

# Oracle® Secure Enterprise Search

Installation and Upgrade Guide

11g Release 2 (11.2.2.2) for Microsoft Windows (64-Bit)

E35069-14

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This Guide describes how to install or upgrade to Oracle Secure Enterprise Search (Oracle SES) 11g Release 2 (11.2.2.2) on 64-bit Windows operating systems.

This Guide contains the following sections:

- [Preinstallation Tasks](#)
- [Installation Tasks](#)
- [Silent Installation Tasks](#)
- [Postinstallation Tasks](#)
- [Deinstallation Tasks](#)
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## Preinstallation Tasks

This section contains the following topics:

- [Oracle SES Windows Certifications](#)
- [Oracle SES Browser Support](#)
- [Oracle SES Installation Modes](#)
- [Checking the Hardware Requirements](#)
- [Checking the Software Requirements](#)
- [Installing Mandatory Oracle Database Patches](#)
- [Installing Mandatory WebLogic Server Patches](#)
- [Installing a Loopback Adapter](#)

For additional preinstallation tips, see the following Oracle SES tutorial:

[http://www.oracle.com/pls/topic/lookup?ctx=E35215-01&id=tut\\_ses\\_administration](http://www.oracle.com/pls/topic/lookup?ctx=E35215-01&id=tut_ses_administration)

### Oracle SES Windows Certifications

Oracle SES 11.2.2.2 is certified to run on the following Windows operating systems:

- Windows Server 2008 R2
- Windows Server 2012 R2

### Oracle SES Browser Support

The Oracle SES administration application and the default query application support the following browsers:

- Firefox 3.x and later
- Internet Explorer 7.x and later
- Safari 4.x and later

### Oracle SES Installation Modes

Oracle SES 11.2.2.2 software can be installed in one of the following three modes:

- **Oracle SES along with the database and the middle tier:** Select this option to install Oracle SES 11.2.2.2 along with Oracle Database 11.2.0.3.0 and Oracle WebLogic Server 10.3.6.0.0. See "[Install and Configure Oracle Secure Enterprise Search with Database and Middle Tier](#)" for more information about this installation option.
- **Oracle SES along with the middle tier on an existing database:** Select this option to install Oracle SES 11.2.2.2 and Oracle WebLogic Server 10.3.6.0.0 on a system, when you already have Oracle Database 11.2.0.3.x (Enterprise Edition) or 11.2.0.4.x (Enterprise Edition) installed on a system in the same network where Oracle SES is to be installed. See "[Install and Configure Oracle Secure Enterprise Search with Middle Tier \(on an Existing Database\)](#)" for more information about this installation option.
- **Oracle SES only on an existing middle tier and an existing database:** Select this option to install only the Oracle SES software on a system, when you already have:
  - Oracle Database 11.2.0.3.x (Enterprise Edition) or 11.2.0.4.x (Enterprise Edition) installed on a system in the same network where Oracle SES is to be installed.
  - Oracle WebLogic Server 10.3.6.0.x version installed on the same system where Oracle SES is to be installed.

See "[Install Oracle Secure Enterprise Search Software Only \(on an Existing Database and an Existing Middle Tier\)](#)" for more information about this installation option.

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**Note:**

- Oracle SES 11.2.2.2 supports only Oracle Database 11.2.0.3.x (Enterprise Edition), 11.2.0.4.x (Enterprise Edition), and 12.1.0.2.x (Enterprise Edition) as database server and WebLogic Server 10.3.6.0.x as middle tier server because Oracle SES depends on certain features that are only provided by these software products.
  - Oracle SES supports Oracle Database 12.1.0.2.x, but it does not support installing Oracle SES directly on an existing Oracle Database 12.1.0.2.x. For using Oracle Database 12.1.0.2.x with Oracle SES, you must first install Oracle SES on Oracle Database 11.2.0.3.x or 11.2.0.4.x, and then upgrade the database to 12.1.0.2.x. Refer to the Oracle SES Release Notes section "Mandatory Upgrade to either Oracle Database 11.2.0.4 or Oracle Database 12.1.0.2" for more information.
  - Oracle SES support for Oracle Database 11.2.0.3.x ends in August 2015, so you must upgrade to either Oracle Database 11.2.0.4.x or Oracle Database 12.1.0.2.x before the support ends for Oracle Database 11.2.0.3.x. For more information about the database upgrade steps, refer to the Oracle SES Release Notes section "Mandatory Upgrade to either Oracle Database 11.2.0.4 or Oracle Database 12.1.0.2".
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### Checking the Hardware Requirements

The system must meet the following minimum hardware requirements:

- [Memory Requirement](#)
- [Disk Space Requirement](#)

#### Memory Requirement

The memory requirement for installing and running Oracle SES 11.2.2.2 is as follows:

- At least 8 GB of physical RAM, if you are planning to have Oracle SES software, WebLogic Server middle tier, and Oracle Database server on the same system.
- At least 6 GB of physical RAM, if you are planning to have Oracle SES software and WebLogic Server middle tier on a system that is different from that of the Oracle Database server.

#### Disk Space Requirement

The disk space requirement for installing Oracle SES software depends upon the Oracle SES installation mode that you select.

- Oracle SES software installed along with the Oracle Database and the WebLogic Server middle tier, requires at least 9 GB of disk space.
- Oracle SES software installed along with the WebLogic Server middle tier, on an existing Oracle Database, requires at least 3.5 GB of disk space.
- Oracle SES software installed alone, on an existing WebLogic Server middle tier and an existing Oracle Database, requires at least 1.1 GB of disk space.

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**See Also:**

"[Oracle SES Installation Modes](#)" for more information about the Oracle SES installation modes.

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The additional disk space requirements are based on the amount of data that you expect to search.

For example, to index 100,000 documents:

- 13 GB of disk space

To index 1,000,000 documents:

- 38 GB of disk space
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**Note:**

The above hardware requirements for the specific number of documents to index are based on an assumption that an average document size is 100KB and the documents to index contain a mix of various document types, such as, HTML, PDF, DOC, and PPT.

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**Checking the Software Requirements**

The operating system and browsers must be among those listed in "[Oracle SES Windows Certifications](#)" and "[Oracle SES Browser Support](#)".

**Installing Mandatory Oracle Database Patches**

If you are going to install Oracle SES 11.2.2.2 software on an existing Oracle Database 11.2.0.3.x or 11.2.0.4.x, then you must download the following patches from My Oracle Support Web site <https://support.oracle.com> and apply them over the existing Oracle Database instance using Oracle OPatch utility before you proceed with the Oracle SES software installation.

Before installing Oracle Database patches, update the OPatch utility by installing the patch 6880880. This patch is available in the `opatch` directory present under the top-level directory of the Oracle SES 11.2.2.2 software distribution. You can also download this patch from My Oracle Support Web site <https://support.oracle.com>. Oracle recommends that you use OPatch utility release 11.2.0.1.9 or later.

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**Note:**

- The database patches are also available in the `database_patches` directory present under the top-level directory of the Oracle SES 11.2.2.2 software distribution.
- Oracle SES support for Oracle Database 11.2.0.3.x ends in August 2015, so you must upgrade to either Oracle Database 11.2.0.4.x or Oracle Database 12.1.0.2.x before the support ends for Oracle Database 11.2.0.3.x. For more information about the database upgrade steps, refer to the Oracle SES Release Notes section "Mandatory Upgrade to either Oracle Database 11.2.0.4 or Oracle Database 12.1.0.2".
- Oracle SES supports Oracle Database 12.1.0.2.x, but it does not support installing Oracle SES directly on an existing Oracle Database 12.1.0.2.x. For using Oracle Database 12.1.0.2.x with Oracle SES, you must first install Oracle SES on Oracle Database 11.2.0.3.x or 11.2.0.4.x, and then upgrade the database to 12.1.0.2.x. Refer to the Oracle SES Release Notes section "Mandatory Upgrade to either Oracle Database 11.2.0.4 or Oracle Database 12.1.0.2" for more information.

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- **Patches for Oracle Database 11.2.0.3.x:** 16803775 and 16464478. These database patches must be installed in the sequence - 16803775, 16464478. Apply these patches using Oracle OPatch utility.
  - **Patches for Oracle Database 11.2.0.4.x:** 19192715. Apply this patch using Oracle OPatch utility.

After applying all the database patches, run the following SQL command as the SYS user to recompile all the invalid database objects.

```
SQL> exec utl_recomp.recomp_serial('CTXSYS');
```

### Installing Mandatory WebLogic Server Patches

If you are going to install Oracle SES 11.2.2.2 software on an existing WebLogic Server 10.3.6.0.x middle tier, then you must download the patch 13583235 from My Oracle Support Web site <https://support.oracle.com> and apply it over the existing WebLogic Server instance before you proceed with the Oracle SES software installation.

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**Note:**

This patch fix is already included in the WebLogic Server 10.3.6.0.7, which is a PSU to be applied on top of WebLogic Server 10.3.6.0.0.

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The following are the steps to apply this patch on a Windows system:

1. Create the directory `cache_dir` under the directory `MW_HOME\utils\bsu` and unzip the contents of the 13583235 patch file `p13583235_1036_Generic.zip` into it.

2. Navigate to the directory `MW_HOME\utils\bsu` and run the command `bsu.cmd`.

### Installing a Loopback Adapter

A loopback adapter is required under either of these circumstances:

- You are installing on a computer connected to a Dynamic Host Configuration Protocol (DHCP) network.
- You are installing on a non-networked computer and plan to connect the computer to a network after installation.

A loopback adapter assigns a local IP for your computer. After installing a loopback adapter, you have at least two network adapters on your computer: your own network adapter and the loopback adapter.

### To check if the Microsoft Loopback Adapter is installed on your computer:

- Open a command window and enter:

```
ipconfig /all
```

If the loopback adapter is installed, its settings are displayed among other configuration settings. For example:

```
Ethernet adapter Local Area Connection 2:  
  
    Connection-specific DNS Suffix  . :  
    Description . . . . . : Microsoft Loopback Adapter  
    Physical Address. . . . . : 02-00-4C-4F-4F-50  
    Dhcp Enabled. . . . . : No  
    IP Address. . . . . : 192.168.123.123  
    Subnet Mask . . . . . : 255.255.255.0  
    Default Gateway . . . . . :
```

Following are instructions for installing and configuring the Microsoft loopback adapter.

### To install the Microsoft Loopback Adapter:

1. From the **Start** menu, select **Control Panel**.
2. In the Control Panel, double-click **Add Hardware** to start the Add Hardware Wizard.
3. On the Welcome page, click **Next**.
4. On the Is the Hardware Connected page, select **Yes, I have already connected the hardware**. Click **Next**.
5. On The Following Hardware Is Already Installed On Your Computer page, select **Add a new hardware device**. Click **Next**.
6. On The Wizard Can Help You Install Other Hardware page, select **Install the hardware that I manually select from a list**. Click **Next**.
7. On the Select the Type of Hardware You Are Installing page, select **Network adapters**. Click **Next**.

