HP BSA Essentials

for the Red Hat Enterprise Linux and Solaris ® operating systems

Software Version: 2.0

Installation Guide

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Contents

1 Welcome to BSA Essentials

Welcome to BSA Essentials 2.0, which provides both high level and detailed historical reporting on your data center's automation processes for BSA Server and Network Automation products. BSA Essentials gives you insight through a rich reporting regarding the cost effectiveness and return on investments for the various automated processed in your data center, and provides a window into the compliance state of your servers, devices, and business applications.

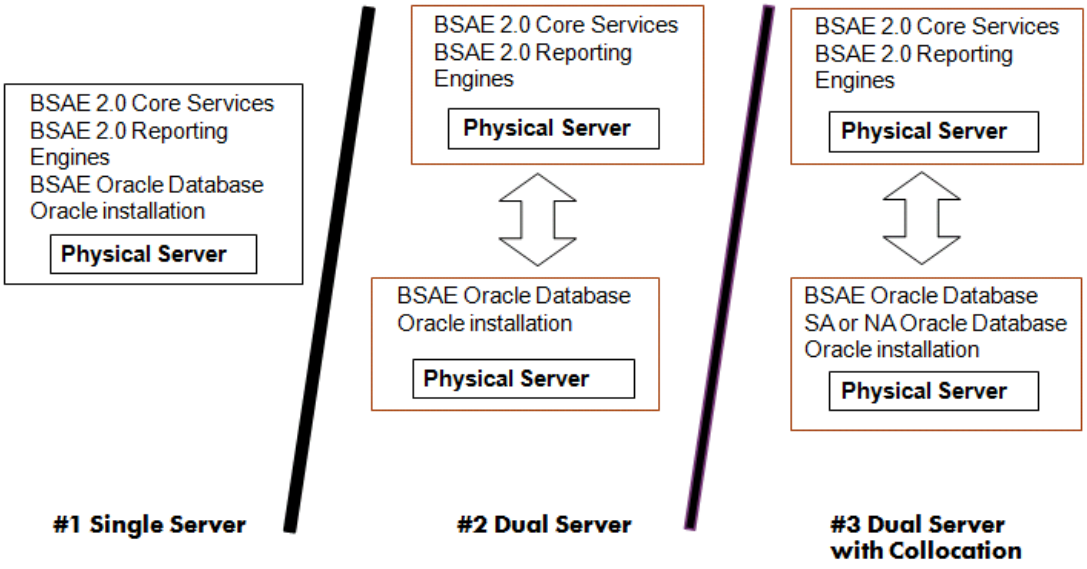
Installation Types

BSA Essentials 2.0 supports the following installation types (as illustrated in Figure 1):

- **Single Server**: Installing BSA Essentials BSA Essentials Core Services, BusinessObjects, and Database components on the same server
- **Dual Server**: Installing the BSA Essentials Core Services and BusinessObjects components on one server, and the BSA Essentials Database component on the separate servers
- **Customer-Supplied Oracle**: Installing BSA Essentials Core Services and BusinessObjects components to work with a customer-supplied Oracle database. In this scenario, BSA Essentials can be installed on the same server as the customer's Oracle, or on a separate server.

For instructions on how to install BSA Essentials, see Installing BSA Essentials on page 21

Figure 1 BSA Essentials Installation Types



Upgrade Paths

There are three supported paths for upgrading an existing SAR deployment to a BSA Essentials 2.0 deployment:

- SAR 7.5 ➤ SAR7.8 ➤ BSA Essentials 2.0
- SAR 7.8 ➤ BSA Essentials 2.0
- SAR 7.80.01 (compatible with SA 7.81) ➤ BSA Essentials 2.0

For instructions on upgrading to BSA Essentials 2.0, see Upgrading SAR to BSA Essentials on page 107.

BSA Essentials 2.0 can be deployed stand alone; it is not dependent on Server Automation. You do not need to upgrade SA to upgrade SAR 7.5 or SAR 7.8 to BSA Essentials 2.0

Any out of the box or custom reports written with SAR 7.0, 7.5 or 7.8 will continue to function correctly when users upgrade to BSA Essentials 2.0. Such reports are viewable in the BSA Essentials Java Client (SAR Client).

Supported Platforms

For information regarding supported platforms for BSA Essentials 2.0, see the *BSA Essentials 2.0 Platform Support* matrix.

Sizing BSA Essentials Deployment Servers

For sizing single server and dual server deployments of BSA Essentials 2.0, please refer to the *Sizing BSA Essentials Sizing Guide*.

BSA Essentials Architecture and Components

BSA Essentials provide analysis and data warehousing capabilities targeted to the operational needs of IT organizations. There are three major collections of functionality: the BSA Essentials Server, the BSA Essentials Web Client, and data miners.

- **BSA Essentials Server** hosts the underlying physical database, Core Services, BusinessObjects component, and the loader interface.
- **BSA Essentials Web Client** provides a browser-based user interface to access the reporting feature and administrative features, such as creating users and groups and creating Cross Item Groups.
- **Data Miners** collect information from source systems and forward the collected information to the BSA Essentials Server to build the data warehouse.
- **BSA Essentials Client (SAR Client)** is a legacy client used for viewing BIRT reports and for setting security boundaries for data objects and other certain tasks in reporting from the Web client. For more information, see BSA Essentials Client (SAR Client) and Launcher on page 6.

BSA Essentials Server Components

- **BusinessObjects Enterprise (BOE)**: BusinessObjects Enterprise is a reporting engine and related functionality that is embedded in the BSA Essentials software and installed on the BSA Essentials server. BOE provides very powerful data analytical and reporting capabilities for the data that BSA Essentials mines from the HP data center automation products. BOE is a 3rd party software and its detailed documentation is included as part of the BSA Essentials distribution.
- **BSAE-AAA**: The Authentication, Authorization, and Auditing component provides core AAA services to BSA Essentials, including authentication for user and group accounts, authorization for specific BSA Essentials features, and representation of BSA Essentials data access boundaries.
- **BIRT**: Business Intelligence Reporting Toolkit (BIRT) is the reporting engine which generates formatted report output for legacy reports previous to this release of BSA Essentials. BIRT is an open source component derived from the Eclipse Project.
- **Catalog**: The Catalog application manages the metadata-based data model. The catalog is the source of definitions for items, attributes, and relationships. Extensions to the BSA Essentials data model are managed by the Catalog.
- **Conveyor**: The Conveyor application provides configuration information to a data miner present on a remote data source. The data miner receives updates to the ETL definitions from the Conveyor. These ETL definitions control what information is collected from each source and how that information is mapped to items, attributes and relationships in the BSA Essentials Database.
- **Cooper**: Cooper is the core web services interface to the BSA Essentials. All BSA Essentials Client data interaction is controlled by Cooper.
- **JAAS Security**: The Java Authentication and Authorization Service (JAAS) Security module marshals authentication, functionality authorization, and security filtering of query information.
- **Loader**: The Loader inserts data records created by data miners into the data warehouse. Because the order of delivery of data from the data miners is not guaranteed, the Loader is responsible for reconstructing the sequence of events as the records are inserted. The Loader also verifies the incoming data records to confirm the data is not corrupted.
- **BSA Essentials JDBC Driver**: The BSA Essentials JDBC Driver implements security filtering by refactoring database queries to limit access to information according to a user's security rights. The BSA Essentials JDBC driver acts in conjunction with a standard JDBC Driver to access the underlying physical representation through the database.
- **BSA Essentials rsync Server**: The BSA Essentials data miner delivers data records to the Loader using the rsync protocol. The rsync Server listens for these connections from the data miner and deposits data records for the Loader to process.
- **Oracle Database Instance**: The BSA Essentials data warehouse uses an Oracle database to store information.
- **Scheduler**: The Scheduler component maintains the queue of scheduled reports and executes those scheduled reports according to their specified schedule.

BSA Essentials Web Client

The BSA Essentials Web Client is the user interface for creating BusinessObject Web Intelligence documents and reports based upon those documents. The BSA Essentials Web Client is also used for interactively running and scheduling reports, creating users, user groups, and applying permissions for all available reporting operations.

BSA Essentials Client (SAR Client) and Launcher

The BSA Essentials Client (SAR Client) Launcher is a self-contained Java application that allows you to access the SAR Client from any BSA Essentials Core. The BSA Essentials Java Client (known as the SAR Client) allows you to set security boundary permissions for data items inBSA Essentials, as well as viewing and running BIRT reports.

After you install BSA Essentials and perform user and group permissions setup inside the BSA Essentials Web Client, an administrator can log in to the SAR Client to set security boundaries for the data items you want to report on. Data items include meaningful objects from the various BSA products, such as SA servers, NA network devices, OO flows, CA compliance policies, and so on. The SAR Client security boundaries allow you to restrict and limit the kinds of information your users can report on.

For more information on how to install and use the SAR Client for setting security boundaries, consult the BSA Essentials online help.

BSA Essentials Dataminer

BSA Essentials data miners collect information for all data sources using the rules specified by the ETL definitions. This source data is formatted into an XML format along with checksum and signature information.

BSA Essentials can communicate with at most 5 Dataminers, and only one dataminer per each type of BSA product types: SA, NA, SE, CA OO. For more information on BSA Essentials data miners, see Installing BSA Essentials Data Miners on page 75.

BSA Essentials File System Layout

This section describes the file system layout of the BSA Essentials Database and the BSA Essentials Core Services.

The default BSA Essentials Database file system layout is presented in Table 1.

Table 1 BSA Essentials Database File System Layout

Path	Description
`/u01/`	Location of Oracle application, instance admin files, and a control file
`/u01/app/oracle/product/10.2.0/db_1/network/admin/tnsnames.ora`	config for BSA Essentials instance
`/u01/app/oracle/product/10.2.0/db_1/network/admin/listener.ora`	config for BSA Essentials instance

Table 1 BSA Essentials Database File System Layout (cont'd)

Path	Description
/u01/app/oracle/product/10.2.0/db_1/dbs/orapwcmdb	BSA Essentials password file
/u01/app/oracle/product/10.2.0/db_1/dbs/spfilecmdb.ora	BSA Essentials config file
/u01/app/oracle/admin/cmdb/bdump,cdump,pfile,udump	Oracle BSA Essentials instance log and support files
/u01/app/oracle/admin/cmdb/create/	Scripts to create database
/u01/app/oracle/admin/cmdb/create/metaschema	Schema creation scripts
/u01/app/oracle/admin/cmdb/dataschema	Data creation scripts
/u01/oradata/cmdb/	BSA Essentials control file #1
/u02/	Location of data files
/u02/oradata/cmdb/	BSA Essentials data files
/u03/oradata/cmdb/	CMDB control file #2, and redo logs group #1
/u04/	Location of second member of redo log groups, and a control file
/u04/oradata/cmdb/	CMDB control file #1, and redo logs group #2
/etc/oratab	Entry for BSA Essentials instance
/var/opt/opsware/omdb/deploy	This directory and its sub-directories are used to by the BSA Essentials Deployer service to deploy the data model, data source, and ETL XML files used to created the BSA Essentials Database. This location contains many files that aid in troubleshooting BSA Essentials, such as verifying the XML files are all end up in the success directory instead of the failures directory. The result files (*.result) also indicate success or failure for each XML file.

The default BSA Essentials Core Services file system layout is presented in Table 2.

Table 2 BSA Essentials Core Services File System Layout

/opt/opsware/omdb	Root of the primary install location
/opt/opsware/omdb/bin	Location of BSA Essentials Core Services binary executables
/var/opt/opsware/crypto/omdb/	cryptographic certificates for omdb, twist
/opt/opsware/omdb/dist	Location where the data miner installer and cert are deployed
/opt/opsware/omdb/conf	JBoss configuration directory
/opt/opsware/omdb/dbinstaller	Used by BSA Essentials to configure the database
/opt/opsware/omdb/deploy	BSA Essentials JBoss deploy files that are not in OCC, such as loadersar, cooper.jar, and so on
/opt/opsware/omdb/deploy/birt.war/	Directory for the BIRT Engine. Also the default location for pas_actions.xml.
/opt/opsware/omdb/omdb/	Hierarchy is the same as the SA OCC
/opt/opsware/omdb/omdb/deploy/	JBoss deployment, hierarchy the same as SA OCC
/opt/opsware/omdb/omdb/deploy/jbossweb-tomcat55.sar/	Apache webserver deployment directory
/opt/opsware/omdb/reports/	BSA Essentials report definitions
/var/opt/opsware/install_opsware/config_file_archive/	if BSA Essentials has been upgraded, the following files from the earlier version are archived here: • omdb.properties • omdb-reporter-ds.xml • cmdb-ds.xml • cmdb-admin-ds.xml
/var/opt/opsware/omdb/collect/	Location of BSA Essentials Core Services Loader Collect directory - data miner collected data is stored here

Table 2 BSA Essentials Core Services File System Layout (cont'd)

`/etc/opt/opsware/omdb/`	Location of BSA Essentials Core Services configuration files
`/etc/inet.d/opsware-omdb`	BSA Essentials Core Services daemon launch script
`/var/log/opsware/omdb/`	Log files for BSA Essentials (If a data miner is installed on a server, the JVM output for the data miner is stored in `dm_jvm.log` in this directory.)

2 BSA Essentials Sizing Recommendations

This guide suggests deployment sizing guidelines to help you decide the kind of hardware and infrastructure you will need to deploy BSA Essentials 2.0 in your environment.

This guide contains the follow sections:

- BSA Essentials Installation Components
- Deployment Sizing Categories — Small, Medium, Large
- Recommended Sizing for BSA Essentials Components
- Sizing Single Sever, Dual Server, and Customer-Oracle Deployments

BSA Essentials Installation Components

This guide suggests the minimum recommended CPU count, RAM, and disk space for the three BSA Essentials installation components:

- BSA Essentials Core Services
- BSA Essentials Database
- BSA Essentials Dataminer

Table 3 BSA Essentials Core Services

BSA Essentials Core Services	A set of processes responsible for the following operations: 1 Loading of data into the BSA Essentials database which has been delivered by the BSA Essentials dataminer component. 2 Displaying the BSA Essentials Web Client user interface, receiving user requests, report scheduling, report execution, and display of report results to users. The processes which constitute the BSA Essentials core services component include legacy HP SAR components and an embedded version of BusinessObjects.	The BSA Essentials core services component reside on a separate physical system from that hosting the source application(s) The location of the BSA Essentials core services depends on the selected deployment model: • Single-server deployment: BSA Essentials core services components reside on the same physical host as the BSA Essentials database. • Dual-server deployment: BSA Essentials core services components reside on a separate physical server from that hosting the BSA Essentials database.

Table 4 BSA Essentials Database Component

BSA Essentials Database	An Oracle database which hosts transformed source application data used for reporting purposes.	The location of the BSAE database depends on the selected BSAE deployment model: • Single-server deployment: BSA Essentials database resides on the same physical host as the BSA Essentials core services components. • Dual-server deployment: BSA Essentials database resides on a separate physical host from the BSA Essentials core services components. In the dual-server deployment model the BSA Essentials database can co-exist with the HP Server Automation (SA) or HP Network Automation (NA) databases.

Table 5 BSA Essentials Dataminer

BSA Essentials Dataminer	A process responsible for extraction of data from the source application and subsequent delivery to the system which hosts the BSA Essentials core services component. Possible source applications for BSA Essentials 2.0 include: HP SA, HP NA, HP Storage and Visibility Automation (ASAS), and HP Operations Orchestration (OO)	Varies by source system. In the case of SA, it runs on the infrastructure host (the core).

Deployment Sizing Categories — Small, Medium, Large

The following table defines BSA Essentials 2.0 deployments as either small, medium, or large.

Table 6 BSA Essentials 2.0 Deployment Sizing Categories

	Server Automation Managed Servers/ Devices	Network Automation Managed Devices
Small	~ 1000	< 10,000
Medium	~ 5000	> 10,000
Large	> 10000	NA

Sizing Units

- **CPU**: A processor core, 2.66 GHz and greater
- **RAM**: GB
- **Disk**: GB

Recommended Sizing for BSA Essentials Components

Table 7 describes sizing suggestions for deploying the BSA Essentials core services components, which includes both the BSA Essentials Core and BusinessObjects component.

Table 7 Recommended Sizing — BSA Essentials Core Services

	CPU	RAM	Disk Space
Small	4	8 GB	40 GB
Medium	4	16 GB	40 GB
Large	8	16 GB	40 GB

Table 8 describes sizing suggestions for deploying the BSA Essentials database component.

Table 8 Recommended Sizing — BSA Essentials Database

	CPU	RAM	Disk Space
Small	4	4 GB	See Database Sizing Estimate — SA and NA.
Medium	4	8 GB	See Database Sizing Estimate — SA and NA.
Large	4	16 GB	See Database Sizing Estimate — SA and NA.

Table 9 describes sizing suggestions for deploying the BSA Essentials data miner.

Table 9 Recommended Sizing — BSA Essentials Dataminer

	CPU	RAM	Disk Space
Small	1	2 GB	5 GB
Medium	2	4 GB	10 GB
Large	2	4 GB	20 GB

Sizing Single Sever, Dual Server, and Customer-Oracle Deployments

BSA Essentials 2.0 supports the following different deployment options:

- **Single Server**: Install all components on a single server
- **Dual Server**: Install the core services component on one server, and the BSA Essentials database component on a separate server (including collocating the database component on another BSA product's database servers)
- **Customer-supplied Oracle**: Install BSA Essentials core services components on one server, and use your own Oracle instance.

When considering sizing for these types of deployments, each sizing suggestion should be considered independent of whether or not the components are installed on the same server of different servers. In other words, these sizing suggestions should be considered "additive."

For example, if you wanted to install both the BSA Essentials core and database components on the same server, then you should add the values of the two tables above to base your sizing requirements.

Thus, a *small* single server deployment would require the following deployment suggestion:

- 8 processor core (2 quad processors)
- 12 GB RAM
- 65 GB disc space (40 GB from BSA Essentials core services component + 25 GB from the BSA Essentials Database table = 65)

For a large deployment, you will likely need to add more data files to your database, since the BSA Essentials database installation has only a maximum of of 100 GB defined for storing data mined over from different datasource.

Database Sizing Estimate — SA and NA

These sizing estimates are for Server Automation (SA) and Network Automation (NA) managed devices.

The database sizing rule for estimating required disk space is based on the following criteria:

- number of managed devices (measured in thousands)
- number of years to keep records about those managed devices

For every thousand devices you should allow 10 GB of disk space for the first year, plus an additional 5 GB for each year after the first year.

Table 10 Example Database Disk Sizing Calculations

Devices	Total Years	First Year	Additional Years	Total Disk Space (GB)
3000	1	30 GB	0	30
5000	5	50	100	270
10,000	4	100	150	415

These sizing estimates are based on the assumption that there are no network bottlenecks in your BSA Essentials deployment. To ensure that it is the case, it is recommended that you set up at least a 1Gbps NIC on the BSA Essentials server.

It is recommended that `/u02` on a BSA Essentials Database server be a multi-disk storage array. You can use a variety of storage solutions, including internal storage, Network Attached Storage (NAS), and Storage Area Networks (SANs).

The BSA Essentials Database server disk sizing value includes 5 GB to allow for the Oracle database installation requirements. For large environments see the Oracle documentation for recommendations on disk sizing for Oracle log size growth and other issues as relevant to your production environment, and add to that 5 GB appropriately.

Directory Sizing

Table 11 suggests database directory sizing for small, medium, and large BSA Essentials deployments.

Table 11 BSA Essentials Directory Sizing

BSA Essentials Directory	Small	Medium	Large	Usage
/etc/opt/opsware	10 MB	10 MB	10 MB	Configuration information for BSA Essentials services
/opt/opsware	32 GB	32 GB	32 GB	Base directory for BSA Essentials

Table 11 BSA Essentials Directory Sizing

BSA Essentials Directory	Small	Medium	Large	Usage
/var/log/opsware	4 GB	8 GB	16 GB	Run space used by BSA Essentials deployer service
/u01, /u02, /u03, /u04	See Database Sizing Estimate — SA and NA.	See Database Sizing Estimate — SA and NA.	See Database Sizing Estimate — SA and NA.	Oracle application and data files
Totals	**36 GB plus database size estimate**	**40 GB plus database size estimate**	**48 GB plus database size estimate**	

Tablespace Usage and Sizing

Table 12 BSA Essentials Database Tablespace Usage

BSA Essentials Database Tablespace Name	Usage	Small, Medium, or Large
BO_ADMIN	Used to store BO data. This tablespace should not grow too fast with normal usage. This table space size is directly related to the number of users in the BSA Essentials deployment, not the number of devices the BSA Essentials deployment is set up to report on. A large number of users that may store a large number of reports will drive up the size for this table space.	Initial size 30 MB. Maximum 20 GB.
CMDB_AAA	Used to store BSA Essentials users info. The size for this tablespace can be fairly small. It is not affected by number of devices or the number of users.	Initial size 25MB. Maximum size 10 GB.
CMDB_CUSTOM	Used to store custom ETLs or customer-added features. In most situations this is rarely used and thus does not require a large amount of space.	Initial size 1 MB. Maximum size 25 GB

Table 12 BSA Essentials Database Tablespace Usage

BSA Essentials Database Tablespace Name	Usage	Small, Medium, or Large
CMDB_TEMP	Provides temporary space for all DML and query operations performed by CMDB components and users. This is the default temporary tablespace for CMDB-related users.	Initial size 100 MB. Maximum size 25 GB.
SYSAUX	System tablespace used by Oracle.	Initial size 50 MB. Maximum size 1 GB
SYSTEM	System tablespace used by Oracle.	Initial size 250 MB. Maximum size 2 GB.
TEMP	Temporary tablespace for the system user.	Initial 100 MB. Maximum size 5 GB
UNDO	Used for undo and rollback operations.	Initial size 200 MB. Maximum size 5 GB.
USER	Storage area for database users or database tools.	Initial size 10 MB. Maximum size 500 MB.
ASAS_RPT_DATA	Staging areas for storing ASAS (Storage Visibility ad Automation) data if there is a ASAS dataminer configured. Otherwise it is not used. Data inside can be removed daily after the ETL is run.	Initial size 50 MB. Maximum size 32 GB.
CMDB_DATA	Storage area for all data that is mined from other products. Most of the space for the BSA Essentials database is consumed under this table space. Refer to Table 10 for the variables and sizing guidance relevant to this table space. Database purging frequency also determines the size consumed under this table space.	Initial size 200 MB. Maximum size 100 GB (across 4 data files).
CMDB_META	Store the metadata about the data tables and CI types.	Initial size 30 MB. Maximum size 10 GB.

