n' for  
none).  
When ready, press 'c' to continue, or 'q' to quit.  
Selection:
```

- 6** To select all, type `a`, then press Enter. The following prompt appears:

```
Welcome to the Opsware Installer.  
Please select the components to install.  
1 (*) Opsware OMDB Core Services  
2 (*) Opsware OMDB Database Instance  
3 (*) Oracle RDBMS for OMDB  
Enter a component number to toggle ('a' for all, 'n' for  
none).
```

When ready, press 'c' to continue, or 'q' to quit.  
Selection:

- 7** To continue, type c, then press Enter. The following prompt appears:
- ```
>>>>Uninstalling component Opware OMDB Core Services.
>>>>Uninstalling component Opware OMDB Database Instance.
>>>>Uninstalling component Oracle RDBMS for OMDB.
.....Would you like to preserve the database of
cryptographic material? [y/n] :
```

- 8** Perform one of the following two actions:

- Type y, and then press Enter.
- To use existing cryptographic information, contact Technical Support for more information.

The following prompt appears:

```
Opware Installer ran successfully.
For more details, please see the following file:
/var/log/opware/install_opware/uninstall_opware.2008-06-
10.21:11:30_verbose.log
```

```
#####
WARNING: to make sure that no sensitive information is left
on this server, please remove,encrypt or copy to a secure
location the following files and directories:
  -- /var/opt/opware/install_opware/resp/*
  -- /var/log/opware/install_opware/*
  -- /var/tmp/*.sh
```

Also, please encrypt or store in a secure location the response file that you used to install this core.

```
#####
```

```
Script done on Tue Jun 10 21:14:50 2008
```

- 9** After the uninstall has completed, remove the `/var/opt/opware/install_opware` directory.



If you specified during the uninstall that you want to preserve the database of cryptographic material, you should *not* delete the `/var/opt/opware/crypto` directory. This directory contains the database of cryptographic material.

## Uninstalling a SAR Core Server

To uninstall a SAR Core server, perform the following steps:

- 1** Stop all Data Miners associated with the SAR server. For more information about stopping Data Miners, see “Listing and Unregistering Data Miners” on page 87.
- 2** On the SAR Core server to be uninstalled, log in as root.
- 3** Mount the SAR install DVD using a command similar to `mount /dev/cdrom` as appropriate.
- 4** From the SAR install DVD, start the Uninstaller using the following command:  

```
/<mnt_point>/opsware_installer/uninstall_opsware.sh -r  
<response-file>
```



---

Start the Uninstaller using the fully qualified path name. Do not start the Uninstaller from the local directory.

---

- 5** At the components prompt, select one or more or all components to uninstall:

```
Welcome to the Opsware Installer.  
Please select the components to install.  
1 ( ) Opsware OMDB Core Services  
2 ( ) Opsware OMDB Database Instance  
3 ( ) Oracle RDBMS for OMDB  
Enter a component number to toggle ('a' for all, 'n' for  
none).  
When ready, press 'c' to continue, or 'q' to quit.  
Selection:
```

- 6** To select SAR Core Services, type 1, then press Enter. The following prompt appears:

```
Welcome to the Opsware Installer.  
Please select the components to install.  
1 (*) Opsware OMDB Core Services  
2 ( ) Opsware OMDB Database Instance  
3 ( ) Oracle RDBMS for OMDB  
Enter a component number to toggle ('a' for all, 'n' for  
none).  
When ready, press 'c' to continue, or 'q' to quit.  
Selection:
```

**7** To continue, type `c`, then press Enter. The following prompt appears:

```
>>>>Uninstalling component Opsware OMDB Core Services.
.....Would you like to preserve the database of
cryptographic material? [y/n] :
```

**8** Perform one of the following two actions:

- Type `y`, then Enter.
- To use existing cryptographic information, contact Technical Support for more information.

The following prompt appears:

```
Opsware Installer ran successfully.
For more details, please see the following file:
/var/log/opsware/install_opsware/uninstall_opsware.2008-06-
10.21:11:30_verbose.log
```

```
#####
#####
```

```
WARNING: to make sure that no sensitive information is left
on this server, please remove,encrypt or copy to a secure
location the following files and directories:
```