8. On the Select Network Adapter page, make these selections, then click **Next**:
  - **Manufacturer: Microsoft**
  - **Network Adapter: Microsoft Loopback Adapter**
9. On The Wizard Is Ready To Install Your Hardware page, click **Next**.
10. On the Completing the Add Hardware Wizard page, click **Finish**.

**To configure the Microsoft Loopback Adapter:**

1. In the Control Panel, double-click **Network Connections**.
2. Right-click the new connection for the loopback adapter, typically named Local Area Connection 2, and select **Properties**.
3. On the General tab, select **Internet Protocol (TCP/IP)**, and click **Properties**.
4. In the Properties dialog box:
  - a. **IP Address:** Enter a non-routable IP for the loopback adapter. Oracle recommends the following non-routable addresses:
    - 192.168.x.x where x is any value between 1 and 255
    - 10.10.10.10
  - b. **Subnet mask:** Enter 255.255.255.0.
  - c. Leave all other fields empty and click **OK**.
5. Click **OK**.
6. Click **Close** in the Local Area Connection dialog box associated with the new Microsoft Loopback Adapter.
7. Restart the computer.
8. Open the C:\WINDOWS\system32\drivers\etc\hosts file in a text editor, and add a line in the following format after the localhost line:

```
IP_address hostname.domainname hostname
```

where:

- *IP\_address* is the non-routable IP address you entered in step 4.
- *hostname* is the name of the computer.
- *domainname* is the name of the domain.

For example:

```
10.10.10.10 mycomputer.example.com mycomputer
```

9. Check the network configuration:

- a. In the Control Panel, double-click **System** to open the System Properties dialog box.
- b. Click the Computer Name tab. For **Full computer name**, verify that the host name and the domain name are displayed, such as `example.oracle.com`.
- c. Click the **Change** button to display the Computer Name Changes dialog box. Verify that the host name is displayed in the **Computer name** field, and the host name and the domain name are displayed as the **Full computer name**.
- d. Click **More** to display the DNS Suffix and NetBIOS Computer Name dialog box. Verify that the **Primary DNS suffix of this computer** field displays the domain name.
- e. Save any changes by clicking **OK**, or simply exit by clicking **Cancel**.

#### To remove the Microsoft Loopback Adapter:

1. In the Control Panel, double-click **System** to open the System Properties dialog box.
2. Click the Hardware tab, and then click **Device Manager**.
3. In the Device Manager window, expand **Network adapters**.
4. Right-click **Microsoft Loopback Adapter** and select **Uninstall**.

### Installation Tasks

This section contains the following topics:

- [Oracle SES Installation Procedure](#)
- [Oracle SES Configuration during Installation](#)
- [Verification of Successful Installation of Oracle SES](#)
- [Important Oracle SES Directories](#)
- [Installation Log Files](#)
- [Installation of Multiple Oracle SES Instances](#)
- [Allocating Custom Memory Size for Oracle SES Database](#)
- [Oracle SES Database User Password Expiration Policy](#)

For supplementary instructions on installing Oracle SES, see the Oracle SES tutorial:

[http://www.oracle.com/pls/topic/lookup?ctx=E35215-01&id=tut\\_ses\\_administration](http://www.oracle.com/pls/topic/lookup?ctx=E35215-01&id=tut_ses_administration)

#### Oracle SES Installation Procedure

To install the Oracle Secure Enterprise Search software:

1. Ensure that you satisfy all minimum requirements, as described in "[Preinstallation Tasks](#)".



2. Log on as a member of the Administrators group to the system where Oracle SES will be installed. Close any other remote sessions owned by this user.

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**Note:**

This user cannot belong to more than one domain in the same network. If you are installing on a Primary Domain Controller (PDC) or a Backup Domain Controller (BDC), then log on as a member of the Domain Administrators group.

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3. If you received the software for this release on DVD, then insert it in the drive, copy the zip archives into a local drive folder, and continue with step 5.
4. Download the Oracle SES software distribution. There are typically four zip file archives.
5. Extract all files from each zip archive into the same destination folder.
6. Right-click `setup.exe` in the folder of the extracted files, and then click **Run as administrator**. The Oracle SES installation wizard is displayed.
7. Follow the wizard pages of the Oracle SES installer. See "[Oracle SES Configuration during Installation](#)".
8. When the Finish wizard page is displayed, click **Close** to exit from the Oracle SES installer.

A successful installation creates the following folders in the Windows Start menu:

- **Oracle - *search\_database\_name***: If Oracle Database is installed as part of the Oracle SES installation, then the Windows Start menu contains shortcuts to SQL\*Plus and other DBA tools.
- **Oracle WebLogic**: If WebLogic Server middle tier is installed as part of the Oracle SES installation, then the Windows Start menu contains shortcuts to the WebLogic Server administration tools and documentation.

Many of the SES configuration tools are opened by the default Web browser, which must be defined on the host system for the shortcuts on the Start menu to work.

### **Oracle SES Configuration during Installation**

The Oracle SES installation wizard displays multiple pages containing the configuration information about the Oracle SES software components, such as database and middle tier.

The Oracle SES 11.2.2.2 installation software contains the following software components:

- Oracle SES version 11.2.2.2
- Oracle Database version 11.2.0.3.0
- Oracle WebLogic Application Server version 10.3.6.0.0
- Oracle JRockit version 1.6.0\_20-b02

- Perl v5.10.0

The Oracle SES installer provides the following three options for installing Oracle SES:

- [Install and Configure Oracle Secure Enterprise Search with Database and Middle Tier](#)
- [Install and Configure Oracle Secure Enterprise Search with Middle Tier \(on an Existing Database\)](#)
- [Install Oracle Secure Enterprise Search Software Only \(on an Existing Database and an Existing Middle Tier\)](#)

The information about the options selected during the Oracle SES installation is stored in the file `ses_home\install\install.properties`.

### **Install and Configure Oracle Secure Enterprise Search with Database and Middle Tier**

Select this option to install Oracle SES 11.2.2.2, Oracle Database 11.2.0.3.0, and Oracle WebLogic Server 10.3.6.0.0 middle tier on the system.

When this installation option is selected, Oracle SES installer provides the Wizard pages for installing and configuring the following Oracle SES components:

- **Database Details**

Provide the following details for installing Oracle Database and Oracle SES schema:

- **DB Oracle Base:** The root directory where all the Oracle Database products are installed. This directory path is displayed by default. You can change this path by clicking the **Browse** button and then selecting a different directory path. In this document, this directory is referred to as *oracle\_base*.

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#### **Note:**

The members of the `oraInventory` group must have write permission to the DB Oracle Base directory.

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- **DB Oracle Home:** The Oracle home directory where the database component of Oracle SES software is installed. The default is *oracle\_base\product\11.2.0\sesdb\_1*. You can change this path by either clicking the **Browse** button and then selecting a different directory path, or entering the directory path in the text box (the directory path must not contain spaces). In this document, this directory is referred to as *oracle\_home*.
- **Data File Location:** The directory where Oracle SES database stores its data files. The default is *oracle\_base\oradata*. You can change this directory path by clicking the **Browse** button and then selecting a different directory path. The data storage location must be outside of the Oracle home directory, so that it will not be deleted during upgrade process in future.
- **Global DB Name:** The name for the database that uniquely identifies it from the other databases in the network. Specify it in the format: *database\_unique\_name.database\_domain\_name*, where *database\_unique\_name* is the name of the database. It can contain a

maximum of 30 characters, as long as the first eight characters are unique. (alphanumeric, underscore (\_), dollar (\$), and pound (#)). Database domain name is the computer environment used for the database. It should not contain more than 128 characters (alphanumeric, underscore (\_), and pound (#)), inclusive of all periods. Global DB Name value should not exceed 128 characters.

Example: `sales.us.example.com`, where the database unique name is `sales` and the database domain name is `us.example.com`.

- Search Schema Password: Password for the Oracle SES schema. The password should contain minimum of 8 characters and maximum of 30 characters. Oracle recommends that the password should contain at least one lowercase letter, one uppercase letter, and one digit.

The Search schema password is the common password used for `SEARCHSYS`, `SYS`, `SEARCH_ESS`, `SEARCH_MDS`, and `SYSTEM` users.

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**See Also:**

["Oracle SES Database User Password Expiration Policy"](#)

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**Note:**

For the Oracle SES 11.2.2.2 release, the Oracle SES administrative user is `SEARCHSYS`. For the earlier Oracle SES release (11.1.2.2), the Oracle SES administrative user is `EQSYS`.

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- Confirm Password: Re-enter password for the Oracle SES schema.
  - Language: Select all the languages to be installed for the database. English is a must, and it is selected by default.
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**Note:**

The Advanced Compression Option feature of Oracle Database is enabled by default. The Advance Compression Option substantially reduces the crawler cache file space requirement on the system where Oracle SES database is installed.

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- **Middle Tier Details**

Provide the following details for installing the middle tier:

- Middleware Home: The home directory of Oracle SES middle tier. This directory path is displayed by default. You can change this path by clicking the **Browse** button and then selecting a different directory path. The middleware home directory cannot be under the `oracle_base` directory. In this document, this directory is referred to as `mw_home`.
- Domain Home: The home directory of WebLogic Server domain. A domain is the basic administration unit for WebLogic Server. It consists of one or more

WebLogic Server instances and logically related resources and services that are managed collectively, as one unit.

The default Domain Home directory is `mw_home\user_projects\domains`. You can change this path by clicking the **Browse** button and then selecting a different directory path. It is recommended to have the Domain Home directory under the Middleware Home directory. In this document, this directory is referred to as `wls_domain_home`.

- Domain Name: The name of the WebLogic Server domain used by the Oracle SES server. It is `search_domain` by default, and the directory with this name is created under the Domain home. In this document, this directory is referred to as `ses_domain_name`.

The domain name can include only alphanumeric characters, hyphen ('-'), and underscore character ('\_'). The domain name must contain at least one letter or digit.

- WLS Admin Port: The WebLogic Server administration port. Its default value is the first available port starting 7001. You can specify any other available port. The specified port must be within a valid range, for example, for Windows operating system, it must be within the range of 1 to 65535.
- Search HTTP Port: The port on which the Oracle SES server will listen. For example, if you install Oracle SES server on host `example.com` and you specify port `7777`, then your Search URL will be `http://example.com:7777/search/query/search`.