3 Pre-Installation Requirements

Before You Install

The following pre-installation tasks are highly recommended to be performed on the target installation server before you begin installing BSA Essentials:

- If you are installing in a dual server configuration, make sure that the database server and core server are located in one data center or in one local network, or there could be latency issues.
- Make sure you have a valid Oracle database license.
- SELinux must be disabled on the target installation servers before BSA Essentials is installed, or the BusinessObject component (Disk 2) of the core services will fail to install.
- Configure networking for the server with a fixed IP.
- Configure a FQDN for the server.
- Set up the server's hostname in the DNS.
- Set the server's time zone to UTC.
- Synchronize the target server's time using NTPD.
- Remove the automatic clearing of /var/tmp.

Setting Hostname in /etc/hosts

The BusinessObject component of BSA Essentials 2.0 requires that the output from the "hostname" application have an appropriate entry in the /etc/hosts file.

For example, your hosts file might look something like this:

```
# Do not remove the following line, or various programs # that require network
functionality will fail.
127.0.0.1 localhost.localdomain localhost
15.3.106.41 myserver.bsae.mycompany.com myserver
```

Open Ports

The following table lists the default ports for BSA Essentials.

Table 13 BSA Essentials Required Ports

Port Number	Purpose	From	To
443 (TCP)	Web Services	BSA Essentials Client	SA OCC
443 (TCP)	Web Services	BSA Essentials Client	NA Server
1032 (TCP)	SA Twist	BSA Essentials Core	SA OCC
1521 (TCP)	Oracle TNS	BSA Essentials Core	BSA Essentials Database
8443 (TCP)	Web Services	• SAR Client • Dataminer on a Managed Server	BSA Essentials Core
8443 (TCP)	Web Services	• BSA Essentials Client	OO Server
8080 (TCP)	BSA Essentials Client Download	BSA Essentials Client	BSA Essentials Core
8873 (TCP)	RSYNC Dataminer	Dataminer on a Managed Server	BSA Essentials Core
14445 (TCP)	RMI Over SSL	BSA Essentials Client	BSA Essentials Core

On the BSA Essentials Core server, it is recommended to block port 1099 from external access to the BSA Essentials Core server, in order to secure your core's JMX console services.

4 Installing BSA Essentials

Overview

This chapter shows you how to install BSA Essentials 2.0 for the following three installation paths:

- **Single Server**: Installing BSA Essentials Core Services, BusinessObjects, and Database components on the same server.
- **Dual Server**: Installing the BSA Essentials Core Services and BusinessObjects components on one server, and the BSA Essentials Database component on a separate servers.
- **Customer-Supplied Oracle**: Installing BSA Essentials Core Services and BusinessObjects components to work with a customer-supplied Oracle database. In this scenario, BSA Essentials can be installed on the same server as the customer's Oracle, or on a separate server.

The BSA Essentials installation media is divided up into three separate DVDs, one for each component of the installation:

- Disc 1: Contains the BSA Essentials Database component installer
- Disc 2: Contains the BSA Essentials BusinessObjects installer
- Disc 3: Contains the BSA Essentials Core Services installer

SELinux must be disabled on the target installation servers before BSA Essentials is installed, or the Business Object component (Disk 2) of the core services will fail to install.

BSA Essentials is not customer self-installable. All production BSA Essentials deployments must be installed by HP Professional Services team to be eligible for official HP support.

BSA Essentials ships with Oracle binaries because Oracle database installation is a pre-requisite for BSA Essentials software to function. However, BSA Essentials requires a valid Oracle license that must be purchased separately.

If you already have an Oracle installation with a valid license, please refer to the Customer-Installed Oracle sections in this document on how to install BSA Essentials in conjunction with that software, otherwise you must purchase a new Oracle database license.

Installing BSA Essentials on a Single Server

This section describes the following installation of the BSA Essentials Database, BusinessObjects, and Core Services components on the same server.

Performing this task requires running all three BSA Essentials installation scripts from the three installation DVDs, one for each software component, in this order:

- Installing BSA Essentials on a Single Server - Database Component
- Installing BSA Essentials on a Single Server - BusinessObjects Component
- Installing BSA Essentials on a Single Server - Core Services Component

Installing BSA Essentials on a Single Server - Database Component

To install the BSA Essentials Database component, complete the following steps:

1. Log in to the server where you want to install the BSA Essentials Database component.
2. Mount the BSA Essentials installation media Disc 1 using a command similar to `mount /dev/cdrom <mnt_point>` as appropriate.
3. Start the BSA Essentials Database installer from Disc 1 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: "BSA Essentials Database 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`, and then press Enter. The following prompt appears:

```
The HP 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 HP Installer will perform
```

```
a final validation check and write out a response file that will be
used to install the components.

Parameter 1 of 5 (decrypt_passwd)Please enter the password for the
cryptographic material:
```

5 Enter a password to access the cryptographic materials, and then press Enter. For example: `crypto`.

The following prompt appears:

```
Parameter 2 of 5 (omdb.oracleHost)Please enter the hostname of the server
where the Oracle RDBMS will be installed. [localhost]:
```

6 Type `localhost` and then press Enter .

The following prompt appears:

```
Parameter 3 of 5 (omdb.oraclePort)Please enter the port on which the Oracle
data base instance for BSA Essentials will listen.:
```

7 Accept the default port number for the Oracle database instance (`1521`), and then press Enter.

The following prompt appears

```
Parameter 4 of 5 (omdb.oracleSid)Please enter the SID for the BSA
Essentials Oracle database instance.:
```

8 Type the SID for the Oracle database instance, and then press Enter.

The following prompt appears:

```
Parameter 5 of 5 (omdb.adminPwd)Please enter the password to use for the
BSA Essentials database administrator.:
```

9 Enter the BSA Essentials Database administrator password, such as `cmdb_admin`, and then press Enter.

The following prompt appears:

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

10 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_db]:
```

11 To accept the default values type y and then press Enter. The following prompt appears:

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

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

```
Welcome to the HP Installer.
Please select the components to install.
1 ( ) Oracle RDBMS for BSA Essentials
2 ( ) BSA Essentials Database Instance
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

13 To continue, type `a` and then press Enter to install both Database components.

14 Type `c` to continue to installation, and then press Enter.

```
Installation prerequisite checking
Processing on Linux/4AS-X86_64 using /mnt/emc-cary/distributions/gray.f/
opsware_34.f.4342.0-omdb_db/disk001/opsware_installer/tools/
Linux_oracle_rqmts.conf
    Checking 'required' packages for Linux/4AS-X86_64
    Checking 'required' patches for LINUX/4AS-X86_64
    Checking 'recommended' packages for LINUX/4AS-X86_64
    Checking 'absent' packages for LINUX/4AS-X86_64
[Jan-21-2010 11:54:34] >>>>Installing preliminary components
.............
[Jan-21-2010 11:55:52] >>>>Installing component Oracle RDBMS for BSA
Essentials
.....................................................
[Jan-21-2010 11:58:47] >>>>Installing component BSA Essentials Database
Instance
.....................................................................
.
[Jan-21-2010 12:02:50] HP Installer ran successfully.



For more details, please see the following file:
/var/log/opsware/install_opsware/
install_opsware.2010-01-21.11:52:21_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.
#####################################################################

Removing directory /var/tmp/oitmp ...
Script done, file is /var/log/opsware/install_opsware/
install_opsware.2010-01-21.11:52:21.log
```

15 After the install completes, save your response file (for use in the next task or for upgrades) to /root:

```
mv /var/tmp/oiresponse.omdb_db /root
```

Installing BSA Essentials on a Single Server - BusinessObjects Component

The next task required to install BSA Essentials on a single server requires installing the BSA Essentials BusinessObjects component found in Disc 2 of the installation media.

To install the BSA Essentials BusinessObjects components, perform the following steps:

1. Log in to the server where you want to install the BSA Essentials BusinessObjects component.
2. Mount the BSA Essentials installation media Disc 2 using a command similar to `mount /dev/cdrom <mnt_point>` as appropriate.
3. Start the BSA Essentials BusinessObjects installer from Disc 2 using the following command:

   ```
   /<mnt_point>/opsware_installer/install_opsware.sh -r /var/tmp/
   oiresponse.omdb_db --interview
   ```

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

The following prompt appears:

```
Install Type: "BSA Essentials Database 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`, and then press Enter. The following prompt appears:

   ```
   The HP 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 HP Installer will perform
   a final validation check and write out a response file that will be
   used to install the components.

   Parameter 1 of 6 (decrypt_passwd)Please enter the password for the
   cryptographic material:
   ```

The next six question of the BusinessObjects installation interview will display default values derived from the Database response file that was created during the Database installation. Accept all default values by pressing Enter for each of the six interview questions.

5 Press Enter to accept the default value of `crypto`.

The following prompt appears:

```
Parameter 2 of 6 (omdb.oracleHost)Please enter the hostname of the server
where the Oracle RDBMS will be installed.:
```

6 Press Enter to accept the default value that was entered during the Database installation.

The following prompt appears:

```
Parameter 3 of 6 (omdb.oraclePort)Please enter the port on which the Oracle
data base instance for BSA Essentials will listen.:
```

7 Press Enter to accept the port number used during the Database installer, such as `1521`.

The following prompt appears

```
Parameter 4 of 6 (omdb.oracleSid)Please enter the SID for the BSA
Essentials Oracle database instance.:
```

8 Press Enter to accept the Oracle SID entered during the Database installation.

The following prompt appears:

```
Parameter 5 of 6 (omcs.host)Please enter the hostname or IP of the server
where the BSA Essentials Core Services will be installed.:
```

9 Press Enter to accept the value entered during the Database installation.

The following prompt appears:

```
Parameter 6 of 6 (omdb.adminPwd)Please enter the password to use for the
BSA Essentials database administrator.:
```

10 Press Enter to accept the value entered during the Database installation, such as `cmdb_admin`.

The following prompt appears:

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

11 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_bo]:
```

12 To accept the default values type y and then press Enter. The following prompt appears:

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

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

```
Welcome to the HP Installer.
Please select the components to install.
1 ( ) BSA Essentials Business Objects Installer
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

14 To continue, type `a` and then press Enter to install the BusinessObjects components.

15 Type `c` to continue to installation, and then press Enter.

16 The following prompt appears:

```
Selection: c
[Jan-21-2010 09:51:32] >>>>Installing preliminary components

[Jan-21-2010 09:51:38] >>>>Installing component BSA Essentials Business
Objects Installer
.........
[Jan-21-2010 10:48:27] HP Installer ran successfully.


For more details, please see the following file:
/var/log/opsware/install_opsware/
install_opsware.2010-01-21.09:47:53_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.
######################################################################

Removing directory /var/tmp/oitmp ...
Script done, file is /var/log/opsware/install_opsware/
install_opsware.2010-01-21.09:47:53.log
```

17 After the install completes, save your response file (for use in the next task or for upgrades) to /root:

```
mv /var/tmp/oiresponse.omdb_bo /root
```

Installing BSA Essentials on a Single Server - Core Services Component

The next task required to install BSA Essentials on a single server requires installing the BSA Essentials Core Services found on Disc 3 of the installation media.

To install the BSA Essentials Core Services components, perform the following steps:

1 Log in to the server where you want to uinstall the BSA Essentials Core Services component.

2 Mount the BSA Essentials install media Disc 3 using a command similar to

```
mount /dev/cdrom <mnt_point> as appropriate.
```

3 Start the BSA Essentials Core Services installer from Disc 3 using the following command:

```
/<mnt_point>/opsware_installer/install_opsware.sh -r /var/tmp/
oiresponse.omdb_bo --interview
```

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

The following prompt appears:

```
Install Type: "BSA Essentials 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`, and then press Enter. The following prompt appears:

```
The HP 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 HP Installer will perform
a final validation check and write out a response file that will be
used to install the components.

Parameter 1 of 10 (truth.oaPwd)Please enter the password for the
opsware_admin user. This is the password used to connect to the Oracle
database.:
```

Several of the next ten questions of the Core Services installation interview will display default values derived from the response file that was created during the Database and BusinessObjects installation. Accept any default values by pressing Enter for those interview questions.

5 Type `opsware_admin` and then press Enter.

The following prompt appears:

```
Parameter 2 of 10 (decrypt_passwd)Please enter the password for the
cryptographic material:
```

6 Press Enter to accept the default value that was entered during the Database installation, such as `crypto`.

The following prompt appears:

```
Parameter 3 of 10 (DATACENTER1)Please enter the short name of the facility
where Opsware Installer is being run (no spaces):
```

7 Enter the name of the datacenter or facility where you are installing the BSA Essentials Core Services, with no spaces. For example, `DATACENTER1` (default).

The following prompt appears

```
Parameter 4 of 10 (truth.servicename)Please enter the service name (aka
TNS name) of the Model Repository instance in the facility where Opsware
Installer is being run:
```

8 Enter in all lower case letters, `truth`, and then press Enter.

The following prompt appears

```
Parameter 5 of 10 (omdb.oracleHost)Please enter the hostname of the server
where the Oracle RDBMS will be installed.
```

9 Press Enter to accept the Oracle server hostname entered during the Database installation, such as `cmdb`.

The following prompt appears:

```
Parameter 6 of 10 (omdb.oraclePort)Please enter the port on which the
Oracle database instance for BSA Essentials will listen.
```

10 Press Enter to accept the value entered during the Database installation. For example, `1521`.

The following prompt appears:

```
Parameter 7 of 10 (omdb.oracleSid)Please enter the SID for the BSA
Essentials Oracle database instance.
```

11 Press Enter to accept the SID entered during the Database installation, such as `cmdb`.

The following prompt appears:

```
Parameter 8 of 10 (omcs.host)Please enter the hostname or IP of the server
where the BSA Essentials Core Services will be installed (not localhost). :
```

12 Type the hostname or IP of the server where you are installing the BSA Essentials Core Services, and then press Enter.

The following prompt appears:

```
Parameter 9 of 10 (omdb.adminPwd)Please enter the password to use for the
BSA Essentials database administrator.:
```

13 Press Enter to accept the value given during the Database installation.

The following prompt appears:

```
Parameter 10 of 10 (omcs.smtpHost)Please enter the hostname or IP address
of your SMTP mail server.:
```

14 Enter the hostname or IP address of the STMP mail server you wish to use with BSA Essentials, and then press Enter.

The following message 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 values type y and then 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 HP Installer.
Please select the components to install.
1 ( ) BSA Essentials Core Services
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

18 To continue, type `a` and then press Enter to install the BusinessObjects components.

19 Type `c` to continue to installation, and then press Enter.

20 The following prompt appears:

```
Selection: c
[Jan-21-2010 09:51:32] >>>>Installing preliminary components

[Jan-21-2010 09:51:38] >>>>Installing component BSA Essentials Business
Objects Installer
.........
[Jan-21-2010 10:48:27] HP Installer ran successfully.

For more details, please see the following file:
/var/log/opsware/install_opsware/
install_opsware.2010-01-21.09:47:53_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.
######################################################################

Removing directory /var/tmp/oitmp ...
Script done, file is /var/log/opsware/install_opsware/
install_opsware.2010-01-21.09:47:53.log
```

21 After the install completes, save your response file to /root:

```
mv /var/tmp/oiresponse.omdb_db /root
```

BSA Essentials Dual Server Installation

This section describes the tasks required for a dual server installation, which requires installing the BSA Essentials Database instance on one server (Server A), and installing the BSA Essentials BusinessObjects and Core Services on a second server (Server B).

Installing BSA Essentials on a dual core installation servers requires performing the following tasks:

- Installing BSA Essentials Database on a Server A (Database Server)
- Installing BSA Essentials Database on Server B (Core Server)
- Configuring Database Instance on Server B (Core Server)
- Installing BSA Essentials BusinessObjects Component on Server B (Core Server)
- Installing BSA Essentials Core Services on Server B (Core Server)
- Dual Server Post Installation Configuration

For more information on supported platforms for a BSA Essentials, see BSA Essentials 2.01 Platform Support on page 19.

Installing BSA Essentials Database on a Server A (Database Server)

To install the BSA Essentials Database component on server, complete the following steps:

1. Log in to the server where you want to install the BSA Essentials Database.
2. Mount the BSA Essentials installation media Disc 1 using a command similar to `mount /dev/cdrom <mnt_point>` as appropriate.
3. Start the BSA Essentials Database installer from Disc 1 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: "BSA Essentials Database 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`, and then press Enter. The following prompt appears:

   ```
   The HP 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 HP Installer will perform
a final validation check and write out a response file that will be
used to install the components.

Parameter 1 of 5 (decrypt_passwd)Please enter the password for the
cryptographic material:
```

5 Enter a password to access the cryptographic materials, and then press Enter. For example: `crypto`.

The following prompt appears:

```
Parameter 2 of 5 (omdb.oracleHost)Please enter the hostname of the server
where the Oracle RDBMS will be installed. [localhost]:
```

6 Type `[localhost] for the` name of the server where the BSA Essentials Database component will be installed, and then press Enter .

The following prompt appears:

```
Parameter 3 of 5 (omdb.oraclePort)Please enter the port on which the Oracle
data base instance for BSA Essentials will listen.:
```

7 Accept the default port number for the Oracle database instance `(1521)`, and then press Enter.

The following prompt appears

```
Parameter 4 of 5( omdb.oracleSid)Please enter the SID for the BSA
Essentials Oracle database instance.:
```

8 Type the SID for the Oracle database instance, for example, `cmdb`, then press Enter.

The following prompt appears:

```
Parameter 5 of 5 (omdb.adminPwd)Please enter the password to use for the
BSA Essentials database administrator.:
```

9 Enter the BSA Essentials Database administrator password, such as `cmdb_admin`, and then press Enter.

The following prompt appears:

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

10 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_db]:
```

11 To accept the default values type y and then press Enter. The following prompt appears:

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

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

```
Welcome to the HP Installer.
Please select the components to install.
1 ( ) Oracle RDBMS for BSA Essentials
2 ( ) BSA Essentials Database Instance
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

13 To continue, type `a` and then press Enter to install both Database components on Server A.

14 Type `c` to continue to installation, and then press Enter.

```
Installation prerequisite checking
Processing on Linux/4AS-X86_64 using /mnt/emc-cary/distributions/gray.f/
opsware_34.f.4344.0-omdb_db/disk001/opsware_installer/tools/
Linux_oracle_rqmts.conf
    Checking 'required' packages for Linux/4AS-X86_64
    Checking 'required' patches for LINUX/4AS-X86_64
    Checking 'recommended' packages for LINUX/4AS-X86_64
    Checking 'absent' packages for LINUX/4AS-X86_64
[Jan-21-2010 20:24:26] >>>>Installing preliminary components
....
[Jan-21-2010 20:25:09] >>>>Installing component Oracle RDBMS for BSA
Essentials
............................................................
[Jan-21-2010 20:28:33] >>>>Installing component BSA Essentials Database
Instance
.....................................................................
.........
[Jan-21-2010 20:32:54] HP Installer ran successfully.



For more details, please see the following file:
/var/log/opsware/install_opsware/
install_opsware.2010-01-21.20:22:23_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.
######################################################################

Removing directory /var/tmp/oitmp ...
Script done, file is /var/log/opsware/install_opsware/
install_opsware.2010-01-21.20:22:23.log
```

15 After the install completes, save your response file (for use in the next task or for upgrades) to /root:

```
mv /var/tmp/oiresponse.omdb_db /root
```

Installing BSA Essentials Database on Server B (Core Server)

In order to install the BSA Essentials Core Services on a separate server from the BSA Essentials Database component, the first part of the core installation requires that you also install the Database component on the core server.

The BSA Essentials Database component need to be installed on the core server because some of the Core Services depend on the Database services. After you install the Database components and perform some intermediary tasks, you will then install the Core Services.

You will use the response file from the first Database installation (Server A) when you run the Database installer on Server B.

To install BSA Essentials Core Services on a Server B (core server) of a dual core installation, perform the following steps:

1. Log in to the server you want to install the BSA Essentials Database Services on.
2. Mount the BSA Essentials installation media Disc 1 using a command similar to `mount /dev/cdrom <mnt_point>` as appropriate.
3. Start the BSA Essentials Database installer from Disc 1 using the following command:

   ```
   /<mnt_point>/install_opsware.sh -r /var/tmp/oiresponse.omdb_db --interview
   ```

This command adds the option [`-r`] to source in the Database response file you installed in the previous task when you installed the BSA Essentials Database components on the core server.

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

The following prompt appears:

```
Install Type: "BSA Essentials Database 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 HP 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 HP Installer will perform
a final validation check and write out a response file that will be
used to install the components.

Parameter 1 of 5 (decrypt_passwd)Please enter the password for the
cryptographic material.
```

5 Press Enter to accept the default crypto password value that was entered during the Database installation (derived from the first server Database installation response file).

The BSA Essentials crypto password is used to create an BSA Essentials keystore that secures communications between the data miner and the BSA Essentials core server. Because BSA Essentials does not need direct access to SA crypto information, the BSA Essentials crypto password is not required to match the SA crypto password.

The following prompt appears:

```
Parameter 2 of 5 (omdb.oracleHost)Please enter the hostname of the server
where the Oracle RDBMS will be installed.:
```

6 Type `localhost` for the hostname of the of the BSA Essentials Database server (Server A) from the previous installation, and then press Enter.

The following prompt appears:

```
Parameter 3 of 5 (omdb.oraclePort)Please enter the port on which the Oracle
database instance for BSA Essentials will listen.:
```

7 Press Enter to accept the port number (`1521`) used for the BSA Essentials Oracle database entered in the previous installation on Server A.

The following prompt appears:

```
Parameter 4 of 5 (omdb.oracleSid)Please enter the SID for the BSA
Essentials Oracle database instance. [cmdb]:
```

8 Press Enter to accept the BSA Essentials Oracle SID entered during the previous installation on Server A. and then press Enter.

The following prompt appears:

```
Parameter 5 of 5 (omdb.adminPwd)Please enter the password to use for the
BSA Essentials database administrator.
```

9 Press Enter to accept the BSA Essentials Database administrator password entered during the previous installation on Server A.