```
-- /var/opt/opsware/install_opsware/resp/*
-- /var/log/opsware/install_opsware/*
-- /var/tmp/*.sh
```

```
Also, please encrypt or store in a secure location the
response file that you used to install this core.
```

```
#####
#####
```

```
Script done on Tue Jun 10 21:14:50 2008
```

**9** After the uninstall has completed, remove the `/var/opt/opsware/install_opsware` directory.




---

If you specified during the uninstall that you want to preserve the database of cryptographic material, you should *not* delete the `/var/opt/opsware/crypto` directory. This directory contains the database of cryptographic material.

---

## Uninstalling a SAR Database Server

To uninstall a SAR Database server, perform the following steps:

- 1** Stop all Data Miners associated with the SAR server. For more information about stopping Data Miners, see “Listing and Unregistering Data Miners” on page 87.
- 2** On the server hosting the SAR database component to be uninstalled, log in as root.
- 3** Mount the SAR install DVD using a command similar to `mount /dev/cdrom` as appropriate.
- 4** From the SAR install DVD, start the Uninstaller using the following command:  

```
<mnt_point>/opsware_installer/uninstall_opsware.sh -r  
<response-file>
```



---

Start the Uninstaller using the fully qualified path name. Do not start the Uninstaller from the local directory.

---

- 5** At the components prompt, select one or more or all components to uninstall:

```
Welcome to the Opsware Installer.  
Please select the components to install.  
1 ( ) Opsware OMDB Core Services  
2 ( ) Opsware OMDB Database Instance  
3 ( ) Oracle RDBMS for OMDB  
Enter a component number to toggle ('a' for all, 'n' for  
none).  
When ready, press 'c' to continue, or 'q' to quit.  
Selection:
```

- 6** To select the Oracle RDBMS for SAR and SAR Database Instance, type `2`, then press Enter, and then type `3`, then press Enter. The following prompt appears:

```
Welcome to the Opsware Installer.  
Please select the components to install.  
1 ( ) Opsware OMDB Core Services  
2 (*) Opsware OMDB Database Instance  
3 (*) Oracle RDBMS for OMDB  
Enter a component number to toggle ('a' for all, 'n' for  
none).  
When ready, press 'c' to continue, or 'q' to quit.  
Selection:
```

**7** To continue, type `c`, then press Enter. The following prompt appears:

```
>>>>Uninstalling component Opware OMDB Database Instance.
>>>>Uninstalling component Oracle RDBMS for OMDB.
.....Would you like to preserve the database of
cryptographic material? [y/n] :
```

**8** Perform one of the following two actions:

- Type `y`, then Enter.
- To use existing cryptographic information, contact Technical Support for more information.

The following prompt appears:

```
Opware Installer ran successfully.
For more details, please see the following file:
/var/log/opware/install_opware/uninstall_opware.2008-06-
10.21:11:30_verbose.log
```

```
#####
#####
```

```
WARNING: to make sure that no sensitive information is left
on this server, please remove,encrypt or copy to a secure
location the following files and directories:
```

- ```
-- /var/opt/opware/install_opware/resp/*
-- /var/log/opware/install_opware/*
-- /var/tmp/*.sh
```

```
Also, please encrypt or store in a secure location the
response file that you used to install this core.
```

```
#####
#####
```

```
Script done on Tue Jun 10 21:14:50 2008
```

**9** After the uninstall has completed, remove the `/var/opt/opware/install_opware` directory.



If you specified during the uninstall that you want to preserve the database of cryptographic material, you should *not* delete the `/var/opt/opware/crypto` directory. This directory contains the database of cryptographic material.





# Chapter 9: Administration

## IN THIS CHAPTER

This chapter discusses the following topics:

- Starting and Stopping SAR
- Configuring SAR to Use Different Ports
- Enabling Actionability in SAR Reports
- Enabling Actionability of an OO Flow in SAR

## Starting and Stopping SAR

This section describes the `opsware-omdb` script used to start SAR. After installation, the script is located in the `/etc/init.d/` directory:

```
/etc/init.d/opsware-omdb
```

The `opsware-omdb` script has the following options:

- `start`
- `stop`
- `startsync`
- `restart`
- `list`
- `status`
- `version`

For more information on these options, see the *SA Administration Guide*.

## Configuring SAR to Use Different Ports

### Changing SAR Default Ports

SAR configuration is retained in `omdb.properties`, and also in the response file created or modified during an installation or upgrade of SAR. The installer will use these values to setup the configuration rather than requiring the user to modify the scattered files throughout SAR.

To change the port number used by SAR, perform the following steps:

- 1** Log in to the SAR server.
- 2** Using a text editor, open the SAR response file from the most recent installation or upgrade on the server. The default location and name of the SAR response file is:  
`/usr/tmp/oiresponse.omdb`
- 3** Edit the `oiresponse.omdb` file to the custom port preferred for the port number, and then save the file.
- 4** Type the following command:  
`upgrade_opsware -r response_file`  
to set the port parameters from the edited response file.

### Changing the SAR Database Port

By default SAR uses port 1521 to connect SAR Core services to the SAR database. Because the SAR database port is not set during the installation the port number is not part of the SAR response file, and you cannot change the SAR database port using the steps in “Changing SAR Default Ports”. To change the database port number used by SAR, perform the following steps:

- 1** Log in to the SAR Core server.
- 2** To shut down the SAR Core, enter the following command:  
`/etc/init.d/opsware-omdb stop`
- 3** For each of the files in the following list, open the file using a text editor, change the database port from the default value of 1521 to the required value, and save the file.  
`/etc/opt/opsware/omdb.properties`  
`/opt/opsware/omdb/bin/dmconfig.properties`  
`/opt/opsware/omdb/deploy/cmdb-admin-ds.xml`  
`/opt/opsware/omdb/deploy/cmdb-ds.xml`  
`/opt/opsware/omdb/deploy/omdb-reporter-ds.xml`

- 4 To start the SAR Core, enter the following command:  

```
/etc/init.d/opsware-omdb start
```

## Enabling Actionability in SAR Reports

SAR reports can support actionable items. For example, a server entry in a report can be set as actionable. Right-clicking on that server displays a pop-up menu of actions available for that server.

### Setting a Table as Actionable

To set a table as actionable, perform the following steps:

- 1 Launch BIRT RCP Designer.
- 2 In the Outline pane, expand the report name, and then expand Body.
- 3 Select the table name.
- 4 In the Property Editor -table name, click the Properties tab.
- 5 In the Properties list, select Bookmark.
- 6 In the text field, enter the following string:  

```
id='actionable'
```
- 7 From the File menu, select **Save**.

### Adding Source and Item IDs to a Custom Report

To add the source and item id to your custom report, perform the following steps:

- 1 Launch BIRT RCP Designer.
- 2 Expand Data Set.
- 3 Double-click the data set that is associated with the report.
- 4 In the query text field, add an actionable text string. See for the acceptable formats and values.
- 5 In the left list of the Edit Data Set window, click Output Columns.
- 6 Click **OK**.
- 7 Expand the Data Set.
- 8 Drag the new column into the table as the first column of the Detail Row of the table.

## SAR Actionable Item Formatting

The format for SAR actionable report items is:

```
ci_type:item_id
```

For example:

```
SAS_SERVER:1001
```

where SAS\_SERVER is the CI Type and 1001 is the item id of the specific item. The item id is a numeric value unique to your SAR installation. All CI Types have actionability supported for the View action, and other actions may also be supported dependent on the CI Type. For a list of valid CI Types in SAR, see "Viewing CI Types".

## Viewing CI Types

To see a list of valid CI Types, perform the following steps:

- 1** In a web browser, enter the following URL:  
`https://omdbserver:8443/catalog/`  
where *omdbserver* is a SAR server that you have an account you can log in to.
- 2** Click **ListItem Types**. The CI Types are shown in the "Type Name" column.

## Enabling Actionability of an OO Flow in SAR

To enable OO actions on objects for SAR users, the SAR Administrator must add an existing OO Flow to SAR by defining the parameters of that OO Flow for SAR in the SAR configuration file `pas_actions.xml`, located in the `/opt/opsware/omdb/deploy/birt.war/` directory.

To add an OO Flow to SAR, you need to know the following information:

- the OO Flow Name
- the OO Flow ID
- the SAR CI Type the OO Flow is associated with
- the Target Name and the Source Name of each input that SAR should pass to the OO Flow

For example, to configure a OO flow with an input named "host" to run on an SA Server and to pass that server's IP address to OO, you must:

- Identify the appropriate input name of the OO Flow
- configure the following elements of the SAR `pas_actions.xml` file:
 