Its default value is the first available port starting 5720. You can specify any other available port. The specified port must be within a valid range, for example, for Windows operating system, it must be within the range of 1 to 65535.

- Search Admin Password: The Oracle SES administrator (`SEARCHSYS`) password. This is a common password used by the `SEARCHSYS` LDAP user and WebLogic administrator. This is the password that you will later use to log on to the Oracle SES administration tool.

The password should contain minimum of 8 characters and maximum of 30 characters. Oracle recommends that the password should contain at least one lowercase letter, one uppercase letter, and one digit.

- Confirm Password: Re-enter the Search Admin password.

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**Note:**

After the successful installation of Oracle SES, the directory `Oracle_SES1` gets created under the SES middle tier home directory. This is the SES home directory, referred to as `ses_home` in this document.

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**Install and Configure Oracle Secure Enterprise Search with Middle Tier (on an Existing Database)**

Select this option to install Oracle SES 11.2.2.2 and Oracle WebLogic Server 10.3.6.0.0 middle tier on a system, when you have already installed Oracle Database 11.2.0.3.x (Enterprise Edition) or 11.2.0.4.x (Enterprise Edition).

Oracle SES application must be installed on a system that is in the same network where Oracle Database is installed. The Oracle Database can be either in a single node configuration or in an Oracle RAC configuration.

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**Note:**

- Oracle Database version must be 11.2.0.3.x (**Enterprise Edition**) or 11.2.0.4.x (**Enterprise Edition**).
  - Oracle SES support for Oracle Database 11.2.0.3.x ends in August 2015, so you must upgrade to either Oracle Database 11.2.0.4.x or Oracle Database 12.1.0.2.x before the support ends for Oracle Database 11.2.0.3.x. Refer to the Oracle SES Release Notes section "Mandatory Upgrade to either Oracle Database 11.2.0.4 or Oracle Database 12.1.0.2" for more information.
  - Oracle SES supports Oracle Database 12.1.0.2.x, but it does not support installing Oracle SES directly on an existing Oracle Database 12.1.0.2.x. For using Oracle Database 12.1.0.2.x with Oracle SES, you must first install Oracle SES on Oracle Database 11.2.0.3.x or 11.2.0.4.x, and then upgrade the database to 12.1.0.2.x. Refer to the Oracle SES Release Notes section "Mandatory Upgrade to either Oracle Database 11.2.0.4 or Oracle Database 12.1.0.2" for more information.
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**Note:**

- Oracle Database must be configured to use **AL32UTF8** character set.
- The database schemas SEARCHSYS, SEARCH\_ESS, and SEARCH\_MDS must not be present in the Oracle Database instance.
- All the required database patches for Oracle SES must be applied on the Oracle Database instance. Refer to section "[Installing Mandatory Oracle Database Patches](#)" for more information about applying the mandatory database patches.
- Oracle Database with Edition-Based Redefinition (EBR) feature enabled is not supported.
- The Oracle Database instance must have the following components:
  - Oracle Text
  - Oracle JVM
  - Oracle XML DB
- The database resource settings, such as, "processes" and "sessions" should be configured based on the number of WebLogic Servers to be run in a cluster. If these resource settings are not configured properly, then an error similar to the following may appear in Oracle SES log file:

```
<BEA-000633> <Resource Pool "SearchQueryDS" suspending due to number of  
resource creation or test failures exceeding threshold of 2>
```

For example, Oracle Database's default settings for maximum sessions and maximum processes are 247 and 150 respectively, which are not adequate to allocate database connections when more servers come online. To resolve this issue, you need to increase the values for both these settings to around 1000.

Refer to the section "[Database Initialization Parameters](#)" in the *Oracle Secure Enterprise Search Administrator's Guide* for more information about these database resource settings.

- Oracle SES supports installing Patch Set Updates (PSUs) for Oracle Database base releases 11.2.0.3.0 and 11.2.0.4.0 as long as the set of mandatory Oracle Database patches listed on the Oracle support website is adhered to. For example, you can install PSU 11.2.0.3.11 over the Oracle Database base release 11.2.0.3.0 only and PSU 11.2.0.4.3 over the Oracle Database base release 11.2.0.4.0 only. For more information about installing PSUs, refer to the section "[Applying Critical Patch Updates \(CPUs\) and Patch Set Updates \(PSUs\)](#)".
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**See Also:**

- *Oracle Real Application Clusters Administration and Deployment Guide* for the detailed information about Oracle RAC Database.
  - "Oracle RAC Deployment Best Practice" in *Oracle Secure Enterprise Search Administrator's Guide*.
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When this installation option is selected, the Oracle SES installer provides the Wizard pages for installing and configuring the following Oracle SES components:

- **Existing Database Details**

Provide the following details for the existing Oracle Database and for the new Oracle SES schema:

- **DB Host Name:** The system host name where the Oracle Database is installed. For Oracle RAC Database, specify SCAN name as DB host name.
- **DB Port:** The Oracle Database Listener port. The Oracle Database and the corresponding Listener should be up and running, and should be ready to accept database connections.
- **DB Service Name:** The Oracle Database service name. This is generally the Global database name.
- **DB SYS Password:** The Oracle Database SYS user password.
- **Search Schema Password:** Password for the Oracle SES schema. The password should contain minimum of 8 characters and maximum of 30 characters. Oracle recommends that the password should contain at least one lowercase letter, one uppercase letter, and one digit.

The Search schema password is the common password used for SEARCHSYS, SEARCH\_ESS, and SEARCH\_MDS users.

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**Note:**

For the Oracle SES 11.2.2.2 release, the Oracle SES administrative user is SEARCHSYS. For the earlier Oracle SES release (11.1.2.2), the Oracle SES administrative user is EQSYS.

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- **Confirm Password:** Re-enter password for the Oracle SES schema.
  - **Advanced Compression Option:** Select this option if you have the license for the Advanced Compression Option feature.
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**Note:**

Selecting the Advance Compression Option substantially reduces the crawler cache file space requirement on the system where Oracle SES database is installed.

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- Oracle Partitioning Option: Select this option if you have the license for the Oracle Partitioning Option feature.
- **Middle Tier Details**

Provide the following details for installing the middle tier:

- **Middleware Home:** The home directory of Oracle SES middle tier. This directory path is displayed by default. You can change this path by clicking the **Browse** button and then selecting a different directory path. The middleware home directory cannot be under the *oracle\_base* directory. In this document, this directory is referred to as *mw\_home*.
- **Domain Home:** The home directory of WebLogic Server domain. A domain is the basic administration unit for WebLogic Server. It consists of one or more WebLogic Server instances and logically related resources and services that are managed collectively, as one unit.

The default Domain Home directory is *mw\_home\user\_projects\domains*. You can change this path by clicking the **Browse** button and then selecting a different directory path. It is recommended to have the Domain Home directory under the Middleware Home directory. In this document, this directory is referred to as *wls\_domain\_home*.

- **Domain Name:** The name of the WebLogic Server domain used by the Oracle SES server. It is *search\_domain* by default, and the directory with this name is created under the Domain home. In this document, this directory is referred to as *ses\_domain\_name*.

The domain name can include only alphanumeric characters, hyphen ('-'), and underscore character ('\_'). The domain name must contain at least one letter or digit.

- **WLS Admin Port:** The WebLogic Server administration port. Its default value is the first available port starting 7001. You can specify any other available port. The specified port must be within a valid range, for example, for Linux and UNIX systems, it must be within the range of 1024 to 65535.
- **Search HTTP Port:** The port on which the Oracle SES server will listen. For example, if you install Oracle SES server on host *example.com* and you specify port *7777*, then your Search URL will be *http://example.com:7777/search/query/search*.

Its default value is the first available port starting 5720. You can specify any other available port. The specified port must be within a valid range, for example, for Linux and UNIX systems, it must be within the range of 1024 to 65535.

- **Search Admin Password:** The Oracle SES administrator (*SEARCHSYS*) password. This is a common password used by the *SEARCHSYS* LDAP user and WebLogic administrator. This is the password that you will later use to log on to the Oracle SES administration tool.

The password should contain minimum of 8 characters and maximum of 30 characters. Oracle recommends that the password should contain at least one lowercase letter, one uppercase letter, and one digit.



- Confirm Password: Re-enter the Search Admin password.

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**Note:**

After the successful installation of Oracle SES, the directory `Oracle_SES1` gets created under the SES middle tier home directory. This is the SES home directory, referred to as `ses_home` in this document.

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**(Optional) Postinstallation Step - Register XML DB Protocol Port**

This postinstallation step allows for WebDAV/HTTP(S) access to the Oracle XML DB repository data. Perform this step only if you want to use WebDAV protocol to customize the skin bundle.

For WebDAV/HTTPS(S) access to the Oracle XML DB repository, you must register the XML DB protocol port. Perform this operation when Oracle SES is installed on an existing database on a system that is different from the one where Oracle SES middle tier is installed.

Perform the following steps to register the XML DB protocol port:

1. Log on to the system where the database is installed.
2. Run the following commands at the command prompt:

```
set ORACLE_HOME=path_of_the_DB_Oracle_Home
set ORACLE_SID=Oracle_Database_SID

%ORACLE_HOME%\bin\sqlplus "sys/password as sysdba"

SQL> EXEC dbms_xdb.sethttpport(port)
```

Here, *port* can be any free port.

You can verify the successful registration of the XML DB protocol port by running the following command:

```
SQL> SELECT dbms_xdb.gethttpport() FROM dual;
```

**Install Oracle Secure Enterprise Search Software Only (on an Existing Database and an Existing Middle Tier)**

Select this option to install only the Oracle SES software on a system, when you already have installed:

- **Oracle Database 11.2.0.3.x (Enterprise Edition) or Oracle Database 11.2.0.4.x**

Oracle SES application must be installed on a system that is in the same network where Oracle Database is installed. The Oracle Database can be either in single node configuration or in Oracle RAC configuration.