The following prompt appears:

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

10 Type `y` and then press Enter. The following prompt appears:

```
Concluding interview.
Interview complete.
Name of response file to write [/usr/tmp/oiresponse.omdb_db]:
The file /usr/tmp/oiresponse.omdb_db exists. Overwrite? (y/n):
```

11 Enter the `y` and then press Enter.

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

12 Type `y` and then press Enter. The following prompt appears:

```
Welcome to the HP Installer.
Please select the components to install.
1 ( ) Oracle RDBMS for BSA Essentials
2 ( ) BSA Essentials Database Instance
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

13 Type a, and then press c to continue. The following message is displayed:

```
Installation prerequisite checking
Processing on Linux/4AS-X86_64 using /mnt/emc-cary/distributions/gray.f/
opsware_34.f.4344.0-omdb_db/disk001/opsware_installer/tools/
Linux_oracle_rqmts.conf
    Checking 'required' packages for Linux/4AS-X86_64
    Checking 'required' patches for LINUX/4AS-X86_64
    Checking 'recommended' packages for LINUX/4AS-X86_64
    Checking 'absent' packages for LINUX/4AS-X86_64
[Jan-21-2010 22:22:02] >>>>Installing preliminary components
....
[Jan-21-2010 22:22:48] >>>>Installing component Oracle RDBMS for BSA
Essentials
..................................................
[Jan-21-2010 22:25:31] >>>>Installing component BSA Essentials Database
Instance
..........................................................................
[Jan-21-2010 22:29:18] HP Installer ran successfully.



For more details, please see the following file:
/var/log/opsware/install_opsware/
install_opsware.2010-01-21.22:19:24_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.
######################################################################

Removing directory /var/tmp/oitmp ...
Script done, file is /var/log/opsware/install_opsware/
install_opsware.2010-01-21.22:19:24.log
```

14 You have now completed the Database installation on Server B of the dual server installation. In the next task, you will perform a few configuration tasks for the BSA Essentials Database.

Configuring Database Instance on Server B (Core Server)

Next, you need to shutdown BSA Essentials Database on Server B and perform a few configuration tasks before you install the BSA Essentials BusinessObjects and Core Services components.

All of these tasks should be performed on the server where you will install the BSA Essentials Core Services, and where you had installed the BSA Essentials Database instance in the preceding step.

To shutdown the BSA Essentials Database on the Core Services server, perform the following steps:

Log on to the server where you installed the BSA Essentials Database.

1. Change directories (cd) to the following location:

   `/etc/init.d`

2. To shutdown the Database instance, execute the following command:

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

3. Next, for the BSA Essentials-installed Oracle database, you need to turn off the automatic database startup scripts by executing the following command:.

   `/chkconfig --level 2345 opsware-oracle off`

4. Next, you need to edit the `tnsnames.ora` file to point to the Oracle instance you installed in the first task of installing BSA Essentials Oracle database for the dual server installation. To do this, change to Oracle super user:

   `$ su oracle`

5. Using VI (or any valid text editor), open the following file:

   `$ vi /var/opt/oracle/tnsnames.ora`

6. Edit the file for the two following values:

   `(HOST=<oracle_instance_hostname>)` – Change this value to point to the server where you installed the BSA Essentials Oracle database

   `(PORT=<oracle_listener_port_number>)` — Enter the Oracle listener port number that is used by the BSA Essentials Database.

7. Save the changes.

8. Next, you need to update the BSA Essentials installation response file by changing the Oracle database hostname to the remote Oracle hostanme (the first server where you installed BSA Essentials Database).

9. Using a text editor, open the following file:

   `/usr/tmp/oiresponse.omdb_db`

10. Change the value of `%omdb.oracleHost` value from "`localhost`" to the hostname of the server where you installed the BSA Essentials Database.

11. Last, using a text editor, open the following file:

    `/etc/opt/opsware/omdb/omdb.properties`

12 Change the value of `com.opsware.cmdb.interview.omdb.oracleHost` value from "`localhost`" to the hostname of the server where you installed the BSA Essentials Database.

13 Save the file and exit. Next, you will install the BSA Essentials BusinessObjects component on Server B.

Installing BSA Essentials BusinessObjects Component on Server B (Core Server)

The next task required to install BSA Essentials on a separate servers requires installing the BusinessObjects found in Disc 2 of the installation media on to Server B. The steps in this task show you how to run the BusinessObjects installer using the Database response file used in the previous installation.

To install the BSA Essentials BusinessObjects components, perform the following steps:

1 Log in to the server where you want to install the BSA Essentials BusinessObjects component.

2 Mount the BSA Essentials installation media Disc 2 using a command similar to `mount /dev/cdrom <mnt_point>` as appropriate.

3 Start the BSA Essentials BusinessObjects installer from Disc 2 using the following command:

```
/<mnt_point>/opsware_installer/install_opsware.sh -r /var/tmp/
oiresponse.omdb_db --interview
```

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

The following prompt appears:

```
Install Type: "BSA Essentials Database 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`, and then press Enter. The following prompt appears:

```
The HP 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 HP Installer will perform
a final validation check and write out a response file that will be
used to install the components.

Parameter 1 of 6 (decrypt_passwd)Please enter the password for the
cryptographic material:
```

The next six question of the BusinessObjects installation interview will display default values derived from the Database response file that was created during the Database installation. Accept all default values by pressing Enter for each of the six interview questions.

5 Press Enter to accept the default value of `crypto`.

The following prompt appears:

```
Parameter 2 of 6 (omdb.oracleHost)Please enter the hostname of the server
where the Oracle RDBMS will be installed.:
```

6 Press Enter to accept the default value that was entered during the Database installation.

The following prompt appears:

```
Parameter 3 of 6 (omdb.oraclePort)Please enter the port on which the Oracle
data base instance for BSA Essentials will listen.:
```

7 Press Enter to accept the port number used during the Database installer, such as `1521`.

The following prompt appears

```
Parameter 4 of 6 (omdb.oracleSid)Please enter the SID for the BSA
Essentials Oracle database instance.:
```

8 Press Enter to accept the Oracle SID entered during the Database installation, such as `cmdb`.

The following prompt appears:

```
Parameter 5 of 6 (omcs.host)Please enter the hostname or IP of the server
where the BSA Essentials Core Services will be installed.:
```

9 Type the hostname or IP address where you are installing the BSA Essentials core, and then press Enter.

The following prompt appears:

```
Parameter 6 of 6 (omdb.adminPwd)Please enter the password to use for the
BSA Essentials database administrator.:
```

10 Press Enter to accept the value entered during the Database installation, such as `cmdb_admin`.

The following prompt appears:

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

11 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_bo]:
```

12 To accept the default values type y and then press Enter. The following prompt appears:

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

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

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

```
Welcome to the HP Installer.
Please select the components to install.
1 ( ) BSA Essentials Business Objects Installer
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

14 To continue, type `a` and then press Enter to install the BusinessObjects components.

15 Type `c` to continue to installation, and then press Enter.

16 The following prompt appears:

```
Selection: c
[Jan-21-2010 09:51:32] >>>>Installing preliminary components

[Jan-21-2010 09:51:38] >>>>Installing component BSA Essentials Business
Objects Installer
.........
[Jan-21-2010 10:48:27] HP Installer ran successfully.



For more details, please see the following file:
/var/log/opsware/install_opsware/
install_opsware.2010-01-21.09:47:53_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.
######################################################################

Removing directory /var/tmp/oitmp ...
Script done, file is /var/log/opsware/install_opsware/
install_opsware.2010-01-21.09:47:53.log
```

17 After the install completes, save your response file (for use in the next task or for upgrades) to /root:

```
mv /var/tmp/oiresponse.omdb_bo /root
```

Installing BSA Essentials Core Services on Server B (Core Server)

The next task required to install BSA Essentials on a single server requires installing the BSA Essentials Core Services found on Disc 3 of the installation media.

To install the BSA Essentials Core Services component, perform the following steps:

1. Log in to the server where you want to install the BSA Essentials Core Services component.
2. Mount the BSA Essentials installation media Disc 3 using a command similar to `mount /dev/cdrom <mnt_point>` as appropriate.
3. Start the BSA Essentials Core Services installer from Disc 3 using the following command:

   ```
   /<mnt_point>/opsware_installer/install_opsware.sh -r /var/tmp/
   oiresponse.omdb_bo --interview
   ```

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

The following prompt appears:

```
Install Type: "BSA Essentials 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`, and then press Enter. The following prompt appears:

   ```
   The HP 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 HP Installer will perform
   a final validation check and write out a response file that will be
   used to install the components.

   Parameter 1 of 10 (truth.oaPwd)Please enter the password for the
   opsware_admin user. This is the password used to connect to the Oracle
   database.:
   ```

Several of the next ten questions of the Core Services installation interview will display default values derived from the response file that was created during the Database and BusinessObjects installation. Accept any default values by pressing Enter for those interview questions.

5 Type `opsware_admin` and then press Enter.

The following prompt appears:

```
Parameter 2 of 10 (decrypt_passwd)Please enter the password for the
cryptographic material:
```

6 Press Enter to accept the default value that was entered during the Database installation, such as `crypto`.

The following prompt appears:

```
Parameter 3 of 10 (truth.dcNm)Please enter the short name of the facility
where Opsware Installer is being run (no spaces):
```

7 Enter the name of the datacenter or facility where you are installing the BSA Essentials Core Services, with no spaces. For example, `DATACENTER1`.

The following prompt appears

```
Parameter 4 of 10 (truth.servicename)Please enter the service name (aka
TNS name) of the Model Repository instance in the facility where Opsware
Installer is being run:
```

8 Enter in all lower case letters, `truth`, and then press Enter.

The following prompt appears

```
Parameter 5 of 10 (omdb.oracleHost)Please enter the hostname of the server
where the Oracle RDBMS will be installed.
```

9 Press Enter to accept the Oracle server hostname entered during the Database installation.

The following prompt appears:

```
Parameter 6 of 10 (omdb.oraclePort)Please enter the port on which the
Oracle database instance for BSA Essentials will listen.
```

10 Press Enter to accept the value entered during the Database installation. For example, `1521`.

The following prompt appears:

```
Parameter 7 of 10 (omdb.oracleSid)Please enter the SID for the BSA
Essentials Oracle database instance.
```

11 Press Enter to accept the SID entered during the Database installation, such as `cmdb`.

The following prompt appears:

```
Parameter 8 of 10 (omcs.host)Please enter the hostname or IP of the server
where the BSA Essentials Core Services will be installed (not localhost). :
```

12 Type the hostname or IP of the server where you are installing the BSA Essentials Core Services, and then press Enter.

The following prompt appears:

```
Parameter 9 of 10 (omdb.adminPwd)Please enter the password to use for the
BSA Essentials database administrator.:
```

13 Press Enter to accept the value given during the Database installation.

The following prompt appears:

```
Parameter 10 of 10 (omcs.smtpHost)Please enter the hostname or IP address
of your SMTP mail server.:
```

14 Enter the hostname or IP address of the STMP mail server you wish to use with BSA Essentials, and then press Enter.

The following message 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 values type y and then 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 HP Installer.
Please select the components to install.
1 ( ) BSA Essentials Core Services
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

18 To continue, type a and then press Enter to install the BusinessObjects components.

19 Type c to continue to installation, and then press Enter.

20 The following prompt appears:

```
Selection: c
[Jan-21-2010 09:51:32] >>>>Installing preliminary components

[Jan-21-2010 09:51:38] >>>>Installing component BSA Essentials Business
Objects Installer
.........
[Jan-21-2010 10:48:27] HP Installer ran successfully.



For more details, please see the following file:
/var/log/opsware/install_opsware/
install_opsware.2010-01-21.09:47:53_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.
######################################################################

Removing directory /var/tmp/oitmp ...
Script done, file is /var/log/opsware/install_opsware/
install_opsware.2010-01-21.09:47:53.log
```

21 After the install completes, save your response file to /root:

```
mv /var/tmp/oiresponse.omdb /root
```

22 You have completed installing BSA Essentials core on a single server.

Dual Server Post Installation Configuration

Your last task in installing the BSA Essentials Core Services and BSA Essentials Database on separate servers requires and shutting down the BSA Essentials Database instance on the server running the BSA Essentials Core Services.

Shutdown BSA Essentials Database — Server B (Core Server)

1 On the server where you installed the BSA Essentials Core Services (Server B), change directory to the following path:

```
cd /etc/init.d/
```

2 Shutdown BSA Essentials Database instance by executing this command:

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

Post-Install Task — Server B (Core Server)

1 Open the BSA Essentials Core Services server (Server B) response file `/var/tmp/oiresponse.omdb` and obtain the values for the following parameters:

```
%omdb.adminPwd
%omdb.reporterPwd
%omcs.host
%omdb.oracleHost
%omdb.oraclePort
%omdb.oracleSid
```

2 Open the `/etc/opt/opsware/omdb/omdb.properties` file with a text editor.

3 Use the values determined from step 1 to verify and update the corresponding fields in the omdb.properties file. For example:

```
com.opsware.cmdb.interview.omdb.adminPwd
com.opsware.cmdb.interview.omdb.reporterPwd
com.opsware.cmdb.interview.omcs.host
com.opsware.cmdb.interview.omdb.oracleHost
com.opsware.cmdb.interview.omdb.oraclePort
com.opsware.cmdb.interview.omdb.oracleSid
```

4 Execute the following script:

```
/opt/opsware/omdb/components/bsae-universe-post.sh script.
```

5 Remove the password values that were entered into the `/etc/opt/opsware/omdb/omdb.properties` file for the `omdb.reporterPwd` and the `omdb.adminPwd` fields.

Post-Install Task — Server A (Database Server)

1 Log in to the BSA Essentials Database server (Server A) as the root user.

2 Set the environment variable for ORACLE_SID, using the value for `%omdb.oracleSid` from the `/var/tmp/oiresponse.omdb_db` file on Server A. How you set this environment variable depends on the type of shell you are using.

For example, if you logged in to Server A with a bash shell, then export the following value:

```
export ORACLE_SID=<sid_value>
```

If you are using a Korn shell:

```
ORACLE_SID=<sid_value>
export ORACLE_SID
```

If you are using a C shell:

```
setenv ORACLE_SID=<sid_value>
```

3 Next, change directory to the following path:

```
/opt/opsware/omdb/bin/install
```

4 Execute the post deploy install script-

```
./postDeploy_Install.sh
```

The following prompt appears:

```
What is the ORACLE_HOME created during the installation? default [/u01/
app/oracle/product/10.2.0/db_1]
```

5 Press Enter to continue.

Installing BSA Essentials with Customer-Installed Oracle — Single Server

The following tasks show you how to install BSA Essentials with a customer-installed Oracle instance on a single server. In this scenario, BSA Essentials can be installed on the same server as your Oracle server.

For information on supported Oracle versions for this release, see Supported Databases for BSA Essentials Database Servers on page 19.

Installing BSA Essentials with a customer-installed Oracle requires performing the following tasks:

- Setting Up BSA Essentials Database on Oracle Server
- Post-BSA Essentials Database Creation Tasks
- Installing BSA Essentials BusinessObjects Component
- Installing BSA Essentials Core Services
- Post-Install Task on Oracle Server

Setting Up BSA Essentials Database on Oracle Server

On the server where your custom Oracle database is installed, you will install the BSA Essentials Database instance so it can operate with your own Oracle installation.

1. Connect to server where BSA Essentials Database component is to be installed.
2. Mount the BSA Essentials installation media Disc 3 using a command similar to `mount /dev/cdrom <mnt_point>` as appropriate.
3. Copy the following BSA Essentials Database instance package named `/<mnt_point>/packages/SunOS/bsae-dbinstance-34f.1.0.0.0.tar.gz` to a working directory on the Oracle server.
4. Note that even though the path to the BSA Essentials Database instance package is listed under a SunOS directory, this database instance is supported on Red Hat Linux Enterprise (RHEL) installations as well. For more information on supported installation platforms, seeChapter 3, BSA Essentials 2.01 Platform Support, on page 19 of this guide.
5. Uncompress and extract the package contents. For example:

   ```
   tar -zxvf bsae-dbinstance-34f.1.0.0.0.tar.gz
   ```

6. Once you have extract the files, your will see several scripts and directories. Specifically, you will need to edit the script named `custom_dbinstance_creation.sh` according to your particular installation.

   There are a number of values in the top of the script that you can change as needed, as follows:

   — Change the Oracle Listener Port by changing the DB_PORT:

   ```
   DB_PORT=1521
   ```

   — Update ORACLE_HOME to the appropriate value for your oracle installation:

   ```
   ORACLE_HOME=/u01/app/oracle/product/10.2.0/db_1
   ```

7. After customizing the script variables as needed, run the script without any command line arguments:

   ```
   ./custom_dbinstance_creation.sh
   ```

8. When the script completes, it will display a confirmation message stating that the new instance has been created

Post-BSA Essentials Database Creation Tasks

In this task, you will add the BSA Essentials CMDB instance configuration value into the `sid_list` of your Oracle `listener.ora` file. This task can be done using Oracle utilities or by editing the `listener.ora` file in `$ORACLE/home/network/admin`.

1. Update the oracle user's `.profile` to include the `/u01/app/oracle/product/10.2.0/db_1/lib32` in the `LD_LIBRARY_PATH` environment variable. For example:

   ```
   $ vi $HOME/.bash_profile
   edit LD_LIBRARY_PATH
   LD_LIBRARY_PATH=$ORACLE_HOME/lib:$ORACLE_HOME/lib32:/lib:/usr/lib;
   export LD_LIBRARY_PATH
   ```

2. Review the file named $`ORACLE/home/network/admin/tnsnames.ora` to ensure that the script was appended to the CMDB entry, if it wasn't found. For example:

```
$ cat tnsnames.ora
new entry for "cmdb" has been added
cmdb=(DESCRIPTION=(ADDRESS=(HOST=nova.omdb.ncqa.opsware.com)(PORT=1521)
PROTOCOL=tcp))(CONNECT_DATA=(SERVICE_NAME=cmdb.opsware.com)))
```

3 Restart the Oracle listener by executing the following commands as the Oracle user:

```
$ lsnrctl stop
$ lsnrctl start
```

Installing BSA Essentials BusinessObjects Component

The next task requires that you install the BSA Essentials Business Objects component, found in Disc 2 of the installation media, on to the BSA Essentials/Oracle server.

To install the BSA Essentials BusinessObjects components, perform the following steps:

1 Log in to the server where you want to install the BSA Essentials BusinessObjects component.

2 Mount the BSA Essentials installation media Disc 2 using a command similar to mount /dev/cdrom <mnt_point> as appropriate.

3 Start the BSA Essentials BusinessObjects installer from Disc 2 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: "BSA Essentials Database 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.

Installing BSA Essentials
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, and then press Enter. The following prompt appears:

```
The HP 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 HP Installer will perform a
final validation check and write out a response file that will be used to
install the components.
```

The next six question of the BusinessObjects installation interview will display default values derived from the Database response file that was created during the database installation. Accept all default values by pressing Enter for each of the six interview questions.

Parameter 1 of 6 (`decrypt_passwd`). Please enter the password for the cryptographic material:

5 Press Enter to accept the default value of the crypto.

The following prompt appears:

```
Parameter 2 of 6 (omdb.oracleHost)Please enter the hostname of the server
where the Oracle RDBMS will be installed.:
```

6 Press Enter to accept the default value that was entered during the Database installation.

The following prompt appears:

```
Parameter 3 of 6 (omdb.oraclePort)Please enter the port on which the Oracle
data base instance for BSA Essentials will listen.:
```

7 Press Enter to accept the port number used during the Database installer, such as `1521`.

The following prompt appears

```
Parameter 4 of 6 (omdb.oracleSid)Please enter the SID for the BSA
Essentials Oracle database instance.:
```

8 Press Enter to accept the Oracle SID entered during the Database installation, such as `cmdb`.

The following prompt appears:

```
Parameter 5 of 6 (omcs.host)Please enter the hostname or IP of the server
where the BSA Essentials Core Services will be installed.:
```

9 Press Enter to accept the value entered during the Database installation.

The following prompt appears:

```
Parameter 6 of 6 (omdb.adminPwd)Please enter the password to use for the
BSA Essentials database administrator.:
```

10 Press Enter to accept the value entered during the Database installation, such as `cmdb_admin`.

The following prompt appears:

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

11 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_bo]:
```

12 To accept the default values type y and then press Enter. The following prompt appears:

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

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

```
Welcome to the HP Installer.
```

```
Please select the components to install.
1 ( ) BSA Essentials Business Objects Installer
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

14 To continue, type a and then press Enter to install the BusinessObjects components.

15 Type `c` to continue to installation, and then press Enter.

The following prompt appears:

```
Selection: c
[Jan-21-2010 09:51:32] >>>>Installing preliminary components

[Jan-21-2010 09:51:38] >>>>Installing component BSA Essentials Business
Objects Installer
.........
[Jan-21-2010 10:48:27] HP Installer ran successfully.

For more details, please see the following file:
/var/log/opsware/install_opsware/
install_opsware.2010-01-21.09:47:53_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.
######################################################################
Removing directory /var/tmp/oitmp ...
Script done, file is /var/log/opsware/install_opsware/
install_opsware.2010-01-21.09:47:53.log
```

16 After the install completes, save your response file to `/root` for use in later tasks. For example:

```
mv /var/tmp/oiresponse.omdb_bo /root
```

Installing BSA Essentials Core Services

The next task required to install BSA Essentials with a custom-installed Oracle on the same server requires installing the BSA Essentials Core Services found on Disc 3 of the installation media.

To install the BSA Essentials Core Services, perform the following steps:

1 Log in to the server where you want to install the BSA Essentials Core Services component.

2 Mount the BSA Essentialsinstallation media Disc 3 using a command similar to `mount /dev/cdrom <mnt_point>` as appropriate.

3 Start the BSA EssentialsCore Services installer using the following command:

```
/<mnt_point>/opsware_installer/install_opsware.sh -r /var/tmp/
oiresponse.omdb_bo --interview
```

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

The following prompt appears:

```
Install Type: "BSA Essentials 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, and then press Enter. The following prompt appears:

```
The HP 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 HP Installer will perform a
final validation check and write out a response file that will be used to
install the components.

Parameter 1 of 10 (truth.oaPwd)
Please enter the password for the opsware_admin user, and then press Enter.
This is the password used to connect to the Oracle database.:
```

Several of the next ten questions of the Core Services installation interview will display default values derived from the response file that was created during the Database and BusinessObjects installation. Accept any default values by pressing Enter for those interview questions.

5 Type `opsware_admin` and then press Enter.

The following prompt appears:

```
Parameter 2 of 10 (decrypt_passwd). Please enter the password for the
cryptographic material:
```

6 Press Enter to accept the default value that was entered during the Database installation, such as `crypto`.

The following prompt appears:

```
Parameter 3 of 10 (truth.dcNm)Please enter the short name of the facility
where Opsware Installer is being run (no spaces):
```

7 Enter the name of the datacenter or facility where you are installing the BSA Essentials Core Services, with no spaces. For example, `DATACENTER1`.