```
<ci-type name="SAS_SERVER">
<source-name>opsware.sa.PrimaryIp</source-name>
<target-name>host</target-name>
```

For more information on working with the SAR `pas_actions.xml` file, see "Adding a OO Flow to SAR" and "Example CI-Type and Flow Elements in `pas_actions.xml`".

Identify the `ci-type` name and `source-name` values using the SAR Data Catalog. For more information, see "Identifying the CI Type" and "Identifying the Source Name of an OO Flow Input".

To identify the `target-name` value, find the name of the input for the OO Flow you want to configure to run from SAR. For example, an OO flow might have a flow variable named "host," with a value of "\${host}". Using the example `pas_actions.xml` tokens, SAR would pass the value of a SAS\_SERVER's ip address as a variable with the name of "host" to the OO server for use in its workflow, as part of the remote flow execution call. For more information, see "Inputs: Providing data to operations" in the *OO Author's Guide*.

The following tasks show how to gather the required information, and then how to add the OO Flow definition to SAR.



The tasks shown in this chapter were created using version 7.0 of PAS. Refer to the documentation for your version of PAS or OO to identify Flow variables such as Flow name, Flow ID, and target names of inputs.

### **Identifying the Flow Name**

You must use the name of the Flow shown in OO as the Flow Name in `pas_actions.xml`. To find the name of a Flow, perform the following steps:

- 1** Using the OO Central web-based application, log into the OO server that the OO Flow is on.
- 2** Select the Flow Library tab.
- 3** View the folder tree of the Flow Library until you find the name of the OO Flow you want to add to SAR.

- 4 Right-click the selected Flow, then select **About**. The Flow Information window is displayed. The name of the OO Flow is displayed as the top line of text in the window.

See “Finding an Ops Flow” in the *OO Central Users’ Guide* for more information.

### **Identifying the Flow ID**

An example of a Flow ID resembles the following text string:

```
13adf024-c87f-46ef-b734-c8d6ad21c8ba
```

To identify the Flow ID of the OO Flow you are working with, perform the following steps:

- 1 Using the OO Central web-based application, log into the OO server that the OO Flow is on.
- 2 Select the Flow Library tab.
- 3 Right-click the selected Flow, then select **About**. The Flow Information window is displayed. The Flow UUID is displayed in the Flow Information window.

### **Identifying the CI Type**

To see a list of valid CI Types in SAR, perform the following steps:

- 1 In a web browser, enter the following URL:  
`https://omdbserver:8443/catalog/`  
where *omdbserver* is a SAR server that you have an account you can log in to.
- 2 Click **ListItem Types**. The CI Types are shown in the "Type Name" column.

### **Identifying the Target Name of an OO Flow Input**

Each input for a OO Flow needs to be defined in `pas_actions.xml` with both a Source Name and a Target Name. The Target Name is the parameter name used by the OO server when a flow is defined.



Examining the design of a flow using the OO Studio can help in understanding a flow’s inputs and the data types expected for a given input.

---

To view the list of target-names to use as inputs for an OO Flow, perform the following steps:

- 1 Using the PAS Central web-based application, log into the OO server that the OO Flow is present on.
- 2 Select the Flow Library tab.
- 3 Right-click the selected Flow, then select **Guided Run**.
- 4 In the Advanced Details pane, choose the appropriate Input name as the text string you will use as the target name.



The above task was created using version 7.0 of PAS. Refer to the documentation for your version of PAS or OO to identify flow variables.

### **Identifying the Source Name of an OO Flow Input**

Each input for a OO Flow needs to be defined in `pas_actions.xml` with both a Source Name and a Target Name. The Source Name is created from the definition of an attribute of a CI Type in the SAR Data Catalog. To identify the source name of a OO Flow input, perform the following steps:

- 1 In a web browser, enter the following URL:  
`https://omdbserver:8443/catalog/`  
 where `omdbserver` is the SAR server that you have an account you can log in to.
- 2 Click **ShowFullCatalog**. The CI Types are shown in alphabetic order.
- 3 Find the CI Type you are working with.
- 4 Find the attribute you want to use. Read the attribute's value in the Attribute Namespace column. We will refer to this value as `attribute_namespace`.
- 5 Find the attribute's value shown in the Attribute Key column. We will refer to this value as `attribute_key`.
- 6 Assemble the source name by writing the `attribute_namespace`, a period (`.`), and then the `attribute_key`. For example, the assembled source name would be in the following format: `attribute_namespace.attribute_key`.

### **Adding a OO Flow to SAR**

Now that you have gathered the required information, you can add the OO Flow to SAR.

- 1 On the SAR Core server, open a terminal window.

- 2** Copy the following file  
`/opt/opsware/omdb/deploy/birt.war/pas_actions.xml`  
to  
`/opt/opsware/omdb/deploy/birt.war/pas_actions_backup.xml`  
`pas_actions.xml` is a file included with SAR that provides example Configuration Item (CI) types and PAS workflows.
- 3** Using a text editor, open the following file:  
`/opt/opsware/omdb/deploy/birt.war/pas_actions.xml`
- 4** Perform one of the following two actions:
  - If the CI Type you are adding a flow for does not already exist in the `pas_actions.xml` file, add a new CI Type element for the CI Type you want to add the PAS Flow to. Go to step 5.  
Or
  - If the CI Type you are adding a flow for does already exist in the `pas_actions.xml` file, modify the existing matching CI Type element of the file to match your desired Flow ID, Flow Name, source name, and target name, and then go to step 10.
- 5** Copy a Flow element from `<flow>` to `</flow>`, and paste the flow element between the last `</flow>` and the `</ci-type>` closing tag for the CI Type.
- 6** In the copied Flow element, edit the value of `<flow id="flow_id">` by replacing `flow_id` with the Flow ID you identified in "Identifying the Flow ID".
- 7** In the copied Flow element, edit the value of `<flow-name>flow_name</flow-name>` by replacing `flow_name` with the OO Flow Name you identified in "Identifying the Flow Name".
- 8** In the `<input>` tag of the copied Flow element, edit the value between the `<source-name>` and `</source-name>` tags with the `attribute_namespace.attribute_key` value you identified in "Identifying the Source Name of an OO Flow Input".
- 9** In the `<input>` tag of the copied Flow element, edit the value in `<target-name>` and `</target-name>` tags with the value you identified in "Identifying the Target Name of an OO Flow Input".
- 10** Delete the example data for the example flows in the `pas_actions.xml` file.
- 11** Save your changes to `pas_actions.xml`, and then exit the text editor.



- 12** (Optional) Before restarting the SAR Core, check the validity and structure of the `pas_actions.xml` file using a tool such as the UNIX utility `xmlwf`.
- 13** Restart the SAR Core. See “Starting and Stopping SAR” for more information.

### **Example CI-Type and Flow Elements in `pas_actions.xml`**

The following example text shows one CI-Type element containing two Flow elements. This example text is not a complete `pas_actions.xml` file.

```
<ci-type name="CI_TYPE">
<!-- SMTP check: flow1_id -->
<flow id="flow1_id">
<flow-name>flow1_name</flow-name>
<inputs>
<input>
<!-- input names should be valid attributes of the CI type -->
<!-- The attribute's value should be passed as an input to the
PAS workflow.-->
<source-name>flow1_source_name1</source-name>
<target-name>flow1_target_name1</target-name>
</input>
<input>
<source-name>flow1_source_name2</source-name>
<target-name>flow1_target_name2</target-name>
</input>
</inputs>
</flow>
<flow id="flow2_id">
<flow-name>flow2_name</flow-name>
<inputs>
<input>
<source-name>flow2_source_name1</source-name>
```

```
<target-name>flow2_target_name1</target-name>
</input>
<input>
<source-name>flow2_source_name2</source-name>
<target-name>flow2_target_name2</target-name>
</input>
</inputs>
</flow>
</ci-type>
```



The `<filter>` and `<multi-select>` elements are not supported in SAR 7.50.

---