---

---

**Note:**

- Oracle SES support for Oracle Database 11.2.0.3.x ends in August 2015, so you must upgrade to either Oracle Database 11.2.0.4.x or Oracle Database 12.1.0.2.x before the support ends for Oracle Database 11.2.0.3.x. Refer to the Oracle SES Release Notes section "Mandatory Upgrade to either Oracle Database 11.2.0.4 or Oracle Database 12.1.0.2" for more information.
  - Oracle SES supports Oracle Database 12.1.0.2.x, but it does not support installing Oracle SES directly on an existing Oracle Database 12.1.0.2.x. For using Oracle Database 12.1.0.2.x with Oracle SES, you must first install Oracle SES on Oracle Database 11.2.0.3.x or 11.2.0.4.x, and then upgrade the database to 12.1.0.2.x. Refer to the Oracle SES Release Notes section "Mandatory Upgrade to either Oracle Database 11.2.0.4 or Oracle Database 12.1.0.2" for more information.
- 
-

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**Note:**

- Oracle Database version must be 11.2.0.3.x (**Enterprise Edition**) or 11.2.0.4.x (**Enterprise Edition**).
- Oracle Database must be configured to use **AL32UTF8** character set
- The database schemas SEARCHSYS, SEARCH\_ESS, and SEARCH\_MDS must not be present in the Oracle Database instance.
- All the required database patches for Oracle SES must be applied on the Oracle Database instance. Refer to section "[Installing Mandatory Oracle Database Patches](#)" for more information about applying the mandatory database patches.
- Oracle Database with Edition-Based Redefinition (EBR) feature enabled is not supported.
- The Oracle Database instance must have the following components:
  - Oracle Text
  - Oracle JVM
  - Oracle XML DB

- The database resource settings, such as, "processes" and "sessions" should be configured based on the number of WebLogic Servers to be run in a cluster. If these resource settings are not configured properly, then an error similar to the following may appear in Oracle SES log file:

```
<BEA-000633> <Resource Pool "SearchQueryDS" suspending due to number of  
resource creation or test failures exceeding threshold of 2>
```

For example, Oracle Database's default settings for maximum sessions and maximum processes are 247 and 150 respectively, which are not adequate to allocate database connections when more servers come online. To resolve this issue, you need to increase the values for both these settings to around 1000.

Refer to the section "[Database Initialization Parameters](#)" in the *Oracle Secure Enterprise Search Administrator's Guide* for more information about these database resource settings.

- Oracle SES supports installing Patch Set Updates (PSUs) for Oracle Database base releases 11.2.0.3.0 and 11.2.0.4.0 as long as the set of mandatory Oracle Database patches listed on the Oracle support website is adhered to. For example, you can install PSU 11.2.0.3.11 over the Oracle Database base release 11.2.0.3.0 only and PSU 11.2.0.4.3 over the Oracle Database base release 11.2.0.4.0 only. For more information about installing PSUs, refer to the section "[Applying Critical Patch Updates \(CPUs\) and Patch Set Updates \(PSUs\)](#)".
- 
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**See Also:**

- *Oracle Real Application Clusters Administration and Deployment Guide* for the detailed information about Oracle RAC Database.
- "Oracle RAC Deployment Best Practice" in *Oracle Secure Enterprise Search Administrator's Guide*.

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- **Oracle WebLogic Server 10.3.6.0.x**

Oracle SES application must be installed on the same system where WebLogic Server is installed. All the required WebLogic Server patches for Oracle SES must be applied on it. Refer to section "[Installing Mandatory WebLogic Server Patches](#)" for more information about applying the mandatory WebLogic Server patches.

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**Note:**

- The existing middle tier must have WebLogic Server version 10.3.6.0.x.
- If the WebLogic Server middle tier contains any Oracle Fusion Middleware product installed on it, then Oracle SES must be installed on a separate middle tier home. Oracle SES cannot have the same middle tier home as that of any other Oracle product.
- Oracle SES software must be installed on the same system where WebLogic Server is installed.
- If you want to use WebLogic Server in a clustered environment, then refer to the support note 1611280.1 "Implementing High Availability for Oracle SES 11.2.2.2". You can search for this support note on My Oracle Support Web site <https://support.oracle.com> by entering the string 1611280.1 in the Global Search field.

---

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When this installation option is selected, the Oracle SES installer provides the Wizard pages for installing and configuring the following Oracle SES components:

- **Existing Middle Tier Details**

Provide the following details for the existing WebLogic Server middle tier:

- **Middleware Home:** The home directory of an existing middle tier installation containing the WebLogic Server software. In this document, this directory is referred to as *mw\_home*.
- **Search Home Directory:** The name of the home directory where Oracle SES must be installed. This directory is created under the Middleware home (*mw\_home*), and is also referred to as SES home. In this document, this directory is referred to as *ses\_home*.

**Postinstallation Steps**

You must execute the following postinstallation steps when you install Oracle SES on an existing middle tier and an existing database.

1. Load SES Schema in the Oracle Database:

- a. Set the environment variable `JRE_DIR` to point to the JDK installation directory used by the existing WebLogic server.

```
set JRE_DIR=wls_server_java_home_directory
```

- b. Run the Repository Creation Utility (RCU) to load the Oracle SES schema into the database.

```
ses_home\rcu\bin\rcu
```

---

---

**See Also:**

- *Oracle Fusion Middleware Repository Creation Utility User's Guide* for detailed information about creating database schema using RCU
- *Oracle Fusion Middleware 11g Repository Creation Utility (RCU) - FAQ (Doc ID 1304790.1)* on Oracle Support Web site <https://support.oracle.com>

- 
- 
- c. In the Welcome screen, click **Next**.
- d. In the Create Repository screen, select **Create**, and click **Next**.
- e. In the Database Connection Details screen, enter the information related to the existing Oracle Database and user credentials of the `sys` user. Click **Next**.
- f. In the Select Components screen, select **Create a new Prefix** option and enter **SEARCH** string as prefix. Select the schemas **SEARCHSYS**, **MDS**, and **ESS**, and click **Next**.

---

---

**Note:**

For the Oracle SES 11.2.2.2 release, the Oracle SES administrative user is `SEARCHSYS`. For the earlier Oracle SES release (11.1.2.2), the Oracle SES administrative user is `EQSYS`.

- 
- 
- g. In the Schema Passwords screen, enter passwords for the selected schemas. You may specify either the same password or different passwords for the selected schemas. Click **Next**.
- h. In the Custom Variables screen, enter **Y** for Advance Compression Option and Oracle Partitioning Option, if you have license for these features; else enter **N**. Click **Next**.

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**Note:**

Selecting the Advance Compression Option substantially reduces the crawler cache file space requirement on the system where Oracle SES database is installed.

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- i. In the Map Tablespaces screen, you may choose to use the existing tablespaces, and click **Next**.
  - j. In the Summary screen, verify the database details information provided by you, and click **Create**. This will create the Oracle SES schema in the existing database specified by you.
2. Create WebLogic domain:

If you want to use an existing WebLogic domain that is already used by applications, such as, Fusion Middleware Webcenter or Peoplesoft or others, then go to step 3.

If you want to create a new WebLogic domain, then execute the following steps.

---

---

**Note:**

For detailed information about creating a new WebLogic domain, refer to *Oracle Fusion Middleware Creating Domains Using the Configuration Wizard*.

---

---

- a. Run the WebLogic configuration tool using the following command:  

```
mw_home\oracle_common\common\bin\config.cmd
```
  - b. In the Welcome screen, select **Create a new WebLogic domain** option and click **Next**.
  - c. In the Select Domain Source screen, the template "Basic Weblogic Template" is selected by default. Click **Next**.
  - d. In the Specify Domain Name and Location screen, enter the domain name (example, *search\_domain*) and domain location information, and click **Next**.
  - e. In the Configure Administrator User Name and Password screen, enter the WebLogic Server administrator user name and password, and click **Next**.
  - f. In the Configure Server Start Mode and JDK screen, select the **Production Mode** option, specify the installation directory for JDK 1.6 or later versions, and click **Next**.
  - g. Click **Create** to create the new WebLogic domain.
3. Extend the WebLogic domain with SES, ESS, and EM templates:

After you create a new WebLogic domain as explained in the earlier step, or if you already have an existing WebLogic domain that you want to use, then you should extend this WebLogic domain with SES, ESS, and EM templates by executing the following steps.

---

---

**Note:**

For detailed information about extending a WebLogic domain, refer to *Oracle Fusion Middleware Creating Domains Using the Configuration Wizard*.

---

---

- a. Run the WebLogic configuration tool using the following command:
 

```
mw_home\oracle_common\common\bin\config.cmd
```
- b. In the Welcome screen, select **Extend an existing WebLogic domain** option and click **Next**.
- c. In the Select a WebLogic Domain Directory screen, select the domain name that you want to extend for Oracle SES, and click **Next**.
- d. In the Select Extension Source screen, select **Extend my domain automatically to support the following added products** option, select the following check boxes, and click **Next**.
  - Oracle Secure Enterprise Search ESS Core Hosting Application–11.2.2.2.0 [ORACLE\_SES1]
  - Oracle Secure Enterprise Search–Standalone Mode 11.2.2.2.0 [ORACLE\_SES1]
  - Oracle Enterprise Scheduler Service Basic–11.1.1.0 [ORACLE\_SES1]
  - Oracle Enterprise Manager Plugin for ESS–11.1.1.0 [ORACLE\_SES1]
  - Oracle Enterprise Manager–11.1.1.0 [oracle\_common]
- e. In the Configure JDBC Component Schema screen, select all the schemas, enter the following database connection information, and click **Next**.
  - Vendor: Oracle
  - DBMS/Service: Database service name
  - Driver: Oracle's Driver (Thin) for service connections
  - Host Name: Name of the database server host for non-Oracle RAC database or SCAN Name for Oracle RAC database
  - Schema Owner: Name of the database schema
  - Port: Database server listener port
  - Schema Password: Database schema password

---



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**Note:**

When entering the schema owner, make sure that MDS and ESS have the prefix name SEARCH as part of the schema owner, for example, SEARCH\_MDS and SEARCH\_ESS. There must not be any prefix for SEARCHSYS. There must not be a schema by the name DEV\_ORAESS.

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- f. In the Test JDBC Component Schema screen, click **Test Connections** button to verify that all the schema details entered are correct.
- g. In the Select Optional Configuration screen, select **Managed Servers, Deployments and Services** check box.
- h. In the Configure Managed Servers screen, add the Managed server names - search\_server1 for the Search server and ess\_server1 for the ESS

server. Specify the listen address of the system on which the WebLogic Server middle tier is installed and listen port as any of the available ports on that system. Note down the port number for the Search server `search_server1`. This information will be used in the URLs for accessing the Oracle SES Administration and Query applications.

---

---

**Note:**

- At least one Managed server should be created for the ESS server and the Search server. For WebLogic Server cluster environment, you should create Managed servers for the ESS server and the Search server for each WebLogic Server node. For example, for two WebLogic Server nodes *WLS1* and *WLS2*, create two ESS servers - `ess_server1` and `ess_server2`, and two Search servers - `search_server1` and `search_server2`.
- Configuration Steps (3) (i) to (3) (l) are optional for a single node WebLogic Server instance, but it is strongly advised to do this configuration for achieving scalability in future by adding multiple ESS servers and Search servers to the WebLogic Server clusters created in Step (3) (i).

- 
- 
- i. In the Configure Clusters screen, add the two cluster names:

- `SESCluster` (for Search server cluster)

- `ESSCluster` (for ESS server cluster)

For both these clusters, set the messaging mode to unicast.