The following prompt appears

```
Parameter 4 of 10 (truth.servicename)Please enter the service name (aka
TNS name) of the Model Repository instance in the facility where Opsware
Installer is being run:
```

8 Enter in all lower case letters the word `truth`, and then press Enter.

The following prompt appears

```
Parameter 5 of 10 (omdb.oracleHost)Please enter the hostname of the server
where the Oracle RDBMS will be installed.
```

9 Press Enter to accept the Oracle server hostname entered during the BSA Essentials database installation, such as `cmdb`.

The following prompt appears:

```
Parameter 6 of 10 (omdb.oraclePort)Please enter the port on which the
Oracle database instance for BSA Essentials will listen.
```

10 Press Enter to accept the value entered during the Database installation. For example, `1521`.

The following prompt appears:

```
Parameter 7 of 10 (omdb.oracleSid)Please enter the SID for the BSA
Essentials Oracle database instance.
```

11 Press Enter to accept the SID entered during the Database installation, such as `cmdb`.

The following prompt appears:

```
Parameter 8 of 10 (omcs.host) Please enter the hostname or IP of the server
where the BSA Essentials Core Services will be installed (not localhost). :
```

12 Type the hostname or IP of the server where you are installing the BSA Essentials Core Services, and then press Enter.

The following prompt appears:

```
Parameter 9 of 10 (omdb.adminPwd)Please enter the password to use for the
BSA Essentials database administrator.:
```

13 Press Enter to accept the value given during the Database installation.

The following prompt appears:

```
Parameter 10 of 10 (omcs.smtpHost)Please enter the hostname or IP address
of your SMTP mail server.:
```

13 Enter the hostname or IP address of the STMP mail server you wish to use with BSA Essentials, and then press Enter.

The following message 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 values type `y`, and then 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 and then press Enter.

The following prompt appears:

```
Welcome to the HP Installer.
Please select the components to install.
1 ( ) BSA Essentials Core Services
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

17 To continue, type `a` and then press Enter to install the BusinessObjects components.

18 Type `c` to continue to installation, and then press Enter.

The following prompt appears:

```
Selection: c
[Jan-21-2010 09:51:32] >>>>Installing preliminary components

[Jan-21-2010 09:51:38] >>>>Installing component BSA Essentials Business
Objects Installer
.........
[Jan-21-2010 10:48:27] HP Installer ran successfully.

For more details, please see the following file:
60 Chapter 5
/var/log/opsware/install_opsware/
install_opsware.2010-01-21.09:47:53_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.
######################################################################

Removing directory /var/tmp/oitmp ...
Script done, file is /var/log/opsware/install_opsware/
install_opsware.2010-01-21.09:47:53.log
```

19 After the install completes, save your response file to `/root`. For example:

```
mv /var/tmp/oiresponse.omdb /root
```

You have completed installing the BSA EssentialsCore Services component.

Post-Install Task on Oracle Server

1. Log in to the BSA Essentials database server as the root user.
2. Set the environment variable for the `ORACLE_SID` to your BSA Essentials database instance. The command for setting this environment variable depends on the type of shell you are using.

   For example, if you logged in with a bash shell, then export the following value:

   ```
   export ORACLE_SID=<sid_value>
   ```

   If you are using a Korn shell:

   ```
   ORACLE_SID=<sid_value>
   export ORACLE_SID
   ```

   If you are using a C shell:

   ```
   setenv ORACLE_SID=<sid_value>
   ```
3. Change directory (cd) to the post-deployer directory where the `bsae-dbinstance-34f.1.0.0.0.tar.gz` package was extracted.
4. Execute the post deploy install script using the following command:

   ```
   ./postDeploy_Install.sh
   ```

   The following prompt appears:

   ```
   What is the ORACLE_HOME created during the installation? default [/u01/
   app/oracle/product/10.2.0/db_1]
   ```
5. Press Enter to continue the script execution.

   You have finished installing BSA Essentials with a customer-installed Oracle on the same server.

Installing BSA Essentials with a Customer-Installed Oracle — Dual Server

The following tasks show you how to install BSA Essentials with a customer-installed Oracle instance. In this scenario, BSA Essentials can be installed on the same server as the customer's Oracle, or on a separate server.

For information on supported Oracle versions for this release, see Supported Databases for BSA Essentials Database Servers on page 19.

Installing BSA Essentials with a customer-installed Oracel requires performing the following tasks:

- Setting Up BSA Essentials Database on Oracle Server
- Post-BSA Essentials Database Creation Tasks
- Installing the BSA Essentials Database Instance on Core Server
- Shutdown BSA Essentials Database Instance
- Installing BSA Essentials BusinessObjects Component
- Installing BSA Essentials Core Services

- Customer-Installed Oracle Post-Installation Configuration
- Post-Install Task — Oracle Server

Setting Up BSA Essentials Database on Oracle Server

On the server where your own, custom Oracle database is installed, you will install the BSA Essentials Database instance so it can operate with your own Oracle installation.

1 Connect to server where BSA Essentials Database instance is to be installed.

2 Mount the BSA Essentials installation media Disc 3 using a command similar to `mount /dev/cdrom <mnt_point>` as appropriate.

3 Copy the following BSA Essentials Database instance package named `/<mnt_point>/packages/SunOS/bsae-dbinstance-34f.1.0.0.0.tar.gz` to a working directory on the Oracle server.

Even though the path to the BSA Essentials Database instance package is listed under a SunOS directory, this database instance is supported on Red Hat Linux Enterprise (RHEL) installations as well. For more information on supported installation platforms, see BSA Essentials 2.01 Platform Support on page 19.

4 Uncompress and extract the package contents. For example:

```
tar -zxvf bsae-dbinstance-34f.1.0.0.0.tar.gz
```

5 Once you extract the files, your will see several scripts and directories. Specifically, you will need to edit the script named "`custom_dbinstance_creation.sh`" according to your particular installation.

There are a number of values in the top of the script that you can change as needed, as follows:

- Change the Oracle Listener Port by changing the DB_PORT:

  ```
  DB_PORT=1521
  ```

- Update ORACLE_HOME to the appropriate value for your oracle installation

  ```
  ORACLE_HOME=/u01/app/oracle/product/10.2.0/db_1
  ```

6 After customizing the script variables as needed, run the script without any command line arguments:

```
./custom_dbinstance_creation.sh
```

When the script completes, it will display a confirmation message stating that the new instance has been created

Post-BSA Essentials Database Creation Tasks

In this task, you will add the BSA Essentials CMDB Instance configuration value into the sid_list of your Oracle `listener.ora` file. This task can be done using Oracle utilities or by editing the `listener.ora` file in `$ORACLE/home/network/admin`.

1 Using a text editor, open the following Oracle listener file located at `$ORACLE/home/network/admin/listener.ora`

2 Edit the file so that the BSA Essentials Database instance "cmdb" as been added to the Listener that already supports the SID "sar". For example:

```
(SID_DESC =
(SID_NAME = cmdb)
(ORACLE_HOME = /u01x/app/oracle/product/10.2.0/db_1)
```

3 Update the oracle user's .profile to include the /u01/app/oracle/product/10.2.0/db_1/lib32 in the LD_LIBRARY_PATH environment variable. For example:

```
$ vi $HOME/.bash_profile
edit LD_LIBRARY_PATH-
LD_LIBRARY_PATH=$ORACLE_HOME/lib:$ORACLE_HOME/lib32:/lib:/usr/lib;
export LD_LIBRARY_PATH
```

4 Review the file named `$ORACLE/home/network/admin/tnsnames.ora` to ensure that the script was have appended the `CMDB` entry, if it wasn't found. For example:

```
$ cat tnsnames.ora
new entry for "cmdb" has been added-
cmdb=(DESCRIPTION=(ADDRESS=(HOST=nova.omdb.ncqa.opsware.com)(PORT=1521)
PROTOCOL=tcp))(CONNECT_DATA=(SERVICE_NAME=cmdb.opsware.com)))
```

5 Restart the Oracle listener by executing the following commands as the Oracle user:

```
$ lsnrctl stop
$ lsnrctl start
```

Installing the BSA Essentials Database Instance on Core Server

In this task, you will use the BSA Essentials installer to first install the BSA Essentials Database and Oracle components on the server where you want to install the BSA Essentials core server. Then in the final tasks, you will install the BSA Essentials Core Services.

To install the BSA Essentials Database components, complete the following steps:

1 Log in to the server where you want to install the BSA Essentials Database and the BSA Essentials Core Services.

2 Mount the BSA Essentials installation media Disc 1 using a command similar to `mount /dev/cdrom <mnt_point>` as appropriate.

3 Start the BSA Essentials Database installer from Disc 1 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: "BSA Essentials Database 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`, and then press Enter. The following prompt appears:

```
The HP 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 HP Installer will perform
a final validation check and write out a response file that will be
used to install the components.

Parameter 1 of 5 (decrypt_passwd)Please enter the password for the
cryptographic material:
```

5 Enter a password to access the cryptographic materials, and then press Enter. For example: `crypto`.

The following prompt appears:

```
Parameter 2 of 5 (omdb.oracleHost)Please enter the hostname of the server
where the Oracle RDBMS will be installed. [localhost]:
```

6 Type the hostname of the server where the BSA Essentials Database component will be installed, or accept the default of `localhost` and press Enter .

The following prompt appears:

```
Parameter 3 of 5 (omdb.oraclePort)Please enter the port on which the Oracle
data base instance for BSA Essentials will listen.:
```

7 Accept the default port number for the Oracle database instance `(1521)`, and then press Enter.

The following prompt appears

```
Parameter 4 of 5 (omdb.oracleSid)Please enter the SID for the BSA
Essentials Oracle database instance.:
```

8 Type the SID for the Oracle database instance, for example, `cmdb`, then press Enter.

The following prompt appears:

```
Parameter 5 of 5 (omdb.adminPwd)Please enter the password to use for the
BSA Essentials database administrator.:
```

9 Enter the BSA Essentials Database administrator password, such as `cmdb_admin`, and then press Enter.

The following prompt appears:

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

10 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_db]:
```

11 To accept the default values type y and then press Enter. The following prompt appears:

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

12 To continue, type y, then press Enter. The following prompt appears:

```
Welcome to the HP Installer.
Please select the components to install.
1 ( ) Oracle RDBMS for BSA Essentials
2 ( ) BSA Essentials Database Instance
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

13 To continue, type a and then press Enter to install both Database components.

14 Type c to continue to installation, and then press Enter.

```
Installation prerequisite checking
Processing on Linux/4AS-X86_64 using /mnt/emc-cary/distributions/gray.f/
opsware_34.f.4342.0-omdb_db/disk001/opsware_installer/tools/
Linux_oracle_rqmts.conf
    Checking 'required' packages for Linux/4AS-X86_64
    Checking 'required' patches for LINUX/4AS-X86_64
    Checking 'recommended' packages for LINUX/4AS-X86_64
    Checking 'absent' packages for LINUX/4AS-X86_64
[Jan-21-2010 11:54:34] >>>>Installing preliminary components
..............
[Jan-21-2010 11:55:52] >>>>Installing component Oracle RDBMS for BSA
Essentials
..................................................
[Jan-21-2010 11:58:47] >>>>Installing component BSA Essentials Database
Instance
..........................................................................
.
[Jan-21-2010 12:02:50] HP Installer ran successfully.


For more details, please see the following file:
/var/log/opsware/install_opsware/
install_opsware.2010-01-21.11:52:21_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.
######################################################################
```

```
Removing directory /var/tmp/oitmp ...
Script done, file is /var/log/opsware/install_opsware/
install_opsware.2010-01-21.11:52:21.log
```

15 After the install completes, save your response file (for use in the next task or for upgrades) to /root:

```
mv /var/tmp/oiresponse.omdb /root
```

16 You have now completed the Database part of the custom-Oracle installation. In the next task, you will install the BSA Essentials Core Services.

Shutdown BSA Essentials Database Instance

This section applies only to Red Hat Linux Oracle database installations. Shutting down and restarting the database on a Solaris server must be done manually.

1 Change directories to `/etc/init.d` and shutdown BSA Essentials Database instance. For example:

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

2 Next, for the BSA Essentials-installed Oracle, you need to turn off the automatic startup scripts. For example:

```
chkconfig --level 2345 opsware-oracle off
```

3 Switch to the Oracle super user:

```
su oracle
```

4 Update the file named `tnsnames.ora` so that it points to the hostname of the server where the remote (customer-installed Oracle) was installed. Also update the listener port if it is other than 1521 on the Customer-installed Oracle server.

5 Last, update install response file (`/usr/tmp/oiresponse.omdb`) by changing the Oracle database hostname (%omdb.oracleHost) to the remote (customer-installed) oracle hostanme.

Configure Database Hostname Value

1 Using a text editor, open the following file:

```
/etc/opt/opsware/omdb/omdb.properties
```

2 Change the value of `com.opsware.cmdb.interview.omdb.oracleHost` value from "`localhost`" to the hostname of the server where you installed the BSA Essentials Database.

3 Save and close the file.

Installing BSA Essentials BusinessObjects Component

The next task requires that you install the BSA Essentials Business Objects component, found in Disc 2 of the installation media, on to the BSA Essentials core server.

The steps in this task show you how to run the BusinessObjects installer using the Database response file used in the previous installation.

To install the BSA Essentials BusinessObjects components, perform the following steps:

1. Log in to the server where you want to install the BSA Essentials BusinessObjects component.
2. Mount the BSA Essentials installation media Disc 2 using a command similar to `mount /dev/cdrom <mnt_point>` as appropriate.
3. Start the BSA Essentials BusinessObjects installer from Disc 2 using the following command:

   ```
   /<mnt_point>/opsware_installer/install_opsware.sh -r /var/tmp/
   oiresponse.omdb_db --interview
   ```

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

The following prompt appears:

```
Install Type: "BSA Essentials Database 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`, and then press Enter. The following prompt appears:

   ```
   The HP 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 HP Installer will perform
   a final validation check and write out a response file that will be
   used to install the components.

   Parameter 1 of 6 (decrypt_passwd)Please enter the password for the
   cryptographic material:
   ```

The next six question of the BusinessObjects installation interview will display default values derived from the Database response file that was created during the Database installation. Accept all default values by pressing Enter for each of the six interview questions.

5 Press Enter to accept the default value of `crypto`.

The following prompt appears:

```
Parameter 2 of 6 (omdb.oracleHost)Please enter the hostname of the server
where the Oracle RDBMS will be installed.:
```

6 Press Enter to accept the default value that was entered during the Database installation.

The following prompt appears:

```
Parameter 3 of 6 (omdb.oraclePort)Please enter the port on which the Oracle
data base instance for BSA Essentials will listen.:
```

7 Press Enter to accept the port number used during the Database installer, such as `1521`.

The following prompt appears

```
Parameter 4 of 6 (omdb.oracleSid)Please enter the SID for the BSA
Essentials Oracle database instance.:
```

8 Press Enter to accept the Oracle SID entered during the Database installation, such as `cmdb`.

The following prompt appears:

```
Parameter 5 of 6 (omcs.host)Please enter the hostname or IP of the server
where the BSA Essentials Core Services will be installed.:
```

9 Press Enter to accept the value entered during the Database installation.

The following prompt appears:

```
Parameter 6 of 6 (omdb.adminPwd)Please enter the password to use for the
BSA Essentials database administrator.:
```

10 Press Enter to accept the value entered during the Database installation, such as `cmdb_admin`.

The following prompt appears:

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

11 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_bo]:
```

12 To accept the default values type y and then press Enter. The following prompt appears:

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

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

```
Welcome to the HP Installer.
Please select the components to install.
1 ( ) BSA Essentials Business Objects Installer
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

14 To continue, type `a` and then press Enter to install the BusinessObjects components.

15 Type `c` to continue to installation, and then press Enter.

16 The following prompt appears:

```
Selection: c
[Jan-21-2010 09:51:32] >>>>Installing preliminary components

[Jan-21-2010 09:51:38] >>>>Installing component BSA Essentials Business
Objects Installer
.........
[Jan-21-2010 10:48:27] HP Installer ran successfully.



For more details, please see the following file:
/var/log/opsware/install_opsware/
install_opsware.2010-01-21.09:47:53_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.
######################################################################

Removing directory /var/tmp/oitmp ...
Script done, file is /var/log/opsware/install_opsware/
install_opsware.2010-01-21.09:47:53.log
```

17 After the install completes, save your response file (for use in the next task or for upgrades) to /root:

18 `mv /var/tmp/oiresponse.omdb_bo /root`

Installing BSA Essentials Core Services

The next task required to install BSA Essentials with a custom-installed Oracle requires installing the BSA Essentials Core Services found on Disc 3 of the installation media.

To install the BSA Essentials Core Services, perform the following steps:

1 Log in to the server where you want to install the BSA Essentials Core Services component.

2 Mount the BSA Essentials installation media Disc 3 using a command similar to `mount /dev/cdrom <mnt_point>` as appropriate.

3 Start the BSA Essentials Core Services installer using the following command:

```
/<mnt_point>/opsware_installer/install_opsware.sh -r /var/tmp/
oiresponse.omdb_bo
 --interview
```

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

The following prompt appears:

```
Install Type: "BSA Essentials 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`, and then press Enter. The following prompt appears:

```
The HP 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 HP Installer will perform
a final validation check and write out a response file that will be
used to install the components.

Parameter 1 of 10 (truth.oaPwd)Please enter the password for the
opsware_admin user. This is the password used to connect to the Oracle
database.:
```

Several of the next ten questions of the Core Services installation interview will display default values derived from the response file that was created during the Database and BusinessObjects installation. Accept any default values by pressing Enter for those interview questions.

5 Type `opsware_admin` and then press Enter.

The following prompt appears:

```
Parameter 2 of 10 (decrypt_passwd)Please enter the password for the
cryptographic material:
```

6 Press Enter to accept the default value that was entered during the Database installation, such as `crypto`.

The following prompt appears:

```
Parameter 3 of 10 (truth.dcNm)Please enter the short name of the facility
where Opsware Installer is being run (no spaces):
```

7 Enter the name of the datacenter or facility where you are installing the BSA Essentials Core Services, with no spaces. For example, `DATACENTER1`.

The following prompt appears

```
Parameter 4 of 10 (truth.servicename)Please enter the service name (aka
TNS name) of the Model Repository instance in the facility where Opsware
Installer is being run:
```

8 Enter in all lower case letters, `truth`, and then press Enter.

The following prompt appears

```
Parameter 5 of 10 (omdb.oracleHost)Please enter the hostname of the server
where the Oracle RDBMS will be installed.
```

9 Press Enter to accept the Oracle server hostname entered during the BSA Essentials Database installation, such as `cmdb`.

The following prompt appears:

```
Parameter 6 of 10 (omdb.oraclePort)Please enter the port on which the
Oracle database instance for BSA Essentials will listen.
```

10 Press Enter to accept the value entered during the Database installation. For example, `1521`.

The following prompt appears:

```
Parameter 7 of 10 (omdb.oracleSid)Please enter the SID for the BSA
Essentials Oracle database instance.
```

11 Press Enter to accept the SID entered during the Database installation, such as `cmdb`.

The following prompt appears:

```
Parameter 8 of 10 (omcs.host)Please enter the hostname or IP of the server
where the BSA Essentials Core Services will be installed (not localhost). :
```

12 Type the hostname or IP of the server where you are installing the BSA Essentials Core Services, and then press Enter.

The following prompt appears:

```
Parameter 9 of 10 (omdb.adminPwd)Please enter the password to use for the
BSA Essentials database administrator.:
```

13 Press Enter to accept the value given during the Database installation.

The following prompt appears:

```
Parameter 10 of 10 (omcs.smtpHost)Please enter the hostname or IP address
of your SMTP mail server.:
```

14 Enter the hostname or IP address of the STMP mail server you wish to use with BSA Essentials, and then press Enter.

The following message 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 values type y and then 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 HP Installer.
Please select the components to install.
1 ( ) BSA Essentials Core Services
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

18 To continue, type `a` and then press Enter to install the BusinessObjects components.

19 Type `c` to continue to installation, and then press Enter.

20 The following prompt appears:

```
Selection: c
[Jan-21-2010 09:51:32] >>>>Installing preliminary components

[Jan-21-2010 09:51:38] >>>>Installing component BSA Essentials Business
Objects Installer
.........
[Jan-21-2010 10:48:27] HP Installer ran successfully.



For more details, please see the following file:
/var/log/opsware/install_opsware/
install_opsware.2010-01-21.09:47:53_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.
######################################################################

Removing directory /var/tmp/oitmp ...
Script done, file is /var/log/opsware/install_opsware/
install_opsware.2010-01-21.09:47:53.log
```

21 After the install completes, save your response file to /root:

```
mv /var/tmp/oiresponse.omdb /root
```

22 You have completed installing the BSA Essentials Core Services component.

Customer-Installed Oracle Post-Installation Configuration

Your last task for installing the BSA Essentials core with a customer-installed Oracle requires shutting down the BSA Essentials Database instance.

Shutdown BSA Essentials Database

1. On the server where you installed the BSA Essentials Core Services and change directories to the following path:

   ```
   cd /etc/init.d/
   ```

2. Shutdown BSA Essentials Database instance by executing this command:

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

Post-Install Task — Oracle Server

1. Log in to the BSA Essentials database server (Server A) as the root user.
2. Set the environment variable for the ORACLE_SID to your BSA Essentials database instance. The command for setting this environment variable depends on the type of shell you are using. For example, if you logged in to Server A with a bash shell, then export the following value:

   ```
   export ORACLE_SID=<sid_value>
   ```

   If you are using a Korn shell:

   ```
   ORACLE_SID=<sid_value>
   export ORACLE_SID
   ```

   If you are using a C shell:

   ```
   setenv ORACLE_SID=<sid_value>
   ```

3. Next, change directory (cd) to the directory where the `bsae-dbinstance-34f.1.0.0.0.tar.gz` package was extracted.
4. Change directory (cd) to the post-deployer directory where the `bsae-dbinstance-34f.1.0.0.0.tar.gz` package was extracted.
5. Execute the post deploy install script using the following command:

   ```
   ./postDeploy_Install.sh
   ```

   The following prompt appears:

   ```
   What is the ORACLE_HOME created during the installation? default [/u01/
   app/oracle/product/10.2.0/db_1]
   ```

6. Press Enter to continue the script execution.

   You have finished installing BSA Essentials with a customer-installed Oracle.

Files Modified By the BSA Essentials Installer at Installation

Table 14 presents the files modified when installing BSA Essentials.

Table 14 Files Modified By the BSA Essentials Installer at Installation

Topic	Location and Description
BSA Essentials properties	`/etc/opt/opsware/omdb/omdb.properties` - twist security and scheduled reports settings
Core Services, default port 8443	• `/opt/opsware/omdb/omdb/conf/http-invoker.sar/jboss-service.xml` Two changes for InvokerURLSuffix • `/opt/opsware/omdb/omdb/deploy/http-invoker.sar/META-INF/jboss-service.xml` Two changes for InvokerURLSuffix • `/opt/opsware/omdb/omdb/deploy/jboss-ws4ee.sar/META-INF/jboss-service.xml` One change for WebServicesSecurePort • `/opt/opsware/omdb/omdb/deploy/jbossweb-tomcat55.sar/server.xml` redirectPort connector port keystore password and file (keystoreFile, keystorePass)
RMIObjectPort, default 14445	`/opt/opsware/omdb/omdb/conf/jboss-service.xml`
BSA Essentials rsync	`/etc/opt/opsware/omdb/rsyncd.conf` Change "port" value
SA Twist	`/opt/opsware/omdb/bin/enable_omdb_client.sh` • omdb host • omdb port SA twist.conf changes must be changed manually or by running this script.

Table 14 Files Modified By the BSA Essentials Installer at Installation (cont'd)

Topic	Location and Description
Application Data Source configurations (Database connection information such as oracle host, port, sid, user, used by dmconfig.sh.)	• /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 • /opt/opsware/omdb/deploy/cmdb-deployer-ds.xml • /var/opt/oracle/tnsnames.ora (tnsnames) • /var/tmp/oiresponse.omdb • /etc/opt/opsware/omdb/omdb.properties
Cryptographic files (generated at install, including querying twist for the SA public certificate)	• /var/opt/opsware/crypto/omdb/server.keystore • /opt/opsware/omdb/dist/dmboot.pem Data miner secure communication.
Keystore password	/opt/opsware/omdb/omdb/deploy/security-service.xml

Table 14 Files Modified By the BSA Essentials Installer at Installation (cont'd)

Topic	Location and Description
Dataminer properties	`/opt/opsware/omdb/bin/dmconfig.properties` • oracle host • port • oracle omdbsid • omdb admin userid (`cmdb_admin`), but is usually not changed The `cmdb_admin` password can be included here as `password=xxx` but is not included automatically by the BSA Essentials Installer. Including the `cmdb_admin` password will prevent prompting for the `cmdb_admin` password when running `dmconfig.sh` to install a data miner.
Dataminer files	`/opt/opsware/omdb/dist/dataminer.tar` This directory includes `dataminer.conf` and `dmboot.pem`.
Dataminer parameters	`/opt/opsware/omdb/dist/dataminer.conf` • rsync port • server (listed as `RestartableCopyLocation`)

Recovery From a BSA Essentials Failed Database Schema Installation

If the installation of the BSA Essentials Database schema is interrupted and the BSA Essentials Installer is run again, the BSA Essentials 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 BSA Essentials 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 BSA Essentials installation or upgrade process.

5 Post-Installation Tasks

This section describes all of the necessary post-installation tasks to be perform after you install BSA Essentials, including the following topics:

- Setting Up Live Content Uploads on a BSA Essentials Server
- Setting Up User Groups and Permissions
- Setting Security Boundaries in the BSA Essentials (SAR) Client
- Setting the SA Server FQDN on the BSA Essentials Core
- Configuring the Reporting Mail Server

After you have performed the post-installation tasks in this chapter, you are ready to install the appropriate Dataminer for your products. For information, see Installing BSA Essentials Data Miners on page 75.

Setting Up Live Content Uploads on a BSA Essentials Server

Your BSA Essentials server can be configured to automatically download and import new BSA Essentials 2.0-related live content into a running BSA Essentials server without user involvement, since the live content is published on HP content distribution servers. The current list of content types that can be updated in this manner is as follows:

- BusinessObjects reports
- Legacy BIRT reports
- Dataminer ETL/Model updates
- BusinessObjects Universe updates

For downloading and installing the latest HP Live Network connector (LNc) software that enables this functionality, please visit the LNc home page on the web at: https://h20034.www2.hp.com/. This page contains the download and install instructions for BSA Essentials 2.0.

Setting Up User Groups and Permissions

After you install BSA Essentials, you need to log in to the BSA Essentials Web Client and create user groups, add users to the groups, and then assign permissions to those groups.

For information on how to create users and groups and set permissions for groups, see the online administration documentation in the BSA Essentials Web Client.

To set security boundaries around the kinds of data you would like specific groups to be able to view and report upon, you need to log into the SAR Client, as described below in Setting Security Boundaries in the BSA Essentials (SAR) Client on page 72.

Setting the SA Server FQDN on the BSA Essentials Core

If you are using BSA Essentials with Server Automation (SA), you will need to set the fully qualified domain name (FQDN) for the SA core server in the BSA Essentials core configuration.

1. On the BSA Essentials core server, change directories to the following path:

   `/etc/opt/opsware/omdb/omdb.properties`

2. Set the SA core server FQDN in the com.opsware.cmdb.security.twist.hostname field.
3. Restart the BSA Essentials core server.

Setting Security Boundaries in the BSA Essentials (SAR) Client

After you install BSA Essentials and perform user and group permissions setup, you have the option of logging in to the SAR Client to set security boundaries for the data items you want to report on. Data items include meaningful objects from the various BSA products, such as SA servers, NA network devices, OO flows, CA compliance policies, and so on.

For more information on how to install and use the SAR Client for setting security boundaries, consult the BSA Essentials Web Client online help.

Configuring the Reporting Mail Server

This task shows you how to configure a mail server for the BSA Essentials reporting feature.

1. Log in to the BSA Essentials core server.
2. Execute the following command to start the Tomcat server:

   `/etc/inii.d/bsae-tomcat start`

3. Open the CMC application by appending to the servername with the following syntax:

   `http://<BSA_Essentials_server>:8080/CmcApp`

4. Log in as administrator (the password is the same as the admin user for the BSA Essentials Web Client).

5 From the Organize column, select Servers.

6 Select bsae.AdaptiveJobServer.

7 From the **Manage** menu, select **Properties**.

8 From the left column list, select Destination, and from Destination drop-down list, select **Email**.

9 Click **Add**.

10 Enter the Domain Name, Host and Port information.

11 Select Authentication method and authentication information if required by your system.

12 Click **Save** and then **Close**.

13 Next, select bsae.DestinationJobServer from Servers List).

14 From the **Manage** menu, select **Properties**.

15 From the left column list, select Destination, and from Destination drop-down list, select Email.

16 Click **Add**.

17 Enter the Domain Name, Host and Port information.

18 Select Authentication method and authentication information, if required by your system.

19 Click **Save**, and then close the CMC.

20 Return to the BSA Essentials core server and log in.

21 Execute the following command to start the Tomcat server:

```
/etc/init.d/bsae-tomcat stop
```

6 Installing BSA Essentials Data Miners

Pre-registering a Data Miner

You will need to pre-register your data miner on the BSA Essentials 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 75.
- Command line – using the command line option all values can be entered on a single command line.

To avoid having to type the BSA Essentials 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 BSA Essentials Administrator password is stored in the file in clear text.

For details on the parameters, see Setting Configuration Options Using dmconfig.sh on page 77, or at a command prompt change directories to this location

```
cd /opt/opsware/omdb/bin
```

And then 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 BSA Essentials server in order to 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 where you install the data miner. 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 key value pairs until done, and then press Enter to finish.
- **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 BSA Essentials 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 BSA Essentials install for the BSA Essentials 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 where you install the data miner.

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 BSA Essentials 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 BSA Essentials server-side configuration for the data miner is now complete.

Setting Configuration Options Using dmconfig.sh

The data miner periodically connects to BSA Essentials and retrieves miscellaneous configuration settings. You can set the following values:

Table 15 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

Table 15 Data Miner Configuration Settings (cont'd)

Parameter	Definition	Default
FileTransferGroupSize	the number of files per rsync transfer, per zip	250
FileTransferInterval	the frequency of file transfer tasks, in milliseconds	30 seconds (30000)
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 BSA Essentials 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 BSA Essentials.

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 where you install the data miner.

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 BSA Essentials 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 BSA Essentials.
- 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 BSA Essentials install for the BSA Essentials 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 BSA Essentials 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 where you install the data miner.

- The database *`NAdatabasename`* and user/password information in this example are for the NA database, not BSA Essentials.
- 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 BSA Essentials install for the BSA Essentials 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 BSA Essentials 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 where you install the data miner.

- The database *OOdatabasename* and user/password information in this example are for the OO database, not BSA Essentials.
- 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 BSA Essentials install for the BSA Essentials 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 BSA Essentials 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 where you install the data miner.

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

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 default 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 can be connected to a specific BSA Essentials server to a SA multimaster mesh, you must not 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:

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

1. Using the SAS Web Client, log in to a server in the multimaster mesh.
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 83, 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 where the data miner is installed.

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 BSA Essentials 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 youromdbserver:/opt/opsware/omdb/dist/dataminer.tar .
   ```

3. Untar the file:

   ```
   tar -xvf dataminer.tar
   ```

4. Run the data miner 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 BSA Essentials 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 83.

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 will display the available parameters and the definitions of those parameters. Table 16 displays the available parameters and their definitions.

Table 16 dmsetup.sh

Parameter	Use
`--token` *`Token`*	Configure the data miner to use the token *`Token`*
`--autostart`	Sets the data miner to start at system boot
`--noautostart`	Sets the data miner to not automatically start at system boot

Table 16 dmsetup.sh (cont'd)

Parameter	Use
`--unregister`	Removes the specified data miner from the list of data miners running on the server
`--register`	Adds the specified data miner to the list of data miners running on the server
`--help`	Displays the parameters usable with dmsetup.sh 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 BSA Essentials 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 85

2 Installing Transaction Mining Triggers for NA with Oracle on Linux or Solaris on page 85

3 Configuring the Data Miner on the NA Server on page 86

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 BSA Essentials server to a local directory such as `/opt/opsware/dataminer`. The commands used for this step are shown in the following example:

```
scp yoursarserver:/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 BSA Essentials 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 data miner 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 BSA Essentials 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 99.

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 87.
2. Perform one of the following two actions:
   - Installing Transaction Mining Triggers for NA with Oracle on Windows on page 87.

     Or

   - Preparing to Install Transaction Mining Triggers for NA with SQL Server on Windows on page 88, and then Installing Transaction Mining Triggers for NA with SQL Server on Windows on page 88.
3. Configuring the Data Miner Service on the NA Windows Server on page 89.
4. Installing the Data Miner Service on a NA Windows Server on page 89.

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 BSA Essentials 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 BSA Essentials 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 88, 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 88, 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 BSA Essentials 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 99.

The data miner service will start automatically the next time the NA Windows server is restarted.

Installing and Configuring Data Miners for Storage Visibility and Automation

Data miners for Storage Visibility and Automation (previously known as ASAS) work differently than data miners for either SA or NA. To mine data from an Storage Visibility and Automation system, you must:

- Create a database link and set up a scheduled Storage Visibility and Automation-specific mining job. This scheduled job moves data from the Storage Visibility and Automation source server to the BSA Essentials staging database.
- Install and configure a SA data miner for the SA server on which Storage Visibility and Automation is installed.
- Register the Storage Visibility and Automation data miner on BSA Essentials.
- Install the standard BSA Essentials data miner and configure it to communicate with the database on BSA Essentials. When the scheduled Storage Visibility and Automation-specific job completes, it triggers the BSA Essentials data miner to then mine data from the BSA Essentials staging database to the BSA Essentials main database instance.

This section describes the following tasks:

- Configuring the BSA Essentials Database for the Storage Visibility and Automation Data Miner
- Pre-registering a Data Miner for Storage Visibility and Automation and Oracle
- Installing and Configuring a Data Miner for an Storage Visibility and Automation Server
- Mining Storage Visibility and Automation 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 BSA Essentials Database for the Storage Visibility and Automation Data Miner

To configure the BSA Essentials database instance for an Storage Visibility and Automation data miner, you must create an entry in the Oracle hosts file `tnsnames.ora` for the Storage Visibility and Automation source server and run a stored procedure in the Oracle database with parameters appropriate for your installation.

Creating the Storage Visibility and Automation entry in the Oracle hosts file

To create the Storage Visibility and Automation (`asas`) entry in the Oracle hosts file, perform the following steps:

1. Ensure that the desired Storage Visibility and Automation source system is properly installed and operational.
2. Install and configure a SA data miner for the SA server where Storage Visibility and Automation is installed.

3 Log in to the BSA Essentials database server.

4 Using a text editor, open the file `/var/opt/oracle/tnsnames.ora`.

5 In `tnsnames.ora`, add an entry for the Storage Visibility and Automation (`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 Storage Visibility and Automation (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 BSA Essentials database.

2 As the user ASAS_RPT_USER, run the following command:
`etlinterface.registerPlaformDatabase`
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 Storage Visibility and Automation 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 Storage Visibility and Automation and Oracle

To pre-register a data miner for Storage Visibility and Automation and Oracle, perform the following steps:

1. Log in to the BSA Essentials 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 Storage Visibility and Automation example uses localhost because the Storage Visibility and Automation data miner is installed on the BSA Essentials Core server. You can specify the host name of the BSA Essentials Core server.

Installing and Configuring a Data Miner for an Storage Visibility and Automation Server

After the data miner is configured on the BSA Essentials server, you will copy data miner files and configure them on the data source machine—the BSA Essentials Core server.

1. Log in to the BSA Essentials 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 data miner 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 BSA Essentials 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 Storage Visibility and Automation Data

An Oracle stored procedure on the Storage Visibility and Automation server mines Storage Visibility and Automation data from the Storage Visibility and Automation server into a staging schema in the BSA Essentials database instance. A scheduled Oracle job runs this Oracle stored procedure against the registered Storage Visibility and Automation server daily at midnight UTC.

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

1. On the BSA Essentials 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 BSA Essentials 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 94
2. Installing Transaction Mining Triggers for OO with Oracle on Linux on page 94
3. Configuring the Data Miner on the OO Server on page 95

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 BSA Essentials 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 BSA Essentials 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 BSA Essentials 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 BSA Essentials 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 99.

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 95.
2. Installing Transaction Mining Triggers for OO with SQL Server on Windows on page 95
3. Configuring the Data Miner Service on the OO Windows Server on page 96.
4. Installing the Data Miner Service on the OO Windows Server on page 97.

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 BSA Essentials 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 BSA Essentials 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 99.

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 open a terminal window.
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. To unregister the data miner, execute 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 77.

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 where the data miner is installed .
2. Change to the directory you installed the data miner.
3. Enter 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 open a terminal window.
2. Perform the steps in Listing and Unregistering Data Miners on page 98 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 **Opsware 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 **Opsware 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 Storage Visibility and Automation Data Miner on Linux or Solaris

To uninstall a SA or Storage Visibility and Automation data miner on Linux or Solaris, perform the following steps:

1. Complete the steps in Unregistering a Data Miner on page 98.
2. Delete the directory where you installed the data miner.

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 98.
2. Complete the steps in Uninstalling Transaction Mining Triggers for NA with Oracle on Linux or Solaris on page 102.
3. Delete the directory where you installed the data miner.

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 98.
2. Complete the steps in Uninstalling Transaction Mining Triggers for OO with Oracle on Linux on page 104.
3. Delete the directory where you installed the data miner.

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 103.

  Or

- Complete the steps in Uninstalling Transaction Mining Triggers for NA with SQL Server on Windows on page 103.

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 104.

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 88, 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.

7 Upgrading SAR to BSA Essentials

You can upgrade previous versions of BSA Essentials — known formerly as Service Automation Reporter (SAR) — to BSA Essentials 2.0 using the instructions in this chapter.

The BSA Essentials 2.0 versions supported for upgrading are:

- SAR 7.5 ➤ SAR7.8 ➤ BSA Essentials 2.0
- SAR 7.8 ➤ BSA Essentials 2.0
- SAR 7.80.01 (compatible with SA 7.81) ➤ BSA Essentials 2.0

Upgrading BSA Essentials is not the same as migrating BSA Essentials upgrading BSA Essentials 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 on BSA Essentials.

For BSA Essentials migration instructions, see Migrating BSA Essentials Architecture on page 143.

The upgrade scripts are located on the three discs included in the BSA Essentials media:

- Disc 1: Contains the BSA Essentials Database component upgrade script
- Disc 2: Contains the BSA Essentials BusinessObjects upgrade script
- Disc 3: Contains the BSA Essentials Core Services upgrade script

Prerequisites for Upgrading

The following items are required before you upgrade to BSA Essentials:

- If the SAR core server is associated with a SA server, the SA server must be upgraded to at least version 7.8 before you upgrade to BSA Essentials 2.0. See the SA documentation for instructions to upgrade the SA server.
- The SA upgrade deletes the BSA Essentials configuration in the SA twist.conf file.
- 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`.
- SAR Media discs
- The location of all data miners associated with the SAR core.

After You Upgrade — Migrating SAR User Group Permissions

If you want to import user groups and permissions from your previous installation, see Migrating SA User Group Permissions on page 136.

Files Archived During an Upgrade

Configuration Files Archived During an Upgrade

During an upgrade of SAR to BSA Essentials, 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 back to their original locations at the end of the upgrade. Table 17 displays the archived files.

Table 17 Files Archived During An Upgrade

Directory	Files

`/etc/opt/opsware/omdb/`	`omdb.properties`
	`rsyncd.xml`
	`rsyncd.secrets`
	`loader.xml`
	`loader-files.xml`
	`loader-transports.xml`

`/opt/opsware/omdb/deploy/`	`cmdb-ds.xml`
	`cmdb-admin-ds.xml`
	`omdb-reporter-ds.xml`

`/opt/opsware/omdb/deploy/birt.war`	`pas_actions.xml`
	`report_def.xm`
	`custom_def.xml`

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. (OMDB is an earlier version of BSA Essentials.)

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 BSA Essentials.

Deployment Directory and Data Miner Collection Files Archived During an Upgrade

When the Installer is run to either install or upgrade to BSA Essentials 2.0, 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 to BSA Essentials for a Single Server Installation

Before you begin this task, make sure you have the response file from your SAR 7.8 installation. The default location and file name of the BSA Essentials response file is /var/tmp/oiresponse.omdb.

Additionally, you will need to run three different upgrade scripts for each of the BSA Essentials components (Database, BusinessObjects, and Core), documentation in these three tasks:

- Upgrading the Database Component for a Single Server Installation
- Upgrading the BusinessObjects Component for a Single Server Installation
- Upgrading the Core Component for a Single Server Installation

Upgrading the Database Component for a Single Server Installation

To upgrade SAR to BSA Essentials 2.0 when all BSA Essentials components (database, BusinessObjects, and core) were installed on the same server, perform the following steps:

1. Shut down all data miners associated with the SAR Core. (See Starting or Stopping a Data Miner on page 99 for more information.)
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. Start the BSA Essentials Database upgrader from the media Disc 1 using the following command:

   ```
   /<mnt_point>/opsware_installer/upgrade_opsware.sh -r /var/tmp/
   oiresponse.omdb --interview
   ```

   The following prompt appears:

   ```
   Install Type: "BSA Essentials Database 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 HP 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 HP Installer will perform
a final validation check and write out a response file that will be
used to install the components.
Parameter 1 of 5 (decrypt_passwd)Please enter the password for the
cryptographic material [crypto]:
```

6 Press Enter to accept the default value of `crypto` from the previous installation response file.

The following prompt appears:

```
Parameter 2 of 5 (omdb.oracleHost)Please enter the hostname of the server
where the Oracle RDBMS will be installed. [localhost]:
```

7 Press Enter to accept the default value of the Oracle hostname from the previous installation response file.

The following prompt appears:

```
Parameter 3 of 5 (omdb.oraclePort)Please enter the port on which the Oracle
database instance for BSA Essentials will listen. [1521]:
```

8 Press Enter to accept the default value of the Oracle database port number from the previous installation response file.

The following prompt appears:

```
Parameter 4 of 5 (omdb.oracleSid)Please enter the SID for the BSA
Essentials Oracle database instance. [cmdb]:
```

9 Press Enter to accept the default value of the Oracle SID from the previous installation response file.

The following prompt appears:

```
Parameter 5 of 5 (omdb.adminPwd)Please enter the password to use for the
BSA Essentials database administrator. [cmdb_admin]:
```

10 Press Enter to accept the default value of the SAR database administrator from the previous installation response file.

The following prompt appears:

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

11 Type `y` and then press Enter.

12 The following output appears:

```
Concluding interview.

Interview complete.

Name of response file to write [/usr/tmp/oiresponse.omdb_db]:
Response file written to /usr/tmp/oiresponse.omdb_db.
Would you like to continue the installation using this response file? (y/
n):
```

13 Type `y` and then press Enter.

The following prompt appears:

```
Applying SAR to BSAE inventory updates...
Welcome to the HP Installer.
Please select the components to upgrade.
1 ( ) BSA Essentials Database Instance
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

14 To continue, type `a`, then press Enter.

The following prompt appears:

```
Welcome to the HP Installer.
Please select the components to upgrade.
1 (*) BSA Essentials Database Instance
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

15 Type c and then press Enter.

The following output appears while the database is upgraded to BSA Essentials 2.0.

```
[Jan-27-2010 16:00:03] >>>>Installing bootstrap components.
..
[Jan-27-2010 16:00:15] >>>>Stopping Opsware components.
..................................................
Applying SAR to BSAE inventory updates...
[Jan-27-2010 16:03:50] >>>>Upgrading component BSA Essentials Database
Instance.
..................
[Jan-27-2010 16:04:49] >>>>Installing component BSA Essentials Database
Instance
.....................................................................
[Jan-27-2010 16:08:24] HP Installer ran successfully.
```

```
For more details, please see the following file:
/var/log/opsware/install_opsware/
upgrade_opsware.2010-01-27.15:57:04_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.
#####################################################################

Removing directory /var/tmp/oitmp ...
Script done, file is /var/log/opsware/install_opsware/
upgrade_opsware.2010-01-27.15:57:04.log
```

16 When the database component is upgraded, you need to next run the upgrade script that will update your installation with the BSA Essentials 2.0 BusinessObjects component, using the response file created during this upgrade.

Upgrading the BusinessObjects Component for a Single Server Installation

In this task, you will run the upgrade script to upgrade your SAR server to use the BSA Essentials 2.0 BusinessObjects component.

The upgrade script for this task is located on disk 2 of your BSA Essentials media.

Before you run the install script, make sure you have a copy of 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`.

To upgrade your SAR core to the BSA Essentials BusinessObjects component, perform the following steps:

1 Start the BSA Essentials BusinessObjects upgrader from Disc 2 using the following command:

```
/<mnt_point>/opsware_installer/upgrade_opsware.sh -r /var/tmp/
oiresponse.omdb --interview
```

The following prompt appears:

```
Install Type: "BSA Essentials Business Objects 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:
```

2 To select the Simple Interview mode, type `1`, then press Enter. The following prompt appears:

```
The HP 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 HP Installer will perform
a final validation check and write out a response file that will be
used to install the components.