For `SESCluster`, in the Cluster address field, enter the system name and port of `search_server1` that was specified in Step (3) (h). If multiple Search servers are created in Step (3) (h) for multiple WebLogic Server nodes, then enter comma-separated list of system names and ports of the multiple Search servers. For example: `wls1:5720, wls2:5720`.

For `ESSCluster`, in the Cluster address field, enter the system name and port of `ess_server1` that was specified in Step (3) (h). If multiple ESS servers are created in Step (3) (h) for multiple WebLogic Server nodes, then enter comma-separated list of system names and ports of the multiple ESS servers. For example: `wls1:13101, wls2:13101`.

- j. In the Assign Servers to Clusters screen, assign the Search servers to the Search server cluster **SESCluster** and assign ESS servers to the ESS server cluster **ESSCluster**.

- k. In the Configure Machines screen, add the node names, node manager listen addresses, and node manager listen ports for all the WebLogic Server nodes.

- l. In the Assign Servers to Machines screen, assign SES servers and ESS servers to their respective WebLogic Server nodes.

- m. Continue clicking **Next** button until you reach the Target Services to Clusters or Servers screen.

- n. Select **SESCluster** in the left panel.



- o. In the right panel, select **Service > JDBC > JDBC System Resource**.
- p. Select **EssDS, EssXADS, EssInternalDS, mds-ESS\_MDS\_DS, mds-owsm, SearchAdminDS, and SearchQueryDS**.

---

**Note:**

- For a single node WebLogic Server instance (that is, when WebLogic Server cluster is not configured), all the JDBC system resources under Service should have `ess_server1` and `ses_server1` as targets. The `mds-owsm` should have `AdminServer`, `ess_server1`, and `ses_server1` as targets.
- For the WebLogic Server cluster environment, all the JDBC system resources under Service should have `ESSCluster` and `SESCluster` as targets. The `mds-owsm` should have `AdminServer`, `ESSCluster`, and `SESCluster` as targets.

- 
- q. Click **Extend** to extend the domain.
4. Configure `nodemanager.properties` file:
    - a. Go to `mw_home\wlserve\common\nodemanager`.
    - b. Open the `nodemanager.properties` file in a text editor.
    - c. Set `StartScriptEnabled=true`.
    - d. Save and close the `nodemanager.properties` file.
  5. Start WebLogic Server, ESS managed server, and Search managed server:
    - a. Start WebLogic Admin Server by navigating to the WebLogic domain directory and running the `startWeblogic.cmd` script.  

```
wls_domain_home\ses_domain_name\startWebLogic.cmd
```
    - b. Start SES and ESS managed servers by executing the following commands:  

```
wls_domain_home\ses_domain_name\bin\startManagedWebLogic ess_server1
```

  

```
wls_domain_home\ses_domain_name\bin\startManagedWebLogic search_server1
```
  6. If you are *not* using an external LDAP server, then execute step 6A, else execute step 6B.

---

**Note:**

If the WebLogic Server middle tier is deployed across multiple systems, then you must configure an LDAP-based identity store and an Oracle Platform Security Services (OPSS) security store as described in Step 6B.

---

6A. If you are not using an external LDAP server, create users `FUSION_APPS_SEARCH_APPID`, and `SEARCHSYS` in the WebLogic Server domain:

- a. Log on to the WebLogic Console (<http://host:port/console>) as an administrator user.
- b. Navigate to Security Realms > myRealm > Users and Groups.
- c. Click **NEW** and create a new user FUSION\_APPS\_SEARCH\_APPID. Provide a password for this user.
- d. Save the changes.
- e. Click **NEW** and create new user SEARCHSYS. Provide a password for this user.
- f. Save the changes.

6B. If you are using an external LDAP server, then create two users in the external LDAP server. One user must be an internal user (for example, APPID user) and is needed for the Oracle SES crawler to work with the Oracle Enterprise Schedule Service (ESS) application. The other user must be an Oracle SES administrator (for example, ADMIN user).

**See Also:**

- *Oracle Fusion Middleware Securing Oracle WebLogic Server* guide at [http://docs.oracle.com/cd/E23943\\_01/web.1111/e13707/atn.htm#SECMG175](http://docs.oracle.com/cd/E23943_01/web.1111/e13707/atn.htm#SECMG175) for information about configuring an LDAP-based identity store as WebLogic Server authentication provider.
- *Oracle Fusion Middleware Application Security Guide* at [http://docs.oracle.com/cd/E23943\\_01/core.1111/e10043/cfgauthr.htm#JISEC2291](http://docs.oracle.com/cd/E23943_01/core.1111/e10043/cfgauthr.htm#JISEC2291) for information about configuring an LDAP-based or a DB-based OPSS security store.

**7. Create CSF entries SES\_ADMIN-KEY and SEARCH\_DATABASE:**

Run the script `mw_home\oracle_common\common\bin\wlst.cmd`, and execute the following WLST commands:

- a. `wls:/offline>connect()`

Enter the user name, password, and the appropriate connection information of the WebLogic console.

Make sure the domain run-time server is enabled, that is, the prompt will become `wls:/>`.

- b. If you are *not* using an external LDAP server, then execute the command:

```
wls:/>createCred(map="oracle.apps.security",
key="FUSION_APPS_SEARCH_APPID-KEY",
user="FUSION_APPS_SEARCH_APPID", password="password")
```

Provide password for FUSION\_APPS\_SEARCH\_APPID-KEY in the *password* field.

If you are using an external LDAP server, then execute the above command by replacing the FUSION\_APPS\_SEARCH\_APPID user credentials with the APPID user of the external LDAP server.

- c. If you are *not* using an external LDAP server, then execute the command:

```
wls:/>createCred(map="oracle.apps.security",
key="FUSION_APPS_ECSF_SES_ADMIN-KEY", user="searchsys",
password="password")
```

Provide password for the database user SEARCHSYS in the *password* field.

If you are using an external LDAP server, then execute the above command by replacing the searchsys user credentials with the ADMIN user credentials of the external LDAP server.

- d. 

```
wls:/>createCred(map="oracle.search",
key="SEARCH_DATABASE", user="SES_DB_JDBC_Connect_String",
password="SES_DB_Password")
```

Provide appropriate value for the *SES\_DB\_Connect\_String* field in the format `jdbc:oracle:thin:@host:port:SID`.

---

---

**Note:**

For the Oracle Database in Oracle RAC configuration, you should use Oracle RAC SCAN name and fully qualified service name in the value for the *SES\_DB\_Connect\_String* field in the following format:

```
jdbc:oracle:thin:@RAC_SCAN_name:port/fully_qualified_service_name
```

To know the Oracle RAC SCAN name, run the command:

```
oracle_home\bin\srvtcl config scan
```

The Oracle RAC SCAN name is also available in the file `oracle_home\network\admin\tnsnames.ora`.

---

---

After successfully completing this task, you can exit the `wlst` script.

8. Configure ESS standalone job type:

Run the script `ses_home\common\bin\wlst.cmd`, and execute the following WLST commands:

- a. 

```
wls:/offline>connect()
```

Enter the user name, password, and the appropriate connection information of the WebLogic console.

Make sure the domain run-time server is enabled, that is, the prompt will become `wls:/>`.

- b. 

```
wls:/
>essManageRuntimeConfig("SearchEss","APP",operation="add",
,name="SEARCH_TOP",val="search_top_location")
```

Replace *search\_top\_location* with the absolute file path of the Oracle SES home directory (that is, *ses\_home* directory).

- c. `wls:/>essManageRuntimeConfig("SearchEss","ESS",  
operation="add",name="PerlCommand",val="perl_location")`

Replace *perl\_location* with the absolute file path of the perl executable:  
*ses\_home\perl\bin\perl*.

After completing this task, exit the *wlst* script.

**9. Grant admin user role to SEARCHSYS/ADMIN user:**

Run the script *mw\_home\oracle\_common\common\bin\wlst.cmd*, and execute the following WLST commands:

- a. `wls:/offline>connect()`

Enter the user name, password, and the appropriate connection information of the WebLogic console.

Make sure the domain run-time server is enabled, that is, the prompt will become "wls:/>".

- b. If you are not using an external LDAP server, then execute the command:

```
wls:/  
>grantAppRole(appStripe="search",appRoleName="SearchAdmin  
SuperUserRole",  
principalClass="weblogic.security.principal.WLSUserImpl",  
principalName="searchsys")
```

If you are using an external LDAP server, then execute the above command by replacing the *searchsys* user with the ADMIN user of the external LDAP server.

After successfully completing this task, exit the *wlst* script.

**10. Set default index optimization frequency:**

For the index optimizer to work properly, the following command must be executed:

```
ses_home\bin\searchadmin -u searchsys -p password -c http://  
sesAdminHost:sesAdminPort/search/api/admin/AdminService update indexOptimizer  
-i ses_home\search\data\config\weekly_optimize.xml -a overwrite
```

where,

*password*= SEARCHSYS user password (This user is created during step 5)

*sesAdminHost* = SES Server Host

*sesAdminPort*= SES Server Port

**11. (Optional) Register XML DB protocol port:**

This postinstallation step allows for WebDAV/HTTP(S) access to the Oracle XML DB repository data. Perform this step only if you want to use WebDAV protocol to customize the skin bundle.

For WebDAV/HTTPS(S) access to the Oracle XML DB repository, you need to register the XML DB protocol port. Perform this operation when Oracle SES is installed on an existing database on a system that is different from the one where Oracle SES middle tier is installed.

Perform the following steps to register the XML DB protocol port:

- a. Log on to the system where Oracle SES database is installed.
- b. Run the following commands at the command line:

```
set ORACLE_HOME=path_of_DB_Oracle_home
set ORACLE_SID=Oracle_Database_SID

%ORACLE_HOME%\bin\sqlplus "sys/password as sysdba"

SQL> exec dbms_xdb.sethttpport(port)
```

Here, *port* can be any free port greater than 1024.

You can verify the successful registration of the XML DB protocol port by running the following command:

```
SQL> SELECT dbms_xdb.gethttpport() FROM dual;
```

### Verification of Successful Installation of Oracle SES

To verify whether Oracle SES 11.2.2.2 is properly installed on your system, check the following things:

- In the WebLogic Server Console, navigate to Services > Data Sources, and verify that the following targets have the appropriate values:
  - EssDS: *ess\_server1*, *search\_server1*
  - EssInternalDS: *ess\_server1*, *search\_server1*
  - EssXADS: *ess\_server1*, *search\_server1*
  - mds-ESS\_MDS\_DS: *ess\_server1*, *search\_server1*
  - mds-owsm: *AdminServer*, *ess\_server1*, *search\_server1*
  - SearchAdminDS : *search\_server1*
  - SearchQueryDS : *ess\_server1*, *search\_server1*
- Check the following URLs in a Web browser:
  - Oracle SES Query application: [http://\*ses\\_host\*:\*ses\\_port\*/search/query/search](http://<i>ses_host</i>:<i>ses_port</i>/search/query/search)
  - Oracle SES Administration application: [http://\*ses\\_host\*:\*ses\\_port\*/search/admin/index.jsp](http://<i>ses_host</i>:<i>ses_port</i>/search/admin/index.jsp) (Log on using the *searchsys* admin user and its password specified during the Oracle SES installation.)