Parameter 1 of 6 (decrypt_passwd)Please enter the password for the
cryptographic material [crypto]:
```

3 Press Enter to accept the default value of `crypto` from the previous installation response file.

The following prompt appears:

```
Parameter 2 of 6 (omdb.oracleHost)Please enter the hostname of the server
where the Oracle RDBMS will be installed. [localhost]:
```

4 Press Enter to accept the default value of the Oracle hostname from the previous installation response file.

The following prompt appears:

```
Parameter 3 of 6 (omdb.oraclePort)Please enter the port on which the Oracle
database instance for BSA Essentials will listen. [1521]:
```

5 Press Enter to accept the default value of the Oracle database port number from the previous installation response file.

The following prompt appears:

```
Parameter 4 of 6 (omdb.oracleSid)Please enter the SID for the BSA
Essentials Oracle database instance. [cmdb]:
```

6 Press Enter to accept the default value of the Oracle SID from the previous installation response file.

The following prompt appears:

```
Parameter 5 of 6 (omcs.host)Please enter the hostname or IP of the server
where the BSA Essentials Core Services will be installed (not localhost).:
```

7 Press Enter to accept the default Hostname or IP address where the previous SAR core was installed (or if the name changed, enter that name).

The following prompt appears

```
Parameter 6 of 6 (omdb.adminPwd)Please enter the password to use for the
BSA Essentials database administrator. [cmdb_admin]:
```

8 Press Enter to accept the default value of the SAR database administrator from the previous installation response file.

The following prompt appears:

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

9 Type `y` and then press Enter.

10 The following output appears:

```
Concluding interview.

Interview complete.

Name of response file to write [/usr/tmp/oiresponse.omdb_bo]:
Response file written to /usr/tmp/oiresponse.omdb_bo.

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

11 Type `y` and then press Enter.

The following prompt appears:

```
Applying SAR to BSAE inventory updates...
Welcome to the HP Installer.
Please select the components to upgrade.
1 ( ) BSA Essentials Business Objects Installer
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

12 To continue, type `a`, then press Enter.

The following prompt appears:

```
Welcome to the HP Installer.
Please select the components to upgrade.
1 (*) BSA Essentials Business Objects Installer
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

13 Type c and then press Enter.

The following output appears while the database is upgraded to BSA Essentials 2.0.

```
[
[Jan-27-2010 16:33:06] >>>>Installing bootstrap components.
[Jan-27-2010 16:33:13] >>>>Stopping Opsware components.

Applying SAR to BSAE inventory updates...
[Jan-27-2010 16:33:29] >>>>Upgrading component BSA Essentials Business
Objects Installer.
[Jan-27-2010 16:33:32] >>>>Installing component BSA Essentials Business
Objects Installer
..............
```

```
[Jan-27-2010 17:40:24] HP Installer ran successfully.


For more details, please see the following file:
/var/log/opsware/install_opsware/
upgrade_opsware.2010-01-27.16:28:18_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.
######################################################################

Removing directory /var/tmp/oitmp ...
Script done, file is /var/log/opsware/install_opsware/
upgrade_opsware.2010-01-27.16:28:18.log
```

14 When the BusinessObjects component is upgraded, you need to next run the upgrade script that will update your installation with the BSA Essentials 2.0 Core Services component, using the response file created during this upgrade.

Upgrading the Core Component for a Single Server Installation

In this task, you will run the upgrade script to upgrade your SAR server to the BSA Essentials 2.0. Core Services component

The upgrade script for this task is located on disc 3 of your BSA Essentials media.

In this task, you will reference the BSA Essentials BusinessObjects component response file that was generated in the previous task.

To upgrade your SAR core to the BSA Essentials Core Services component, perform the following steps:

1 Start the BSA Essentials Core Services upgrader from Disc 3 using the following command:

```
/<mnt_point>/opsware_installer/upgrade_opsware.sh -r /var/tmp/
oiresponse.omdb --interview
```

The following prompt appears:

```
Install Type: "BSA Essentials 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:
```

2 To select the Simple Interview mode, type `1`, then press Enter. The following prompt appears:

```
The HP 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 HP Installer will perform
a final validation check and write out a response file that will be
used to install the components.

Parameter 1 of 14 (truth.oaPwd)Please enter the password for the
opsware_admin user. This is the password used to connect to the Oracle
database.: opsware_admin
```

3 Press Enter to accept the default value of `opsware_admin`.

The following prompt appears:

```
Parameter 2 of 14 (decrypt_passwd)Please enter the password for the
cryptographic material [crypto]:
```

4 Press Enter to accept the default value of `crypto` from the previous installation response file.

The following prompt appears:

```
Parameter 3 of 14 (truth.dcNm)Please enter the short name of the facility
where Opsware Installer is being run (no spaces) [DATACENTER1]:
```

5 Press Enter to accept the default value of the short name for where the installer is being run, `[DATACENTER1]`.

The following prompt appears:

```
Parameter 4 of 14 (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]:
```

6 Press Enter to accept the default value of the Model Repository service name used in your previous SAR deployment.

The following prompt appears:

```
Parameter 5 of 14 (omdb.oracleHost)Please enter the hostname of the server
where the Oracle RDBMS will be installed. [localhost]:
```

7 Press Enter to accept the default value of the Oracle hostname from the previous installation.

The following prompt appears:

```
Parameter 6 of 14 (omdb.oraclePort)Please enter the port on which the
Oracle database instance for BSA Essentials will listen. [1521]:
```

8 Press Enter to accept the default value of the Oracle database port number from the previous installation.

The following prompt appears:

```
Parameter 7 of 14 (omdb.oracleSid)Please enter the SID for the BSA
Essentials Oracle database instance. [cmdb]:
```

9 Press Enter to accept the default value of the Oracle SID from the previous installation response file.

The following prompt appears:

```
Parameter 8 of 14 (omcs.occHost)Please enter the hostname or IP of the
server where the SAS OCC service is running.:
```

10 Press Enter to accept the default hostname or IP where the SAR server's OCC service was running.

The following prompt appears:

```
Parameter 9 of 14 (omcs.twistUser)Please enter the username of a SAS
administrator for BSA Essentials to use to connect to the twist. [admin]:
```

11 Press Enter to accept the default value of `[admin]`.

The following prompt appears:

```
Parameter 10 of 14 (omcs.twistPwd)Please enter the password for the SAS
admin user for BSA Essentials to use to connect to the twist.:
opsware_admin
```

12 Press Enter to accept the default admin password.

The following prompt appears:

```
Parameter 11 of 14 (omcs.host)Please enter the hostname or IP of the server
where the BSA Essentials Core Services will be installed (not localhost).
[<server_hostname_or_IP]:
```

13 Press Enter to accept the default hostname or IP address shown in the prompt.

The following prompt appears:

```
Parameter 13 of 14 (omcs.smtpHost)Please enter the hostname or IP address
of your SMTP mail server. [localhost]: smtp3.host.com
```

14 Press Enter to accept the default SMTP mail server name, or enter a new SMTP server name

The following prompt appears:

```
Parameter 14 of 14 (omcs.userImport) BSA Essentials has a feature where
users and user groups from your HP Server Automation System are imported.
Would you like to enable this feature? (y/n):
```

15 Type `y` if you would like to import your Server Automation users and groups from your previous SAR deployment, and then press Enter. (Type n if you do not want to import pre-existing SA users.)

The following prompt appears:

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

16 Type `y` and then press Enter.

17 The following output appears:

```
Interview complete.

Name of response file to write [/usr/tmp/oiresponse.omdb]:
The file /usr/tmp/oiresponse.omdb exists. Overwrite? (y/n):
```

18 Type y, and then press enter.

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

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

19 Type `y` and then press Enter.

The following prompt appears:

```
Applying SAR to BSAE inventory updates...
Welcome to the HP Installer.
Please select the components to upgrade.
1 ( ) BSA Essentials Core Services
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

20 To continue, type `a`, then press Enter.

The following prompt appears:

```
Welcome to the HP Installer.
Please select the components to upgrade.
1 (*) BSA Essentials Core Services
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

21 Type c and then press Enter.

The following output appears while the core is upgraded to BSA Essentials 2.0.

```
[Jan-27-2010 17:45:20] >>>>Installing bootstrap components.
[Jan-27-2010 17:45:24] >>>>Stopping Opsware components.

Applying SAR to BSAE inventory updates...
[Jan-27-2010 17:45:37] >>>>Upgrading component BSA Essentials Core
Services.
Ensuring all omdb server processes are stopped
Ensuring that omdb server is stopped
Archiving /etc/opt/opsware/omdb/omdb.properties to /var/opt/opsware/
install_opsware/config_file_archive...
NOTE:
 A data collection directory exists from a previous OMDB installation.
 The existing directory contents will be moved to /var/opt/opsware/omdb/
collect.previous.2010-01-27T174538.
 If existing data has been collected in this directory that still has not
 been processed, it should be manually copied back into the
 /var/opt/opsware/omdb/collect directory following completion of the
upgrade.
```

```
[Jan-27-2010 17:45:39] WARNING: OPSWomdb_dbinstaller with a different
version and release is installed. Removing.
[Jan-27-2010 17:45:41] WARNING: package OPSWomdb is not installed.
..
[Jan-27-2010 17:45:52] >>>>Installing component BSA Essentials Core
Services
..............
[Jan-27-2010 18:04:48] HP Installer ran successfully.



For more details, please see the following file:
/var/log/opsware/install_opsware/
upgrade_opsware.2010-01-27.17:42:40_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.
######################################################################

Removing directory /var/tmp/oitmp ...
Script done, file is /var/log/opsware/install_opsware/
upgrade_opsware.2010-01-27.17:42:40.log
```

22 You have now finished upgrading to BSA Essentials 2.0 for a single server deployment.

Upgrading the SAR to BSA Essentials — Dual Server Installation

This section describes how to upgrade a pre-existing SAR core when the SAR Core Services and the SAR database were installed on separate servers:

- SAR Database — Server A
- SAR Core Services — Server B

In order to upgrade SAR to BSA Essentials on a dual server installation, you need to perform the following tasks:

- Upgrading the SAR Database Server to BSA Essentials — Server A
- Upgrading Core Server Preparation — Server B

Before you begin this type of upgrade, make sure you have a copy of 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`.

Upgrading the SAR Database Server to BSA Essentials — Server A

To upgrade SAR to BSA Essentials, you first need to upgrade the SAR Database component what was installed on Server A:

1. Shut down all data miners associated with the SAR Core. (See Starting or Stopping a Data Miner on page 99 for more information.)
2. On the SAR database server, log in as root.
3. Start the BSA Essentials installer from the BSA Essentials media using the following command:

   ```
   /<mnt_point>/opsware_installer/upgrade_opsware.sh -r /var/tmp/
   oiresponse.omdb
   ```

   The following prompt appears:

   ```
   Install Type: "BSA Essentials Database 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 HP 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 HP Installer will perform
a final validation check and write out a response file that will be
used to install the components.
```

5 Parameter 1 of 5 (decrypt_passwd)Please enter the password for the cryptographic material [crypto]:

6 Press Enter to accept the default value from the previous installation response file.

The following prompt appears:

```
Parameter 2 of 5 (omdb.oracleHost)Please enter the hostname of the server
where the Oracle RDBMS will be installed. [localhost]:
```

7 Press Enter to accept the default value of the Oracle hostname from the previous installation response file.

The following prompt appears:

```
Parameter 3 of 5 (omdb.oraclePort)Please enter the port on which the Oracle
database instance for BSA Essentials will listen. [1521]:
```

8 Press Enter to accept the default value of the Oracle database port number from the previous installation response file.

The following prompt appears:

```
Parameter 4 of 5 (omdb.oracleSid)Please enter the SID for the BSA
Essentials Oracle database instance. [cmdb]:
```

9 Press Enter to accept the default value of the Oracle SID from the previous installation response file.

The following prompt appears:

```
Parameter 5 of 5 (omdb.adminPwd)Please enter the password to use for the
BSA Essentials database administrator. [cmdb_admin]:
```

10 Press Enter to accept the default value of the SAR database administrator from the previous installation response file.

The following prompt appears:

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

11 Type `y` and then press Enter.

12 The following output appears:

```
Concluding interview.

Interview complete.

Name of response file to write [/usr/tmp/oiresponse.omdb_db]:
The file /usr/tmp/oiresponse.omdb_db exists. Overwrite? (y/n):
```

13 Type `y` and then press Enter.

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

14 Type `y` and then press Enter.

The following prompt appears:

```
Applying SAR to BSAE inventory updates...
Welcome to the HP Installer.
Please select the components to upgrade.
1 ( ) BSA Essentials Database Instance
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

15 To continue, type `a`, then press Enter.

The following prompt appears:

```
Welcome to the HP Installer.
Please select the components to upgrade.
1 (*) BSA Essentials Database Instance
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

16 Type c and then press Enter.

The following output appears while the database is upgraded to BSA Essentials 2.0.

```
Jan-22-2010 19:00:46] >>>>Installing bootstrap components.
[Jan-22-2010 19:00:52] >>>>Stopping Opsware components.
.....................................................................
.....................................................
Applying SAR to BSAE inventory updates...
['opsware_utilities']
['opsware_installer_inst', 'DMRX_compat_symlinks']
[Jan-22-2010 19:08:24] >>>>Upgrading component BSA Essentials Database
Instance.
............
[Jan-22-2010 19:09:12] >>>>Installing component BSA Essentials Database
Instance
.....................................................................
.....................................
[Jan-22-2010 19:15:13] HP Installer ran successfully.

For more details, please see the following file:
/var/log/opsware/install_opsware/
upgrade_opsware.2010-01-22.19:00:13_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.
#####################################################################

Removing directory /var/tmp/oitmp ...
```

```
Script done, file is /var/log/opsware/install_opsware/
upgrade_opsware.2010-01-22.19:00:13.log
```

17 When the database component is upgraded, you need to next run the install script to your installation with the BSA Essentials 2.0 database component on the core server.

Upgrading Core Server Preparation — Server B

In this upgrade task, you will run the BSA Essentials Database installation script in the non-interview mode where you previously installed the the SAR core server (Server B).

Before you run the upgrade script, make sure you have a copy of 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`.

To install the BSA Essentials Database component on the core server, perform the following steps:

1 Log in to the server you want to install the BSA Essentials Database Services on.

2 Before you begin the upgrade script, remove the following file on the server:

```
/etc/oratab file
```

3 Next, mount the SAR 7.5 installation media Disc 1 using a command similar to `mount /dev/cdrom` as appropriate.

4 Start the database installer from Disc 1 using the following command:

```
/<mnt_point>/install_opsware.sh -r /var/tmp/oiresponse.omdb
```

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

The following prompt appears:

```
Welcome to the HP Installer.
Please select the components to install.
1 ( ) Oracle RDBMS for BSA Essentials
2 ( ) BSA Essentials Database Instance
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

5 Type a, and then press Enter.

The following output appears:

```
Welcome to the Opsware Installer.
Please select the components to install.
1 (*) Oracle RDBMS for OMDB
2 (*) 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.
```

6 Type `c` and then press Enter.

7 The following message is displayed as the database is installed:

```
Installation prerequisite checking
```

```
Processing on Linux/4AS-X86_64 using /mnt/emc-cary/distributions/gray.c/
opsware_34.c.2868.0-omdb/disk001/opsware_installer/tools/
Linux_oracle_rqmts.conf
    Checking 'required' packages for Linux/4AS-X86_64
    Checking 'required' patches for LINUX/4AS-X86_64
    Checking 'recommended' packages for LINUX/4AS-X86_64
    Checking 'absent' packages for LINUX/4AS-X86_64
[Jan-22-2010 20:01:21] >>>>Installing preliminary components

[Jan-22-2010 20:01:29] >>>>Installing component Oracle RDBMS for OMDB
.........................................
[Jan-22-2010 20:03:41] >>>>Installing component Opsware OMDB Database
Instance
.............
[Jan-22-2010 20:04:32] WARNING: package OPSWomdb_dbinstaller is already
installed, but not listed in the inventory.
.....................................................................
.........................................
[Jan-22-2010 20:10:38] Opsware Installer ran successfully.



For more details, please see the following file:
/var/log/opsware/install_opsware/
install_opsware.2010-01-22.20:01:09_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.
#####################################################################

Removing directory /var/tmp/oitmp ...
Script done, file is /var/log/opsware/install_opsware/
install_opsware.2010-01-22.20:01:09.log
```

8 When the installation is finished, you are now ready to upgrade the Database component on the core server (Server B).

Upgrading SAR Core with BSA Essentials Database Component — Server B

In this task, you will run the BSA Essentials Database upgrade script on the core server (Server B).

Before you run the upgrade script, make sure you have a copy of 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`.

To upgrade SAR to BSA Essentials 2.0, you will first need to perform the following steps on the server where you previously installed the SAR Database core component (Server B):

1. Shut down all data miners associated with the SAR Core. (See Starting or Stopping a Data Miner on page 99 for more information.)
2. On the SAR core server, log in as root.
3. Start the BSA Essentials Database upgrader from Disc 1 using the following command:

   ```
   /<mnt_point>/opsware_installer/upgrade_opsware.sh -r /var/tmp/
   oiresponse.omdb --interview
   ```

   The following prompt appears:

   ```
   Install Type: "BSA Essentials Database 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 HP 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 HP Installer will perform
   a final validation check and write out a response file that will be
   used to install the components.

   Parameter 1 of 5 (decrypt_passwd) Please enter the password for the
   cryptographic material [crypto]:
   ```

5. Press Enter to accept the default value from the previous installation response file.

   The following prompt appears:

   ```
   Parameter 2 of 5 (omdb.oracleHost) Please enter the hostname of the server
   where the Oracle RDBMS will be installed. [localhost]:
   ```

6. Type the value localhost and then press Enter.

   The following prompt appears:

   ```
   Parameter 3 of 5 (omdb.oraclePort) Please enter the port on which the
   Oracle database instance for BSA Essentials will listen. [1521]:
   ```

7. Press Enter to accept the default value of the Oracle database port number from the previous installation response file.

The following prompt appears:

```
Parameter 4 of 5 (omdb.oracleSid)Please enter the SID for the BSA
Essentials Oracle database instance. [cmdb]:
```

8 Press Enter to accept the default value of the Oracle SID from the previous installation response file.

The following prompt appears:

```
Parameter 5 of 5 (omdb.adminPwd)Please enter the password to use for the
BSA Essentials database administrator. [cmdb_admin]:
```

9 Press Enter to accept the default value of the SAR database administrator from the previous installation response file.

The following prompt appears:

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

10 Type `y` and then press Enter.

11 The following output appears:

```
Concluding interview.

Interview complete.

Name of response file to write [/usr/tmp/oiresponse.omdb_db]:
The file /usr/tmp/oiresponse.omdb_db exists. Overwrite? (y/n):
```

12 Type `y` and then press Enter.

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

13 Type `y` and then press Enter.

The following prompt appears:

```
Applying SAR to BSAE inventory updates...
Welcome to the HP Installer.
Please select the components to upgrade.
1 ( ) BSA Essentials Database Instance
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

14 To continue, type `a`, then press Enter.

The following prompt appears:

```
Welcome to the HP Installer.
Please select the components to upgrade.
1 (*) BSA Essentials Database Instance
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

15 Type c and then press Enter.

The following output appears while the database is upgraded to BSA Essentials 2.0.

```
Jan-22-2010 19:00:46] >>>>Installing bootstrap components.
[Jan-22-2010 19:00:52] >>>>Stopping Opsware components.
```

```
.....................................................................
.....................................................
Applying SAR to BSAE inventory updates...
['opsware_utilities']
['opsware_installer_inst', 'DMRX_compat_symlinks']
[Jan-22-2010 19:08:24] >>>>Upgrading component BSA Essentials Database
Instance.
............
[Jan-22-2010 19:09:12] >>>>Installing component BSA Essentials Database
Instance
.....................................................................
.......................................
[Jan-22-2010 19:15:13] HP Installer ran successfully.

For more details, please see the following file:
/var/log/opsware/install_opsware/
upgrade_opsware.2010-01-22.19:00:13_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.
#####################################################################

Removing directory /var/tmp/oitmp ...
Script done, file is /var/log/opsware/install_opsware/
upgrade_opsware.2010-01-22.19:00:13.log
```

16 When the database component is upgraded, you need to next run the install script to your installation with the BSA Essentials 2.0 BusinessObjects component on the core server. You will use the response file created during the database upgrade in this task, `/var/tmp/oiresponse.omdb`.

Post-Upgrade Configuration — Server B

1 Log in to the BSA Essentials Core server (Server B).

2 Change your user to become the Oracle user on the server.

3 Using a text editor, edit the `tnsnames.ora` file, set `HOST` to be the hostname of the server where you upgraded the BSA Essentials Database (Server A).

4 Next, edit the BSA Essentials Database upgrade response file (`/var/tmp/oiresponse.omdb`) and the set `%omdb.oracleHost` to be the hostname of the server where you upgraded the BSA Essentials Database (Server A).

5 Next, using a text editor, open the following file:

`/etc/opt/opsware/omdb/omdb.properties`

6 Change the value of `com.opsware.cmdb.interview.omdb.oracleHost` value from "`localhost`" to the hostname of the server where you installed the BSA Essentials Database.

7 Save and close the file.

Upgrading SAR Core with BSA Essentials BusinessObjects Component — Server B

In this task, you will run the BSA Essentials BusinessObjects upgrade script on the core server (Server B).

Before you run the install script, make sure you have a copy of 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`.

To upgrade your SAR core to the BSA Essentials BusinessObjects component, perform the following steps:

1 Start the BSA Essentials BusinessObjects upgrader from Disc 2 of the installation media using the following command:

```
/<mnt_point>/opsware_installer/upgrade_opsware.sh -r /var/tmp/
oiresponse.omdb --interview
```

The following prompt appears:

```
Install Type: "BSA Essentials Business Objects 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:
```

2 To select the Simple Interview mode, type `1`, then press Enter. The following prompt appears:

```
The HP 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 HP Installer will perform
a final validation check and write out a response file that will be
```

```
used to install the components.

Parameter 1 of 6 (decrypt_passwd)Please enter the password for the
cryptographic material [crypto]:
```

3 Press Enter to accept the default value of `crypto` from the previous installation response file.

The following prompt appears:

```
Parameter 2 of 6 (omdb.oracleHost)Please enter the hostname of the server
where the Oracle RDBMS will be installed. [localhost]:
```

4 Press Enter to accept the default value of the Oracle hostname from the previous installation response file.

The following prompt appears:

```
Parameter 3 of 6 (omdb.oraclePort)Please enter the port on which the Oracle
database instance for BSA Essentials will listen. [1521]:
```

5 Press Enter to accept the default value of the Oracle database port number from the previous installation response file.

The following prompt appears:

```
Parameter 4 of 6 (omdb.oracleSid)Please enter the SID for the BSA
Essentials Oracle database instance. [cmdb]:
```

6 Type the hostname of the server where you upgraded the BSA Essentials Database (Server A), and then press Enter.

The following prompt appears:

```
Parameter 5 of 6 (omcs.host)Please enter the hostname or IP of the server
where the BSA Essentials Core Services will be installed (not localhost).:
```

7 Press Enter to accept the default Hostname or IP address where the previous SAR core was installed (or if the name changed, enter that name).

The following prompt appears

```
Parameter 6 of 6 (omdb.adminPwd)Please enter the password to use for the
BSA Essentials database administrator. [cmdb_admin]:
```

8 Press Enter to accept the default value of the SAR Database administrator from the previous installation response file.

The following prompt appears:

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

9 Type `y` and then press Enter.

10 The following output appears:

```
Concluding interview.

Interview complete.

Name of response file to write [/usr/tmp/oiresponse.omdb_bo]:
Response file written to /usr/tmp/oiresponse.omdb_bo.

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

11 Type `y` and then press Enter.

The following prompt appears:

```
Applying SAR to BSAE inventory updates...
Welcome to the HP Installer.
Please select the components to upgrade.
1 ( ) BSA Essentials Business Objects Installer
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

12 To continue, type `a`, then press Enter.

The following prompt appears:

```
Welcome to the HP Installer.
Please select the components to upgrade.
1 (*) BSA Essentials Business Objects Installer
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

13 Type c and then press Enter.

The following output appears while the database is upgraded to BSA Essentials 2.0.

```
[
[Jan-27-2010 16:33:06] >>>>Installing bootstrap components.
[Jan-27-2010 16:33:13] >>>>Stopping Opsware components.

Applying SAR to BSAE inventory updates...
[Jan-27-2010 16:33:29] >>>>Upgrading component BSA Essentials Business
Objects Installer.
[Jan-27-2010 16:33:32] >>>>Installing component BSA Essentials Business
Objects Installer
..............

[Jan-27-2010 17:40:24] HP Installer ran successfully.


For more details, please see the following file:
/var/log/opsware/install_opsware/
upgrade_opsware.2010-01-27.16:28:18_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.
######################################################################

Removing directory /var/tmp/oitmp ...
```

```
Script done, file is /var/log/opsware/install_opsware/
upgrade_opsware.2010-01-27.16:28:18.log
```

14 When the BusinessObjects component is upgraded, you need to perform a few configuration tasks. Then, you need to run the upgrade script that will update your installation with the BSA Essentials Core Services component, using the response file created during this upgrade.

Upgrading SAR Core Server to BSA Essentials — Server B

This section describes how to upgrade a SAR core server with BSA Essentials Core for a dual server installation.

Before you run the install script, make sure you have a copy of 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`.

In this task, you will upgrade the SAR Core server to BSA Essentials Core Services using the response file generated during the previous BusinessObjects upgrade.

1 Start the BSA Essentials Core Services Upgrader from Disc 3 of the installation media using the following command:

```
/<mnt_point>/opsware_installer/upgrade_opsware.sh -r /var/tmp/
oiresponse.omdb --interview
```

The following prompt appears:

```
Install Type: "BSA Essentials 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:
```

2 To select the Simple Interview mode, type `1`, then press Enter. The following prompt appears:

```
The HP 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 HP Installer will perform
a final validation check and write out a response file that will be
used to install the components.
```

```
Parameter 1 of 14 (truth.oaPwd)Please enter the password for the
opsware_admin user. This is the password used to connect to the Oracle
database.: opsware_admin
```

3 Press Enter to accept the default value of `opsware_admin`.

The following prompt appears:

```
Parameter 2 of 14 (decrypt_passwd)Please enter the password for the
cryptographic material [crypto]:
```

4 Press Enter to accept the default value of `crypto` from the previous installation response file.

The following prompt appears:

```
Parameter 3 of 14 (truth.dcNm)Please enter the short name of the facility
where Opsware Installer is being run (no spaces) [DATACENTER1]:
```

5 Press Enter to accept the default value of the short name for where the installer is being run, `[DATACENTER1]`.

The following prompt appears:

```
Parameter 4 of 14 (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]:
```

6 Press Enter to accept the default value of the Model Repository service name used in your previous SAR deployment.

The following prompt appears:

```
Parameter 5 of 14 (omdb.oracleHost)Please enter the hostname of the server
where the Oracle RDBMS will be installed. [localhost]:
```

7 Press Enter to accept the default value of the Oracle hostname from the previous installation.

The following prompt appears:

```
Parameter 6 of 14 (omdb.oraclePort)Please enter the port on which the
Oracle database instance for BSA Essentials will listen. [1521]:
```

8 Press Enter to accept the default value of the Oracle database port number from the previous installation.

The following prompt appears:

```
Parameter 7 of 14 (omdb.oracleSid)Please enter the SID for the BSA
Essentials Oracle database instance. [cmdb]:
```

9 Press Enter to accept the default value of the Oracle SID from the previous installation response file.

The following prompt appears:

```
Parameter 8 of 14 (omcs.occHost)Please enter the hostname or IP of the
server where the SAS OCC service is running.:
```

10 Press Enter to accept the default hostname or IP where the SAR server's OCC service was running.

The following prompt appears:

```
Parameter 9 of 14 (omcs.twistUser)Please enter the username of a SAS
administrator for BSA Essentials to use to connect to the twist. [admin]:
```

11 Press Enter to accept the default value of `[admin]`.

The following prompt appears:

```
Parameter 10 of 14 (omcs.twistPwd)Please enter the password for the SAS
admin user for BSA Essentials to use to connect to the twist.:
opsware_admin
```

12 Press Enter to accept the default admin password.

The following prompt appears:

```
Parameter 11 of 14 (omcs.host)Please enter the hostname or IP of the server
where the BSA Essentials Core Services will be installed (not localhost).
[<server_hostname_or_IP]:
```

13 Press Enter to accept the default hostname or IP address shown in the prompt.

The following prompt appears:

```
Parameter 12 of 14 (omdb.adminPwd)Please enter the password to use for the
BSA Essentials database administrator. [admin_password]:
```

14 Type the password for the BSA Essentials database administrator, and then press Enter.

The following prompt appears:

```
Parameter 13 of 14 (omcs.smtpHost)Please enter the hostname or IP address
of your SMTP mail server. [localhost]: smtp3.host.com
```

15 Press Enter to accept the default SMTP mail server name, or enter a new SMTP server name

The following prompt appears:

```
Parameter 14 of 14 (omcs.userImport) BSA Essentials has a feature where
users and user groups from your HP Server Automation System are imported.
Would you like to enable this feature? (y/n):
```

16 Type `y` if you would like to import your Server Automation users and groups from your previous SAR deployment, and then press Enter. (Type n if you do not want to import pre-existing SA users.)

The following prompt appears:

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

17 Type `y` and then press Enter.

18 The following output appears:

```
Interview complete.

Name of response file to write [/usr/tmp/oiresponse.omdb]:
The file /usr/tmp/oiresponse.omdb exists. Overwrite? (y/n):
```

19 Type y, and then press enter.

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

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

20 Type `y` and then press Enter.

The following prompt appears:

```
Applying SAR to BSAE inventory updates...
Welcome to the HP Installer.
Please select the components to upgrade.
1 ( ) BSA Essentials Core Services
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

21 To continue, type `a`, then press Enter.

The following prompt appears:

```
Welcome to the HP Installer.
Please select the components to upgrade.
1 (*) BSA Essentials Core Services
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

22 Type c and then press Enter.

The following output appears while the core is upgraded to BSA Essentials 2.0.

```
[Jan-27-2010 17:45:20] >>>>Installing bootstrap components.
[Jan-27-2010 17:45:24] >>>>Stopping Opsware components.

Applying SAR to BSAE inventory updates...
[Jan-27-2010 17:45:37] >>>>Upgrading component BSA Essentials Core
Services.
Ensuring all omdb server processes are stopped
Ensuring that omdb server is stopped
Archiving /etc/opt/opsware/omdb/omdb.properties to /var/opt/opsware/
install_opsware/config_file_archive...
NOTE:
 A data collection directory exists from a previous OMDB installation.
 The existing directory contents will be moved to /var/opt/opsware/omdb/
collect.previous.2010-01-27T174538.
 If existing data has been collected in this directory that still has not
 been processed, it should be manually copied back into the
 /var/opt/opsware/omdb/collect directory following completion of the
upgrade.

[Jan-27-2010 17:45:39] WARNING: OPSWomdb_dbinstaller with a different
version and release is installed. Removing.
[Jan-27-2010 17:45:41] WARNING: package OPSWomdb is not installed.
..
[Jan-27-2010 17:45:52] >>>>Installing component BSA Essentials Core
Services
.............
[Jan-27-2010 18:04:48] HP Installer ran successfully.



For more details, please see the following file:
```

```
/var/log/opsware/install_opsware/
upgrade_opsware.2010-01-27.17:42:40_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.
######################################################################

Removing directory /var/tmp/oitmp ...
Script done, file is /var/log/opsware/install_opsware/
upgrade_opsware.2010-01-27.17:42:40.log
```

23 You have now finished upgrading to BSA Essentials 2.0 for a dual server deployment.

Post-Upgrade Task — Server B

1 Open the BSA Essentials Core server (Server B) response file `/var/tmp/oiresponse.omdb` and get the values for the following parameters:

```
%omcs.twistPwd
%omdb.reporterPwd
%omcs.host
%omdb.oracleHost
%omdb.oraclePort
%omdb.oracleSid
```

2 Open the `/etc/opt/opsware/omdb/omdb.properties` file with a text editor.

3 Use the values determined from step 1 to verify and update the corresponding fields in the omdb.properties file. For the `omdb.adminPwd` field, use the value of the `%omcs.twistPwd` from step 1. For example:

```
com.opsware.cmdb.interview.omdb.adminPwd
com.opsware.cmdb.interview.omdb.reporterPwd
com.opsware.cmdb.interview.omcs.host
com.opsware.cmdb.interview.omdb.oracleHost
com.opsware.cmdb.interview.omdb.oraclePort
com.opsware.cmdb.interview.omdb.oracleSid
```

4 Execute the following script:

```
/opt/opsware/omdb/components/bsae-universe-post.sh script.
```

5 Remove the password values that were entered into the `/etc/opt/opsware/omdb/omdb.properties` file for the `omdb.reporterPwd` and the `omdb.adminPwd` fields.

Post-Upgrade Task — Server A

1 Log in to the BSA Essentials Database server (Server A) as the root user.

2 Set the environment variable for ORACLE_SID, using the value for `%omdb.oracleSid` from the `/var/tmp/oiresponse.omdb_db` file on Server A. How you set this environment variable depends on the type of shell you are using.

For example, if you logged in to Server A with a bash shell, then you would export the following value:

```
export ORACLE_SID=<sid_value>
```

If you are using a korn shell:

```
ORACLE_SID=<sid_value>
export ORACLE_SID
```

If you are using a C shell:

```
setenv ORACLE_SID=<sid_value>
```

3 Next, change directory to the following path:

```
/opt/opsware/omdb/bin/upgrade
```

4 Execute the post deploy upgrade script-

```
./postDeploy_Upgrade.sh
```

The following prompt appears:

```
What is the ORACLE_HOME created during the installation? default [/u01/
app/oracle/product/10.2.0/db_1]
```

5 Press Enter to continue.

Migrating SA User Group Permissions

If you already have imported users and groups from Server Automation (SA), you need to also import the permissions assigned to each group. When you import SA user group permissions, all reporting permissions assigned to the group are imported.

Specifically, data access permissions assigned to groups are imported, so you can be sure your pre-existing users retain their reporting permissions.

1 Log in to the core server.

2 Change your user to become the super user on the server:

```
su - omdb
```

3 Change directories to the following location:

```
cd /opt/opsware/omdb/contrib
```

4 If your core is running on Solaris, add `/usr/ucb` to your path. For example:

```
export PATH=$PATH:/usr/ucb/
```

5 Run the following command:

```
./extend_omdb_env.sh
```

6 Exit the connection

7 Reconnect to the core server.

8 Change your user to become the super user on the server:

```
su - omdb
```

9 Change directories to the following location:

```
cd /opt/opsware/omdb/contrib
```

10 Make a new directory for the migrated group permissions, such as:

```
mkdir sar_migration
```

11 Copy the following package to the new directory:

```
cp sar_aaa_migrate.tar.gz sar_migration
```

12 Change directories to the following location: cd sar_migration

13 Unzip and untar the package:

```
gunzip sar_aaa_migrate.tar.gz | tar -xvf sar_aaa_migrate.tar
```

14 Change permissions on the unzipped script to you can execute it:

```
chmod +x sar_data_migration.sh
```

15 If your core is running on Solaris, add /usr/ucb to your path. For example:

```
export PATH=$PATH:/usr/ucb/
```

16 Execute the migration script:

```
run ./sar_data_migration.sh
```

Upgrading Data Miners

This section describes how to upgrade the data miners associated with the BSA Essentials core server. You must upgrade the BSA Essentials Core server before upgrading the data miners associated with that BSA Essentials 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 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 where the data miner is installed.

2 Stop the data miner by performing the steps in Stopping a Data Miner From the Solaris or Linux Command Line on page 99.

3 Copy `dataminer-upgrade.tar` from `/opt/opsware/omdb/dist` on the BSA Essentials 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 Data Miners on page 98 and Unregistering a Data Miner on page 98.

9 Restart the BSA Essentials 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 where the data miner is installed.

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 BSA Essentials server to a local directory such as `C:\dataminer`.

4 Unzip the file.

5 Start the data miner by performing the steps in Listing Data Miners on page 98 and Unregistering a Data Miner on page 98.

Upgrading NA Data Miners

This section describes how to upgrade the NA data miners and Transaction Mining Triggers associated with the BSA Essentials Core server. You must upgrade the BSA Essentials Core server before upgrading the data miners associated with that BSA Essentials 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 where the data miner is installed.

3 Stop the data miner by performing the steps in Stopping a Data Miner From the Solaris or Linux Command Line on page 99.

4 Copy `dataminer-upgrade.tar` from `/opt/opsware/omdb/dist` on the BSA Essentials 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 Data Miners on page 98 and Unregistering a Data Miner on page 98.

15 Restart the BSA Essentials 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 where the data miner is installed.
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 99.
9. Restart the BSA Essentials 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 88.

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 where the data miner is installed.
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 99.

7 Restart the BSA Essentials Core server.

8 Restart the NA application.

Post-Upgrade Task for Configuring Live Content

Perform this task after a BSA Essentials upgrade to re-enable the live content via HP Live Network connector (LNc). This task assumes that the SAR server being upgraded has an existing LNc installation. If that is not the case, see the Setting Up Live Content Uploads on a BSA Essentials Server on page 71 for more information on how to configure LNc for the first time.

1 As root, run the LNc application for it to self upgrade to the latest version by executing the following command:

```
/<lnc_install_location>/lnc/bin/live-network-connector
```

2 Verify that the LNc version is at least 3.0 by executing the following command:

```
/<lnc_install_location>/lnc/bin/live-network-connector --version
```

3 If this is an update of an existing SAR deployment, switch the product from 'sar' to 'bsae' by executing the following command:

```
/<lnc_install_location>/lnc/bin/live-network-connector write-config -p
bsae
```

4 Verify that the correct content steams are still enabled in the LNc configuration file by executing the following command:

```
/<lnc_install_location>/lnc/bin/live-network-connector --read-config
```

To set or to confirm current content subscriptions, please consult the HP Live Network connector Installation and Configuration Guide.

---

5 As root, re-run the LNc application with the `--reload` option

```
/<lnc_install_location>/lnc/bin/live-network-connector --reload
```

6 Confirm that the command exited successfully by executing the following command:

```
echo $?
```

(If it does not, please follow the instructions in the HP Live Network connector Installation and Configuration Guide.

Non-zero indicates failure. If non-zero, then inspect the LNc log file for errors:

```
/<lnc_install_location>/lnc/log/live-network-connector.log
```

8 Migrating BSA Essentials Architecture

You can migrate BSA Essentials 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 BSA Essentials is not the same as *upgrading* BSA Essentials. The version of BSA Essentials that you start these steps with is the version of BSA Essentials that you have when you complete the steps. For upgrading instructions, see Upgrading SAR to BSA Essentials on page 107.

The architecture and BSA Essentials versions supported for migration are:

- RHEL AS 32-bit to RHEL AS 64-bit: OMDB 1.0.2, OMDB 7.0, SAR 7.50 and 7.80.
- Solaris 9 to Solaris 10: OMDB 1.0.2, OMDB 7.0, SAR 7.50 and 7.80.

This chapter uses the official product name of this release, BSA Essentials. If you are migrating architecture for a pre-BSA Essentials 2.0 version of the product — such as SAR or OMDB — the instructions apply to those products as well.

Migration Requirements

Before you begin migrating BSA Essentials architecture, you will need the following:

- The response file from the most recent installation or upgrade. The default location and file name of the BSA Essentials response file is `/var/tmp/oiresponse.omdb`.
- The location of all data miners associated with the BSA Essentials core.
- The current size of the contents of the `/var/opt/opsware/omdb/collect` directory. You can run the following command on the BSA Essentials database server:

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

  to report this value.
- The size of the BSA Essentials database exported files. See Estimating SAR Database Export Size.

Estimating SAR Database Export Size

To estimate the size of the BSA Essentials database export, you can enter the following command on the BSA Essentials 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 BSA Essentials 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 BSA Essentials 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 Installation

To migrate BSA Essentials architecture when the BSA Essentials core and the database were installed on the same server, you need to perform the following task:

1. Preparing the BSA Essentials Server For Migration
2. Configuring the New Architecture
3. Restoring the BSA Essentials Files to the New Architecture

Preparing the BSA Essentials Server For Migration

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

1. Shut down all data miners associated with the BSA Essentials core.
2. On the BSA Essentials server, log in as root.
3. To shut down the BSA Essentials 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 BSA Essentials 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 BSA Essentials 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 BSA Essentials 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 BSA Essentials database, enter the following command:

```
/var/tmp/omdb/migrate/bin/export-omdb.sh
```

12 To create the BSA Essentials backup files, enter the following command:

```
/var/tmp/omdb/migrate/bin/save-to-migrate.sh
```

Configuring the New Architecture

Whether you are migrating BSA Essentials 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 3, “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 BSA Essentials core and database using the response file copied to `/var/tmp/omdb/migrate/oiresponse.omdb`.

4 After you install BSA Essentials on the new server, BSA Essentials starts at the end of the installation. To shut down the BSA Essentials core, enter the following command: `/etc/init.d/opsware-omdb stop`

The version of BSA Essentials installed on the new server must match the version of BSA Essentials you worked with in Preparing the BSA Essentials Server For Migration. If the versions of BSA Essentials are not the same, the migration will fail.

Restoring the BSA Essentials 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 BSA Essentials 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 BSA Essentials data from the migrated files to the new BSA Essentials database, enter the following command:

   ```
   /var/tmp/omdb/migrate/bin/import-omdb.sh
   ```
5. To start the BSA Essentials core, enter the following command:

   ```
   /etc/init.d/opsware-omdb start
   ```
6. Restart all Data Miners associated with the BSA Essentials Core.

Migrating the BSA Essentials Core Server

This section describes how to migrate the BSA Essentials Core Server when the BSA Essentials Core Server and the BSA Essentials Database Server are installed on separate platforms.

Preparing the BSA Essentials Core Server For Migration

To prepare the BSA Essentials Core Server and create the files needed to migrate the server, perform the following steps:

1. Shut down all Data Miners associated with the BSA Essentials Core.
2. On the BSA Essentials Core Server, log in as root.
3. To shut down the BSA Essentials 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 BSA Essentials 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 BSA Essentials 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 BSA Essentials 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 BSA Essentials installation or upgrade to the `/var/tmp/omdb/migrate` directory.

11 To create the BSA Essentials backup files, enter the following command:

```
/var/tmp/omdb/migrate/bin/save-to-migrate.sh
```

Configuring the New Architecture for the BSA Essentials Core Server

Whether you are migrating BSA Essentials 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 3, “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 BSA Essentials Core Server using the response file copied to `/var/tmp/omdb/migrate/oiresponse.omdb`.

4 After you install BSA Essentials on the new server, BSA Essentials starts at the end of the installation. To shut down the BSA Essentials core, enter the following command:

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

The version of BSA Essentials installed on the new server must match the version of BSA Essentials you worked with in Preparing the BSA Essentials Server For Migration. If the versions of BSA Essentials are not the same, the migration will fail.

Restoring the BSA Essentials Core Server Files to the New Architecture

To restore the migrated BSA Essentials Core Server files from the old architecture to the new architecture, perform the following steps:

1 On the BSA Essentials 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 BSA Essentials core, enter the following command:

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

5 Restart all Data Miners associated with the BSA Essentials Core.

Migrating Architecture for the BSA Essentials Database Server

This section describes how to migrate the BSA Essentials Database Server when the BSA Essentials Core Server and the BSA Essentials Database Server are installed on separate platforms.

Preparing the BSA Essentials Database Server For Migration

To prepare the BSA Essentials Database Server and create the files needed to migrate the server, perform the following steps:

1. Shut down all Data Miners associated with the BSA Essentials Core.
2. On the BSA Essentials Core Server, log in as root.
3. To shut down the BSA Essentials 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 BSA Essentials Database Server, log in as root.
5. Create a directory to store the BSA Essentials database export. See Estimating SAR Database Export Size on page 143. For these steps, the example directory is `/var/tmp/omdb/migrate`.
6. Mount the BSA Essentials install DVD using a command similar to `mount /dev/cdrom` as appropriate.
7. Change to the root directory of the drive.
8. To extract the BSA Essentials 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/oiresponse.omdb` file from the most recent BSA Essentials installation or upgrade to the `/var/tmp/omdb/migrate` directory.
12. To create an export of the BSA Essentials database, enter the following command:

    ```
    /var/tmp/omdb/migrate/bin/export-omdb.sh
    ```

Configuring the New Architecture

Whether you are migrating BSA Essentials 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 3, “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 BSA Essentials Database using the response file copied to `/var/tmp/omdb/migrate/oiresponse.omdb`.