---

---

**Note:**

The information about the options selected during the Oracle SES installation is stored in the *ses\_home\install\install.properties* file.

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### Important Oracle SES Directories

This document uses the following names for describing various directories of the Oracle SES 11.2.2.2 software:

---

Directory Name	Description
<i>oracle_base</i>	The directory where all the Oracle Database products are installed.
<i>oracle_home</i>	The directory where the Oracle Database component specific to Oracle SES software is installed. The default <i>oracle_home</i> directory is <i>oracle_base\product\11.2.0\sesdb_1</i> .
<i>mw_home</i>	The middleware home directory where the middle tier components of Oracle SES software (that is, WebLogic Server, Oracle SES server, Oracle Fusion Middleware common files) are installed.
<i>wls_home</i>	The directory where the WebLogic Server is installed. The default <i>wls_home</i> directory is <i>mw_home\wlserver</i> .
<i>wls_domain_home</i>	The directory where multiple instances of a WebLogic Server middle tier are created. The default <i>wls_domain_home</i> directory is <i>mw_home\user_projects\domains</i> .
<i>ses_domain_name</i>	The directory where the WebLogic Server instance specific to Oracle SES is created under <i>wls_domain_home</i> directory. The default <i>ses_domain_name</i> directory is <i>search_domain</i> .
<i>ses_home</i>	The directory where the Oracle SES server is installed. The <i>ses_home</i> directory is created under the <i>mw_home</i> directory. When Oracle SES 11.2.2.2 software is installed along with the WebLogic Server middle tier, the <i>ses_home</i> directory is <i>mw_home\Oracle_SES1</i> .

---

### Installation Log Files

The installation process generates following log files in the *Oracle\Inventory\logs* folder, which is typically created in the *C:\Program Files* folder:

- **installActionstimestamp.log:** Contains all informational messages generated during the installation. This log is created for both silent and interactive installations. For a successful installation, this message appears at the end of the log file:

```
*** End of Installation Page***
```

```
The installation of Oracle Secure Enterprise Search was successful.
```

- **OPatchtimestamp.log**: Contains an inventory of installed software following installation of an interim patch. One log file is created for each patch.

## Installation of Multiple Oracle SES Instances

You cannot install multiple Oracle SES instances (current release or a previous release) that use the same database or the same middle tier. But, you can configure multiple Oracle SES servers and Oracle ESS servers in a clustered environment.

---

---

### See Also:

Support note 1611280.1 "Implementing High Availability for Oracle SES 11.2.2.2". You can search for this support note on My Oracle Support Web site <https://support.oracle.com> by entering the string 1611280.1 in the Global Search field.

---

---

## Allocating Custom Memory Size for Oracle SES Database

When Oracle SES software is installed along with the database and the middle tier, 40% of the total available physical memory is allocated for the database by default. You can override this default behavior by allocating a custom memory size for the database during the Oracle SES installation. Use the parameter `oracle_install_db_AllocatedMemory` of the Oracle SES installer to achieve this.

For example, on Windows system, execute the following command:

```
setup.exe oracle_install_db_AllocatedMemory=<db_memory_size>
```

where, `<db_memory_size>` is the amount of memory in megabytes to allocate for the Oracle SES database instance.

---

---

### See Also:

["Install and Configure Oracle Secure Enterprise Search with Database and Middle Tier"](#)

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## Oracle SES Database User Password Expiration Policy

Oracle SES uses three Oracle SES application specific schemas `SEARCHSYS`, `SEARCH_ESS`, and `SEARCH_MDS`. When Oracle SES is installed along with the database, the password for these three schemas never expire. When Oracle SES is installed on an existing database, then the password expiry for these three schemas follows the Oracle Database default password expiry policy. Refer to the *Oracle Database 2 Day DBA* guide for more information about the default password expiry policy for an Oracle Database.

## Silent Installation Tasks

A silent installation has no graphical output and no input by the user. It is accomplished by supplying Oracle SES installer with a response file and specifying the `-silent` flag on the command line. Use silent installation when you want to use the same Oracle SES installation configuration on more than one system.

## Performing Silent Installation

To perform a silent installation of Oracle SES:

1. Download and unzip the installation files, as described in steps 1 to 5 of "[Oracle SES Installation Procedure](#)".
2. Edit the response file in a text editor, such as Windows Notepad, as described in the section "[Editing a Response File](#)". Ensure that all the values in the response file are correct.

---

---

### Note:

Values for variables that are of the wrong context, format, or type are treated as if no values were specified. Variables that are outside any section are ignored. If you attempt a silent installation with an incorrect or incomplete response file, or if Oracle SES installer encounters an error, such as insufficient disk space, then the installation will fail.

---

---

### Caution:

If you must provide passwords or other sensitive information in your response files, then for the security purpose, delete them after completing and verifying the installation.

---

---

3. Navigate to the top level directory of the Oracle SES software distribution and run the following command to start the silent installation:

```
setup.exe -silent -responseFile response_file_name_with_absolute_path
```

4. Check the status of silent installation by referring to the log file `oracle_inventory_directory\logs\installActionsDate_Time.log`

On successful completion of the silent installation, the installer displays the message "Successfully Setup Software." on the command line.

## Editing a Response File

Before performing a silent installation, you must provide information specific to your installation in a response file. The installer will fail if you attempt an installation using a response file that is not configured correctly.

There are two ways to use a response file:

- Use the response file that was generated during the earlier installation of Oracle SES on a different system. The summary page of Oracle SES installer contains Save Response File button that can be used to save the Oracle SES installation settings to a response file.
- Use the response file template after editing it according to your requirement. Oracle SES provides three response file templates that you can use depending upon the Oracle SES installation option that you choose. The following response file templates are located in the directory `install\response` under the top level directory of the Oracle SES software distribution:



- `search_standalone.rsp`

Use this response file template when installing Oracle SES along with the database and the middle tier.

- `search_midtier.rsp`

Use this response file template when installing Oracle SES along with the middle tier (on an existing database)

- `search_swnly.rsp`

Use this response file template when installing Oracle SES only (on an existing middle tier and an existing database)

Use any text editor to edit one of the above response files to include information specific to your system. You must specify values for variables in your response file.

---

---

**Note:**

You must specify values to all the variables in a response file. The response file contains the installation password in clear text. To minimize security issues, follow these guidelines:

- Set the permissions on the response files so that they are readable only by the operating system user performing the silent installation.
- If possible, remove the response files from the system after the silent installation is completed.

---

---

## Postinstallation Tasks

This section describes the tasks to perform after installing Oracle SES and contains the following topics:

- [Applying Mandatory Oracle SES Patches](#)
- [Applying Critical Patch Updates \(CPUs\) and Patch Set Updates \(PSUs\)](#)
- [Checking for Additional Documentation and Support Services](#)
- [\(Optional\) Changing the Oracle SES Middle Tier Port](#)
- [\(Optional\) Configuration Steps when Oracle Database Server is Changed](#)
- [\(Optional\) Changing Password for WebLogic User in Oracle SES Instance](#)

### Applying Mandatory Oracle SES Patches

After installing Oracle SES 11.2.2.2, apply the mandatory Oracle SES patches mentioned in the section "Mandatory Software Patches" of *Oracle Secure Enterprise Search Release Notes*.

### Applying Critical Patch Updates (CPUs) and Patch Set Updates (PSUs)

After installing Oracle SES, apply the latest Patch Set Updates (PSUs) and Critical Patch Updates (CPUs) for Oracle products.

Critical Patch Updates (CPUs) are collections of security fixes for Oracle products. They are available to customers with valid support contracts. To check the latest Critical Patch Updates, visit the Oracle Technology Network website:

<http://www.oracle.com/technetwork/topics/security/alerts-086861.html>

Patch Set Updates (PSUs) are proactive cumulative patches containing recommended bug fixes for Oracle products. To check the latest Patch Set Updates for Oracle products, see the support note 854428.1, *Patch Set Updates for Oracle Products* on My Oracle Support website: <https://support.oracle.com>.

To locate the support note 854428.1:

1. Log on to My Oracle Support website.
2. Enter 854428.1 in the search field and click the Search icon.

### **Checking for Additional Documentation and Support Services**

To download release notes, installation documentation, white papers, or other collaterals, visit Oracle Technology Network (OTN). You must register online before using OTN. Registration is free and can be done at <http://www.oracle.com/technetwork/community/join/overview/index.html>

If you already have a user name and password for OTN, then you can go directly to the documentation section of OTN at <http://www.oracle.com/technetwork/indexes/documentation/index.html>

### **(Optional) Changing the Oracle SES Middle Tier Port**

Perform these steps only if, after installation, you find that there is a port number conflict requiring you to change the port number of the SES middle tier.

There are two methods to change the Search HTTP port, depending upon whether the port that you want to change to is greater than or equal to 1024, or is less than 1024.

#### **To change the Search HTTP port to a value greater than or equal to 1024:**

1. In the WebLogic Server Administration Console, select **Servers** > **search\_server1**.
2. Select **Configuration** > **General**.
3. Click **Lock & Edit** in the Change Center.
4. Enter the port number that you want to change to in the **Listen Port** box.
5. Click **Save**.
6. Restart the Oracle SES managed server, that is, **search\_server1**.

#### **To change the Search HTTP port to a value less than 1024, execute the following additional steps after executing the above mentioned steps:**

1. In the Change Center of the Administration Console, click **Lock & Edit**.

2. In the left pane of the Console, expand **Environment** and select **Machines**.
3. Click **New**.
4. Enter a name for the new system in the **Name** attribute field. This name is used to identify the system within the WebLogic Server domain. This name does not have to correspond to the system's network name.
5. Select Windows in the **Machine OS** field.
6. Click **OK**. The new system is displayed in the Machines table.
7. Select the name of the system you just created.
8. Select **Configuration > General**.
  - a. To specify a non-privileged user account under which the server instance runs, place a check mark in the **Enable Post-bind UID** field and enter the user ID in the **Post-Bind UID** field. The user ID that you enter must have read, write, and execute privileges within the Oracle Middleware directory, the WebLogic Server product directory tree, and your domain directory.

The default value of the **Post-Bind UID** field, *nobody*, is a standard Windows account that provides the least possible privileges. While the *nobody* account is acceptable for use in a development environment, in a production environment, Oracle recommends that you create an operating-system user account specifically for running instances of WebLogic Server.
  - b. To specify a non-privileged group instead of (or in addition to) providing a user ID, place a check mark in the **Enable Post-bind GID** field and enter the group ID in the **Post-Bind GID** field.
9. Click **Save**.
10. Click **Activate Changes** in the Change Center.
11. Restart the Oracle SES managed server, that is, **search\_server1**.

#### **(Optional) Configuration Steps when Oracle Database Server is Changed**

The following are the steps to configure new database listener name and port in Oracle SES when Oracle Database server is moved to another system or it is configured as Oracle RAC database.

1. Stop all the running schedules and index optimizer using Oracle SES Administration GUI:
  - To stop the running schedules, navigate to **Home > Schedules**, select each of the running schedules, and click **Stop**.
  - To stop the index optimizer, navigate to **Global Settings > Index Optimization**, and click **Stop Index Optimizer**.
2. Configure the new Oracle SES database listener name and port at the back-end and restart the database listener.

3. Log in to the WebLogic Server Administration Console and navigate to **Services > Data Sources**.
4. Update the database connection URL for all the following data sources with the new database listener port and service name by selecting each of the data sources and navigating to **Configuration > Connection Pool**.
  - EssDs
  - EssInternalDS
  - EssXADS
  - mds-ESS\_MDS\_DS
  - mds-owsm
  - SearchAdminDS
  - SearchQueryDS
5. Update the `SES_DB_JDBC_Connect_String` configuration setting using the WLST script by executing the following steps:
  - a. Run the WLST command:
 

```
MW_HOME\oracle_common\common\bin\wlst.cmd
```
  - b. `wls:/offline>connect()`  
 For the above command, enter user name, password, and appropriate connection information of the WebLogic Administration server.
  - c. `wls:/>updateCred(map="oracle.search", key="SEARCH_DATABASE", user="SES_DB_JDBC_Connect_String", password="SES_DB_Password")`  
 Provide the new database connection string value for the `SES_DB_Connect_String` field in the format `jdbc:oracle:thin:@host:port:SID`.
6. Restart all the WebLogic servers, including `AdminServer`, `ess_server1`, and `search_server1`.
7. Verify the updated database connection string status:
  - a. Log in to the WebLogic Server Administration Console.
  - b. Navigate to **Services > Data Sources > SearchQueryDS > Monitoring > Testing**.
  - c. Select `search_server1` and click the **Test Data Source** button to check the new database connection string status.

### **(Optional) Changing Password for WebLogic User in Oracle SES Instance**

The following are the steps to change WebLogic user password in an Oracle SES instance:

### To change the WebLogic user password:

1. Log in to the WebLogic Server Administration Console.
2. Under the **Domain Structure** in the left panel, click **Security Realm**.
3. In the **Summary of Security Realms** section, click **myrealm**.
4. Click the **Users and Groups** tab.
5. Click **weblogic** from the list of users.
6. Click the **Passwords** tab.
7. Enter and confirm the new password.
8. Save the changes.

After changing the WebLogic user password, if you want to use the `startWebLogic.cmd` command to start the WebLogic Administration server, then manually edit the `wls_domain_home\servers\AdminServer\security\boot.properties` file and update the following information:

```
username=weblogic  
password=<weblogic user new password>
```

After changing the WebLogic user password, if you want to use the `searchctl` command (when both the Oracle Database and the WebLogic Server middle tier are installed as part of the Oracle SES software installation), then change the node manager password as described below:

### To change the node manager password:

1. Log in to the WebLogic Server Administration Console.
2. Under the **Domain Structure** in the left panel, click **base\_domain**.
3. In the **Settings for base\_domain** section, click **Security** tab.
4. Click the **Users and Groups** tab.
5. Click **Advanced**.
6. Click **Lock & Edit**.
7. Enter and confirm the new node manager password.
8. Click **Activate Changes**.

---

---

**Note:**

After changing the node manager password, if you fail to start `search_server1` using the command `searchctl start` and get the following error in the log file `search_server1_yyyy_MM_dd_hh_mm.log`:

```
Authentication denied: Boot identity not valid
```

then remove the following file and directory from the system where Oracle SES is installed:

```
wls_domain_home\servers\search_server1\security\boot.properties  
wls_domain_home\servers\search_server1\data\ldap
```

---

---

## Deinstallation Tasks

This section provides the procedure for deinstalling Oracle SES. The Oracle SES deinstallation process depends upon the installation option that you chose while installing Oracle SES.

Before you deinstall Oracle SES, you must stop all the crawler schedules and the index optimizer by using either Administration GUI or Administration API.

### To stop all the crawler schedules and the index optimizer using Administrator GUI

1. Log in to the Administration GUI.
2. Stop the crawler schedules:
  - a. Navigate to Home > Schedules page.
  - b. Select each schedule and click **Stop**.
3. Stop the index optimizer:
  - a. Navigate to Global Settings > Index Optimization page.
  - b. Click **Stop Index Optimizer** button.

### To stop all the crawler schedules and the index optimizer using Administrator API

1. Get the list of all the schedules:

```
ses_home\bin\searchadmin -u searchsys -p sesAdminPwd -c http://  
sesAdminHost:sesAdminPort/search/api/admin/AdminService getAllObjectKeys  
schedule
```

2. Stop each of the schedules returned by the above command:

```
ses_home\bin\searchadmin -u searchsys -p sesAdminPwd -c http://  
sesAdminHost:sesAdminPort/search/api/admin/AdminService stop schedule --  
NAME="source_name"
```

3. Stop the index optimizer:

```
ses_home\bin\searchadmin -u searchsys -p sesAdminPwd -c http://
sesAdminHost:sesAdminPort/search/api/admin/AdminService stop indexOptimizer
```

Run the following deinstallation scripts depending upon the installation option that you chose while installing Oracle SES.

### **To deinstall Oracle SES when Oracle SES is installed along with the database and the middle tier**

1. Connect to the system where Oracle SES is installed as the Oracle SES installation user.

2. Run the middle tier deinstallation script:

```
ses_home\deinstall\deinstall
```

3. Run the database deinstallation script:

```
oracle_home\deinstall\deinstall
```

### **To deinstall Oracle SES when Oracle SES is installed along with the middle tier (on an existing database)**

1. Connect to the system where Oracle SES is installed as the Oracle SES installation user.

2. Run the middle tier deinstallation script:

```
ses_home\deinstall\deinstall
```

### **To deinstall Oracle SES when only Oracle SES is installed (on an existing middle tier and an existing database)**

1. Connect to the system where Oracle SES is installed, as the Oracle SES installation user.

2. Stop the Oracle ESS managed servers:

```
wls_domain_home\ses_domain_name\bin\stopManagedWebLogic server_name
admin_URL user_name password
```

3. Stop the Oracle SES managed servers:

```
wls_domain_home\ses_domain_name\bin\stopManagedWebLogic server_name
admin_URL user_name password
```

4. Stop the WebLogic Server:

```
wls_domain_home\ses_domain_name\bin\stopWeblogic
```

5. Drop the Oracle SES and Oracle ESS schemas (make sure that the environment variable JRE\_DIR is already set to the JDK installation directory):

```
ses_home\rcu\bin\rcu
```

6. Run the middle tier deinstallation script:

```
ses_home\deinstall\deinstall
```

## Directories to Remove Manually

After deinstalling Oracle SES, you must manually remove the following directory, if it exists:

- `data\cache\mail` directory present under the DB Oracle home on the system where the database is installed.

## Upgrading Oracle SES

This section provides the information and procedures for upgrading from Oracle SES 11.1.2.2 to Oracle SES 11.2.2.2. Also discussed are pre-upgrade and post-upgrade tasks.

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### Note:

- You must already have installed both the Oracle SES versions - Oracle SES 11.1.2.2 and Oracle SES 11.2.2.2 - on the same system or on different systems before starting the upgrade process. Both the Oracle SES instances must be present on the same operating system, that is, cross-platform upgrade is not supported.
  - All the database patches and the middle tier patches should be applied on the Oracle SES 11.2.2.2 instance before starting the upgrade process. Refer to the sections "[Installing Mandatory Oracle Database Patches](#)" and "[Installing Mandatory WebLogic Server Patches](#)" of this guide for more information about the database and middle tier patches for the Oracle SES 11.2.2.2 software.
- 
- 

This section contains the following topics:

- [Pre-upgrade Tasks](#)
- [Upgrade Tasks](#)
- [Post-upgrade Tasks](#)

### Pre-upgrade Tasks

This section provides the information and tasks specific to preparing an upgrade from Oracle SES 11.1.2.2 to Oracle SES 11.2.2.2.

- [Confirm that Free Memory and Disk Space Requirements are Met](#)
- [Back Up the Existing Oracle SES Instance](#)
- [Export the Existing Oracle SES Crawler Schedules](#)
- [Stop All the Scheduled Jobs](#)
- [\(Optional\) Change the Search Service HTTP Port if less than 1024](#)
- [Shut down Middle Tiers for Oracle SES 11.1.2.2 and Oracle SES 11.2.2.2](#)
- [Apply the Database Patch 8353098 for Oracle SES 11.1.2.2 Instance](#)



## Confirm that Free Memory and Disk Space Requirements are Met

Before performing the upgrade tasks for this release of Oracle SES, at least 2 GB of free RAM and 10 GB of free disk space must be available on the system.

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### Note:

Depending on the number of documents to process and how many custom attributes are meta-tagged, extra space might be needed.

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## Back Up the Existing Oracle SES Instance

You must create a backup copy of the existing Oracle SES 11.1.2.2 instance, so that you can restore it back in case you face any major issue while upgrading to Oracle SES 11.2.2.2.

You must create a copy of the following directories:

- *oracle\_base*: Oracle products installation directory
- *oracle\_home*: Oracle SES 11.1.2.2 database directory
- *oradata*: repository for data files, control files, and log files
- *oraInventory*: central inventory for all the Oracle homes

### To back up Oracle SES 11.1.2.2 instance using the zip command:

1. Shut down the Oracle SES instance using the following command:

```
ses_home\bin\searchctl stopall
```

---

---

### See Also:

["Starting and Stopping Oracle SES Instance"](#)

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2. Navigate to the directory where you want to store the Oracle SES 11.1.2.2 backup files and execute the following commands:

```
zip ses_orabase.zip {full path to Oracle base}
zip ses_orahome.zip {full path to Oracle home}
zip ses_orainv.zip {full path to oraInventory}
zip ses_oradat.zip {full path to oradata}
```

---

---

### Note:

Create separate archives for Oracle base, Oracle home, oraInventory, and oradata directories.