The version of BSA Essentials installed on the new server must match the version of BSA Essentials you worked with in Preparing the BSA Essentials Server For Migration. If the versions of BSA Essentials are not the same, the migration will fail.

Restoring the BSA Essentials 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 BSA Essentials 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 BSA Essentials data from the migrated files to the new BSA Essentials database, enter the following command:

   ```
   /var/tmp/omdb/migrate/bin/import-omdb.sh
   ```
4. On the BSA Essentials Core Server, log in as root.
5. To start the BSA Essentials Core, enter the following command:

   ```
   /etc/init.d/opsware-omdb start
   ```
6. Restart all Data Miners associated with the BSA Essentials Core.

9 Uninstalling BSA Essentials

Uninstall Basics

This chapter describes how to uninstall a BSA Essentials server for the following installation paths:

- **Single Server**: Where the BSA Essentials BSA Essentials Core Services, BusinessObjects, and Database components were installed on the same server
- **Dual Server**: Where the BSA Essentials Core Services and BusinessObjects components on one server, and the BSA Essentials Database component on the separate servers
- **Customer-Supplied Oracle**: Installing BSA Essentials Core Services and BusinessObjects components to work with a customer-supplied Oracle database

Before you uninstall a BSA Essentials server, it is recommended that you back up the Oracle database for the BSA Essentials server.

The uninstall scripts are located on the three discs included in the BSA Essentials media:

- Disc 1: Contains the BSA Essentials Database component uninstall script
- Disc 2: Contains the BSA Essentials BusinessObjects uninstall script
- Disc 3: Contains the BSA Essentials Core Services uninstall script

Uninstalling a Single Server BSA Essentials Installation

To uninstall a BSA Essentials for a single server installation, perform the following steps:

- Stop and Unregister All Data Miners
- Shut Down the BSA Essentials Core
- Uninstall BSA Essentials Core Services
- Uninstall BSA Essentials Database Components
- Clean Up Directories and Restart the Server

Stop and Unregister All Data Miners

1. Log in to the BSA Essentials core server.
2. To determine what data sources are configured, change directories to:

   `/opt/opsware/omdb/bin`

3 Run the following command:

```
./dmconfig.sh --list
```

4 For each data source listed, go to the dataminer installation location on that data source and stop and unregister the dataminer by executing the following commands:

```
./dataminer.sh stop

./dmsetup.sh --unregister
```

5 Delete the contents of the Data Miner directory

6 Verify there are no stray dataminer process in memory by executing the following commands (depending upon your operating system):

```
ps -aef | grep dataminer (for Linux)

/usr/ucb/ps -auxww | grep dataminer (for Solaris10)
```

Shut Down the BSA Essentials Core

1 On the server where you want to uninstall BSA Essentials, shut down the following components:

2 Shut down the core services by executing this command:

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

3 Shut down the BusinessObjects component by executing the following command:

```
/etc/init.d/bsae-bo stop
```

4 Shutdown Tomcat by executing the following command:

```
/etc/init.d/bsae-tomcat stop
```

5 Shutdown the database component by executing the following command

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

Uninstall BSA Essentials Core Services

1 Log in to the server where you want to uninstall the BSA Essentials Core Services component.

2 Mount the BSA Essentials install media Disc 3 using a command similar to

```
mount /dev/cdrom <mnt_point> as appropriate.
```

3 Run the uninstall script while sourcing the previous oiresponse file that was used during the installation. The default is `oiresponse.omdb`. For example:

```
/<mnt_point>/opsware_installer/uninstall_opsware.sh -r /var/tmp/
oiresponse.omdb
```

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

---

4 The uninstall components prompt appears:

```
Welcome to the HP Installer.
```

```
Please select the components to uninstall.
1 ( ) BSA Essentials Core Services
2 ( ) Oracle RDBMS for BSA Essentials
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

5 Select 1, and then type c to continue. The following output appears

```
Welcome to the HP Installer.
Please select the components to uninstall.
1 (*) BSA Essentials Core Services
2 ( ) Oracle RDBMS for BSA Essentials
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

6 Select c to continue. The following output appears as the software is uninstalled:

```
[Feb-17-2010 16:04:06] >>>>Uninstalling component BSA Essentials Core
Services.
..
[Feb-17-2010 16:04:25] >>>>Uninstalling component BSA Essentials Client
Foundation.
[Feb-17-2010 16:04:26] >>>>Uninstalling component BSA Essentials Security
and Configuration Console X.
.................................
[Feb-17-2010 16:06:20] >>>>Uninstalling component BSA Essentials Universes
for Business Objects.
[Feb-17-2010 16:06:21] >>>>Uninstalling component BSA Essentials Business
Objects Installer.
..
[Feb-17-2010 16:06:36] HP Installer ran successfully.



For more details, please see the following file:
/var/log/opsware/install_opsware/
uninstall_opsware.2010-02-17.16:01:39_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.
############################################################
```

7 You are now ready to move to the next task of the uninstallation process.

Uninstall BSA Essentials Database Components

Next, you will uninstall the BSA Essentials database components by performing the following steps:

1. Log in to the server where you want to uninstall the BSA Essentials Core Services component.
2. Mount the BSA Essentials install media Disc 1 using a command similar to

   ```
   mount /dev/cdrom <mnt_point> as appropriate.
   ```

3. Run the uninstall script while sourcing the previous oiresponse file that was used during the installation. For example:

   ```
   /<mnt_point>/opsware_installer/uninstall_opsware.sh -r /var/tmp/
   oiresponse.omdb_db
   ```

4. The following prompt appears:

   ```
   Welcome to the HP Installer.
   Please select the components to uninstall.
   1 ( ) BSA Essentials Database Instance
   2 ( ) Oracle RDBMS for BSA Essentials
   Enter a component number to toggle ('a' for all, 'n' for none).
   When ready, press 'c' to continue, or 'q' to quit.
   ```

5. Type a to select both database components:

   ```
   Welcome to the HP Installer.
   Please select the components to uninstall.
   1 (*) BSA Essentials Database Instance
   2 (*) Oracle RDBMS for BSA Essentials
   Enter a component number to toggle ('a' for all, 'n' for none).
   When ready, press 'c' to continue, or 'q' to quit.
   ```

6. Type c to continue the uninstallation.

   ```
   [Feb-17-2010 16:20:13] >>>>Uninstalling component BSA Essentials Database
   Instance.
   [Feb-17-2010 16:20:14] WARNING: package OPSWomdb_dbinstaller is not
   installed.
   [Feb-17-2010 16:20:18] >>>>Uninstalling component Oracle RDBMS for BSA
   Essentials.
   ........................Would you like to preserve the database of
   cryptographic material? (y/n): n
   ..........
   [Feb-17-2010 16:23:03] HP Installer ran successfully.



   For more details, please see the following file:
   /var/log/opsware/install_opsware/
   uninstall_opsware.2010-02-17.16:17:33_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.
############################################################
```

7 The database components have been uninstalled. Next, you will need to delete a few directories for good house keeping and restart the server.

Clean Up Directories and Restart the Server

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.

1 On the BSA Essentials Core server, delete the following files to clean up the install directories:

```
rm -rf /var/opt/opsware/ /var/opt/oracle/ /var/log/opsware/ /etc/opt/
opsware/ /opt/opsware/ /var/tmp/oitmp/ /etc/oratab* /u0*
```

2 Restart the server (this cleans out any orphaned BSA Essentials processes).

Uninstalling a Dual Server BSA Essentials Installation

This section shows you how to uninstall BSA Essentials that was installed in a dual server deployment, — where the BSA Essentials Database component was installed on a separate server (Server A) and the BSA Essentials BSA Essentials Core Services and BusinessObjects components were installed on separate serve (Server B).

To uninstall a BSA Essentials dual server deployment, perform the following tasks:

- Stop and Unregister All Data Miners
- Shut Down the BSA Essentials Core — Server B
- Shutdown the BSA Essentials Database — Server A
- Uninstall the BSA Essentials Core Services — Server B
- Uninstall BSA Essentials Database — Server B
- Uninstall BSA Essentials Database — Server A
- Clean Up Directories and Restart Both Servers

Stop and Unregister All Data Miners

1 Log in to the BSA Essentials Core server (Server B).

2 To determine what data sources are configured, change directories to:

```
/opt/opsware/omdb/bin
```

3 Run the following command:

```
./dmconfig.sh --list
```

4 For each data source listed, go to the dataminer installation location on that data source and stop and unregister the dataminer by executing the following commands:

```
./dataminer.sh stop

./dmsetup.sh --unregister
```

5 Delete the contents of the Data Miner directory

6 Verify there are no stray dataminer process in memory by executing the following commands (depending upon your operating system):

```
ps -aef | grep dataminer (for Linux)

/usr/ucb/ps -auxww | grep dataminer (for Solaris10)
```

Shut Down the BSA Essentials Core — Server B

On server B, where you installed the BSA Essentials Core Services, shut down the following components:

7 Shut down the core services by executing this command:

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

8 Shut down the BusinessObjects component by executing the following command:

```
/etc/init.d/bsae-bo stop
```

9 Shutdown Tomcat by executing the following command:

```
/etc/init.d/bsae-tomcat stop
```

10 Shutdown the database component by executing the following command

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

Shutdown the BSA Essentials Database — Server A

1 Shutdown the BSA Essentials Database component on Server A by executing the following command:

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

Uninstall the BSA Essentials Core Services — Server B

1 Log in to Server B where you want to uninstall the BSA Essentials Core Services component.

2 Mount the BSA Essentials install media Disc 3 using a command similar to

```
mount /dev/cdrom <mnt_point> as appropriate.
```

3 Run the uninstall script while sourcing the previous oiresponse file that was used during the installation. The default is `oiresponse.omdb`. For example:

```
/<mnt_point>/opsware_installer/uninstall_opsware.sh -r /var/tmp/
oiresponse.omdb
```

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

4 The uninstall components prompt appears:

```
Welcome to the HP Installer.
Please select the components to uninstall.
1 ( ) BSA Essentials Core Services
2 ( ) Oracle RDBMS for BSA Essentials
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

5 Select 1, and then type c to continue. The following output appears

```
Welcome to the HP Installer.
Please select the components to uninstall.
1 (*) BSA Essentials Core Services
2 ( ) Oracle RDBMS for BSA Essentials
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

6 Select c to continue. The following output appears as the software is uninstalled:

```
[Feb-17-2010 16:04:06] >>>>Uninstalling component BSA Essentials Core
Services.
..
[Feb-17-2010 16:04:25] >>>>Uninstalling component BSA Essentials Client
Foundation.
[Feb-17-2010 16:04:26] >>>>Uninstalling component BSA Essentials Security
and Configuration Console X.
.................................
[Feb-17-2010 16:06:20] >>>>Uninstalling component BSA Essentials Universes
for Business Objects.
[Feb-17-2010 16:06:21] >>>>Uninstalling component BSA Essentials Business
Objects Installer.
..
[Feb-17-2010 16:06:36] HP Installer ran successfully.



For more details, please see the following file:
/var/log/opsware/install_opsware/
uninstall_opsware.2010-02-17.16:01:39_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.
############################################################
```

7 After the uninstall has completed, remove the `/var/opt/opsware/install_opsware` directory.

Uninstall BSA Essentials Database — Server B

Next, you will uninstall the BSA Essentials database components on Server B by performing the following steps:

1. Log in to the server where you want to uinstall the BSA Essentials Core Services component.
2. Mount the BSA Essentials install media Disc 1 using a command similar to

   ```
   mount /dev/cdrom <mnt_point> as appropriate.
   ```

3. Run the uninstall script while sourcing the previous oiresponse file that was used during the installation. For example:

   ```
   /<mnt_point>/opsware_installer/uninstall_opsware.sh -r /var/tmp/
   oiresponse.omdb_db
   ```

4. The following prompt appears:

   ```
   Welcome to the HP Installer.
   Please select the components to uninstall.
   1 ( ) BSA Essentials Database Instance
   2 ( ) Oracle RDBMS for BSA Essentials
   Enter a component number to toggle ('a' for all, 'n' for none).
   When ready, press 'c' to continue, or 'q' to quit.
   ```

5. Type a to select both database components:

   ```
   Welcome to the HP Installer.
   Please select the components to uninstall.
   1 (*) BSA Essentials Database Instance
   2 (*) Oracle RDBMS for BSA Essentials
   Enter a component number to toggle ('a' for all, 'n' for none).
   When ready, press 'c' to continue, or 'q' to quit.
   ```

6. Type c to continue the uninstallation.

   ```
   [Feb-17-2010 16:20:13] >>>>Uninstalling component BSA Essentials Database
   Instance.
   [Feb-17-2010 16:20:14] WARNING: package OPSWomdb_dbinstaller is not
   installed.
   [Feb-17-2010 16:20:18] >>>>Uninstalling component Oracle RDBMS for BSA
   Essentials.
   ........................Would you like to preserve the database of
   cryptographic material? (y/n): n
   ..........
   [Feb-17-2010 16:23:03] HP Installer ran successfully.



   For more details, please see the following file:
   /var/log/opsware/install_opsware/
   uninstall_opsware.2010-02-17.16:17:33_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.
############################################################
```

7 The database components have been uninstalled on Server B.

Uninstall BSA Essentials Database — Server A

Next, you will uninstall the BSA Essentials database components on Server A by performing the following steps:

1 Log in to the server where you want to uinstall the BSA Essentials Core Services component.

2 Mount the BSA Essentials install media Disc 1 using a command similar to

```
mount /dev/cdrom <mnt_point> as appropriate.
```

3 Run the uninstall script while sourcing the previous oiresponse file that was used during the installation. The default is `oiresponse.omdb`. For example:

```
/<mnt_point>/opsware_installer/uninstall_opsware.sh -r /var/tmp/
oiresponse.omdb_db
```

4 The following prompt appears:

```
Welcome to the HP Installer.
Please select the components to uninstall.
1 ( ) BSA Essentials Database Instance
2 ( ) Oracle RDBMS for BSA Essentials
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

5 Type `a` to select both database components:

```
Welcome to the HP Installer.
Please select the components to uninstall.
1 (*) BSA Essentials Database Instance
2 (*) Oracle RDBMS for BSA Essentials
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

6 Type c to continue the uninstallation.

```
[Feb-17-2010 16:20:13] >>>>Uninstalling component BSA Essentials Database
Instance.
[Feb-17-2010 16:20:14] WARNING: package OPSWomdb_dbinstaller is not
installed.
[Feb-17-2010 16:20:18] >>>>Uninstalling component Oracle RDBMS for BSA
Essentials.
.........................Would you like to preserve the database of
cryptographic material? (y/n): n
..........
[Feb-17-2010 16:23:03] HP Installer ran successfully.



For more details, please see the following file:
```

```
/var/log/opsware/install_opsware/
uninstall_opsware.2010-02-17.16:17:33_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.
############################################################
```

7 The database components have been uninstalled.

Clean Up Directories and Restart Both Servers

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.

1 On both BSA Essentials Core and Database delete the following files to clean up the install directories:

```
rm -rf /var/opt/opsware/ /var/opt/oracle/ /var/log/opsware/ /etc/opt/
opsware/ /opt/opsware/ /var/tmp/oitmp/ /etc/oratab* /u0*
```

2 Restart both servers (this cleans out any orphaned BSA Essentials processes).

Uninstalling a Customer-Supplied Oracle BSA Essentials Installation

This section shows you how to uninstall a BSA Essentials installation where the BSA Essentials Core Services and BusinessObjects components were installed to work with a customer-supplied Oracle database.

This section contains the following tasks:

- Stop and Unregister All Data Miners
- Shut Down the BSA Essentials Core — Server B
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Stop and Unregister All Data Miners

1. Log in to the BSA Essentials Core server (Server B).
2. To determine what data sources are configured, change directories to the following location:

   ```
   /opt/opsware/omdb/bin
   ```

3. Run the following command to list all configured data miners:

   ```
   ./dmconfig.sh --list
   ```

4. For each data source listed, go to the data miner installation location on that data source and stop and unregister the data miner by executing the following commands:

   ```
   ./dataminer.sh stop
   ./dmsetup.sh --unregister
   ```

5. Delete the contents of the Data Miner directory
6. Verify there are no stray dataminer process in memory by executing the following commands (depending upon your operating system):

   ```
   ps -aef | grep dataminer (for Linux)
   /usr/ucb/ps -auxww | grep dataminer (for Solaris10)
   ```

Shut Down the BSA Essentials Core — Server B

On the server (Server B) where you installed the BSA Essentials Core Services, shut down the following components:

1. Shut down the core services by executing this command:

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

2. Shut down the BusinessObjects component by executing the following command:

   ```
   /etc/init.d/bsae-bo stop
   ```

3. Shutdown Tomcat by executing the following command:

   ```
   /etc/init.d/bsae-tomcat stop
   ```

4. Shutdown the database component by executing the following command

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

Shutdown the BSA Essentials Database - Server A

Shutdown the BSA Essentials Database component on Server A by executing the following command:

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

Uninstall the BSA Essentials Core Services - Server B

1. Log in to Server B where you want to uninstall the BSA Essentials Core Services component.
2. Mount the BSA Essentials install media Disc 3 using a command similar to

```
mount /dev/cdrom <mnt_point>
```

3 Run the uninstall script while sourcing the previous oiresponse file that was used during the installation. The default is oiresponse.omdb. For example:

```
/<mnt_point>/opsware_installer/uninstall_opsware.sh -r /var/tmp/
oiresponse.omdb
```

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

5 The uninstall components prompt appears:

```
Welcome to the HP Installer.
Please select the components to uninstall.
1 ( ) BSA Essentials Core Services
2 ( ) Oracle RDBMS for BSA Essentials

Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

6 Select `1`, and then type `c` to continue. The following output appears

```
Welcome to the HP Installer.
Please select the components to uninstall.
1 (*) BSA Essentials Core Services
2 ( ) Oracle RDBMS for BSA Essentials
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

7 Select c to continue. The following output appears as the software is uninstalled:

```
[Feb-17-2010 16:04:06] >>>>Uninstalling component BSA Essentials Core
Services.
..
[Feb-17-2010 16:04:25] >>>>Uninstalling component BSA Essentials Client
Foundation.
[Feb-17-2010 16:04:26] >>>>Uninstalling component BSA Essentials Security
and Configuration Console X.
.................................
[Feb-17-2010 16:06:20] >>>>Uninstalling component BSA Essentials Universes
for Business Objects.
[Feb-17-2010 16:06:21] >>>>Uninstalling component BSA Essentials Business
Objects Installer.
..
[Feb-17-2010 16:06:36] HP Installer ran successfully.
For more details, please see the following file:
/var/log/opsware/install_opsware/
uninstall_opsware.2010-02-17.16:01:39_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.
############################################################
```

8 After the uninstall has completed, remove the `/var/opt/opsware/install_opsware` directory.

Uninstall the BSA Essentials Database — Server B

Next, you will uninstall the BSA Essentials database components on Server B by performing the following steps:

1 Log in to the server where you want to uinstall the BSA Essentials Core Services component.

2 Mount the BSA Essentials install media Disc 1 using a command similar to:

```
mount /dev/cdrom <mnt_point>
```

3 Run the uninstall script while sourcing the previous oiresponse file that was used during the installation. For example:

```
/<mnt_point>/opsware_installer/uninstall_opsware.sh -r /var/tmp/
oiresponse.omdb_db
```

4 The following prompt appears:

```
Welcome to the HP Installer.
Please select the components to uninstall.
1 ( ) BSA Essentials Database Instance
2 ( ) Oracle RDBMS for BSA Essentials
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

5 Type `a` to select both database components:

```
Welcome to the HP Installer.
Please select the components to uninstall.
1 (*) BSA Essentials Database Instance
2 (*) Oracle RDBMS for BSA Essentials
Enter a component number to toggle ('a' for all, 'n' for none).
When ready, press 'c' to continue, or 'q' to quit.
```

6 Type `c` to continue the uninstallation.

```
[Feb-17-2010 16:20:13] >>>>Uninstalling component BSA Essentials Database
Instance.
[Feb-17-2010 16:20:14] WARNING: package OPSWomdb_dbinstaller is not
installed.
[Feb-17-2010 16:20:18] >>>>Uninstalling component Oracle RDBMS for BSA
Essentials.
.........................Would you like to preserve the database of
cryptographic material? (y/n): n
..........
[Feb-17-2010 16:23:03] HP Installer ran successfully.
For more details, please see the following file:
/var/log/opsware/install_opsware/
uninstall_opsware.2010-02-17.16:17:33_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.
############################################################
```

7 The database components have been uninstalled on Server B.

Uninstall the BSA Essentials Database Instance — Server A

Next, you will uninstall the BSA Essentials database instance on Server A by performing the following steps:

1 Go to the location where the custom create scripts were originally run, or download and unpack the `bsae-dbinstance-34f.1.0.0.0.tar.gz` from the disk 3 of the BSA Essentials media]

2 Uncomment and edit the script `removeOmdbInstance.sql` for your environment.()

The `removeOmdbInstance.sql` script contains the default settings for database SID, oracle_home and oracle paths, settings which you might need to changed to match your environment. We strongly recommend that editing this script be done by your Database Administrator.

3 Next, run the `removeOmdbInstance.sql` script as the Oracle user in SQL*Plus.

4 Switch your log in user to the Oracle user:

```
su - oracle
```

5 Set the Oracle user environment variable for ORACLE_SID for the SID of the BSA Essentials database instance that is about to be uninstalled:

```
export ORACLE_SID=cmdb

$ sqlplus /nolog

SQL> start removeOmdbInstance.sql
```

6 Run the script as the Oracle user in SQL*Plus

7 Update the `tnsnames.ora` file in `$ORACLE/home/network/admin` to remove the entry for the BSA Essentials instance name.

8 Update the `listener.ora` file in `$ORACLE/home/network/admin` to remove the entry for the BSA Essentials instance.

9 As the Oracle user restart the Oracle listener by running the following command:

```
lsnrctl start
```

Clean Up Directories and Restart BSA Essentials Core

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.

1 On the BSA Essentials Core delete the following files to clean up the install directories:

```
rm -rf /var/opt/opsware/ /var/opt/oracle/ /var/log/opsware/ /etc/opt/
opsware/ /opt/opsware/ /var/tmp/oitmp/ /etc/oratab* /u0*
```

2 Restart the BSA Essentials Core server to remove any orphaned BSA Essentials processes).