---

---

## Export the Existing Oracle SES Crawler Schedules

You must export all the crawler schedules of the existing Oracle SES 11.1.2.2 instance, so that you can import them back into the Oracle SES 11.2.2.2 instance while upgrading to Oracle SES 11.2.2.2.

### To export all the Oracle SES 11.1.2.2 crawler schedules:

1. In the Oracle SES 11.2.2.2 instance, open the script file `ses_home\search\admin\upgrade\11.1.2.2\pre_11122_export.bat` in a text editor, specify Oracle SES 11.1.2.2 Administration URL and password, and copy this file to the Oracle home directory of the Oracle SES 11.1.2.2 instance. See that `ORACLE_HOME` variable is defined in the Oracle SES 11.1.2.2 instance.

2. Start the Oracle SES 11.1.2.2 instance using the `searchctl startall` command:

```
ORACLE_HOME\bin\searchctl startall
```

3. In the Oracle SES 11.1.2.2 instance, run the script file `pre_11122_export.bat` that was copied in step 1:

```
pre_11122_export
```

This script exports two files, `all_schedules.xml` and `index_optimizer.xml`, to the directory `ses_home\search\data\config`. These two files must be imported to Oracle SES 11.2.2.2 instance as described in the section "[Running Scripts to Complete the Upgrade Process](#)".

### Stop All the Scheduled Jobs

During the upgrade of Oracle SES 11.1.2.2 instance, scheduled jobs should not be started, and crawl and optimization processes should not be running in the background. To prevent scheduled jobs from executing, set the `JOB_QUEUE_PROCESSES` parameter to 0.

### To set the JOB\_QUEUE\_PROCESSES parameter to 0:

1. Run sqlplus and connect as eqsys user.
2. Check the current value of `JOB_QUEUE_PROCESSES`, so that you can later restore it. By default, `JOB_QUEUE_PROCESSES` is 10, but it may be set differently in this database. Execute this query to obtain the value of `JOB_QUEUE_PROCESSES`.

```
SQL> SELECT name, value FROM v$parameter WHERE name='job_queue_processes';
```

3. Execute this SQL statement to set `JOB_QUEUE_PROCESSES` to zero.

```
SQL> ALTER SYSTEM SET job_queue_processes=0 scope=both
```

### (Optional) Change the Search Service HTTP Port if less than 1024

This step is necessary only if the Oracle SES instance that you are upgrading is bound to a port number less than 1024. You must change the port to a number greater than or equal to 1024 before starting the upgrade. After the upgrade completes, you can change the port back to a number less than 1024. Follow the instructions in "[\(Optional\) Changing the Oracle SES Middle Tier Port](#)" of this document.

### Shut down Middle Tiers for Oracle SES 11.1.2.2 and Oracle SES 11.2.2.2

Shut down the middle tiers for both the Oracle SES instances - 11.1.2.2 and 11.2.2.2, before continuing with the upgrade process.

- Shut down the Oracle SES 11.1.2.2 middle tier using the following command:

```
ses_home\bin\searchctl stop
```

- Shut down the Oracle SES 11.2.2.2 middle tier. Refer to the section "[Starting and Stopping Oracle SES Instance](#)" for information about the procedure to start and stop an Oracle SES instance.

### **Apply the Database Patch 8353098 for Oracle SES 11.1.2.2 Instance**

Download the Oracle Database 11.1.0.7.0 patch 8353098 from My Oracle Support Web site <https://support.oracle.com> and apply it over the Oracle SES 11.1.2.2 database instance.

### **Upgrade Tasks**

This section contains the procedures for upgrading Oracle SES 11.1.2.2 to Oracle SES 11.2.2.2. This section contains the following topics that should be followed in the same sequence:

- [Exporting Oracle SES 11.1.2.2 Tablespaces](#)
- [Exporting Oracle SES 11.1.2.2 Skin Bundle Resources](#)
- [Importing Oracle SES 11.1.2.2 Tablespaces into Oracle SES 11.2.2.2 Instance](#)
- [Importing Oracle SES 11.1.2.2 Skin Bundle Resources into Oracle SES 11.2.2.2 Instance](#)
- [Running Scripts to Complete the Upgrade Process](#)
- [Applying Patch 17246573](#)
- [Manually Configuring Oracle SES 11.2.2.2 Instance](#)
- [Restoring Oracle SES 11.1.2.2 if Upgrade Fails](#)

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#### **Note:**

The scripts for upgrade are located in the `ses_home\search\admin\upgrade\11.1.2.2` directory of the Oracle SES 11.2.2.2 instance.

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### **Exporting Oracle SES 11.1.2.2 Tablespaces**

This section describes the steps for exporting Oracle SES 11.1.2.2 tablespaces using the `expdp` command.

#### **Prepare Directory and Tablespaces for Export**

1. Copy the SQL script file `prepare_11122_export.sql` from Oracle SES 11.2.2.2 instance to Oracle SES 11.1.2.2 instance. This file is located in the directory `ses_home\search\admin\upgrade\11.1.2.2` in the Oracle SES 11.2.2.2 instance.
2. Connect to the Oracle SES 11.1.2.2 database as admin user by using `sqlplus`.  
`oracle_home\bin\sqlplus "sys/SES_admin_password as sysdba"`
3. Run the SQL script file `prepare_11122_export.sql` from the `sqlplus` prompt:

```
SQL> @prepare_11122_export.sql dump_dir_name dump_dir_path
```

where, *dump\_dir\_name* is the name of the directory where the exported files will be stored, and *dump\_dir\_path* is the absolute path of the *dump\_dir\_name* directory that already exists on the system.

After running the `prepare_11122_export.sql` file, the `dump_tts.info` file is generated under the *dump\_dir\_path* directory. This file contains the information required to run the *expdp* command.

The contents of a sample `dump_tts.info` file are as follows:

(1) expdp options for tablespaces:

```
oracle_home\bin\expdp system/password dumpfile=expTTS.dmp directory=DUMP
logfile=expTTS.log
transport_tablespaces=OES_PUSH,OES_ITAB,OES,OES_ASSM,OES_ASSM2
```

(2) expdp options for sequences:

```
oracle_home\bin\expdp system/password SCHEMAS=EQSYS,EQ_TEST INCLUDE=SEQUENCE
dumpfile=expSEQ.dmp directory=DUMP logfile=expSEQ.log
```

(3) expdp options for views:

```
oracle_home\bin\expdp system/password SCHEMAS=EQSYS,EQ_TEST INCLUDE=VIEW
dumpfile=expVIEW.dmp directory=DUMP logfile=expVIEW.log
```

(4) expdp options for types:

```
oracle_home\bin\expdp system/password SCHEMAS=EQSYS,EQ_TEST INCLUDE=TYPE
dumpfile=expTYPE.dmp directory=DUMP logfile=expTYPE.log
```

(5) Tablespace file names:

```
oradata_directory\ses\OES_01.dbf
oradata_directory\ses\OES_02.dbf
oradata_directory\ses\OES_ASSM.dbf
oradata_directory\ses\OES_ASSM2.dbf
oradata_directory\ses\OES_ITAB.dbf
oradata_directory\ses\OES_PUSH.dbf
```

## Export Tablespaces, Sequences, Views, and Types

Run the *expdp* command in the Oracle SES 11.1.2.2 instance to export the Oracle SES 11.1.2.2 tablespaces, views, sequences, and types. Refer to the **expdp options** sections in the `dump_tts.info` file before running the following commands.

---

---

### Note:

In case you get the error message "ORA-28001: the password has expired" while running the *expdp* commands, then reset the SYSTEM password using the following SQL scripts:

```
oracle_home\bin\sqlplus "sys/password as sysdba"
```

```
SQL> ALTER user SYSTEM identified by new_sytem_user_password;
```

---

---

- **Export tablespaces**

```
oracle_home\bin\expdp system/SES_admin_password dumpfile=expTTS.dmp
directory=db_directory_object
transport_tablespaces=OES,OES_ASSM,OES_ASSM2,OES_ITAB,OES_PUSH,SA1,SA2
logfile=expTTS.log
```

- **Export sequences**

```
oracle_home\bin\expdp system/SES_admin_password SCHEMAS=EQSYS,EQ_TEST
INCLUDE=SEQUENCE dumpfile=expSEQ.dmp directory=db_directory_object
logfile=expSEQ.log
```

- **Export views**

```
oracle_home\bin\expdp system/SES_admin_password SCHEMAS=EQSYS,EQ_TEST
INCLUDE=VIEW dumpfile=expVIEW.dmp directory=db_directory_object
logfile=expVIEW.log
```

- **Export types**

```
oracle_home\bin\expdp system/SES_admin_password SCHEMAS=EQSYS,EQ_TEST
INCLUDE=TYPE dumpfile=expTYPE.dmp directory=db_directory_object
logfile=expTYPE.log
```

---

---

**Note:**

After running the `expdp` command, the Oracle SES 11.1.2.2 tablespaces are set to *read only*. If you want to use the Oracle SES 11.1.2.2 instance, then you will have to set these tablespaces to *read write* using the following SQL command after importing the tablespaces into the Oracle SES 11.2.2.2 instance as described in the section "[Importing Oracle SES 11.1.2.2 Tablespaces into Oracle SES 11.2.2.2 Instance](#)":

```
ALTER TABLESPACE tablespace_name read write;
```

---

---

### Exporting Oracle SES 11.1.2.2 Skin Bundle Resources

Run the `exp` command of Oracle sqlplus in the Oracle SES 11.1.2.2 instance to export the Oracle SES 11.1.2.2 Skin Bundle resources from the XDB repository.

```
oracle_home\bin\exp "sys/password as sysdba" tables=eqsys_resource_dump
file=skin_bundle_resource.dmp log=exp_resource.log
```

where,

`skin_bundle_resource.dmp` is the name of the Skin Bundle resource dump file along with its full file path.

`exp_resource.log` is the name of the log file along with its full file path that is generated by the export operation.

### Importing Oracle SES 11.1.2.2 Tablespaces into Oracle SES 11.2.2.2 Instance

This section describes the steps for importing Oracle SES 11.1.2.2 tablespaces into Oracle SES 11.2.2.2 database.

#### Create Directory and Cleanup Tablespaces for Import

1. Connect to the Oracle SES 11.2.2.2 database as the admin user by using sqlplus.

```
oracle_home\bin\sqlplus "sys/SES_admin_password as sysdba"
```

2. Run the SQL script file `prepare_11222_import_windows.sql` present in the directory `ses_home\search\admin\upgrade\11.1.2.2` of the Oracle SES 11.2.2.2 instance:

```
SQL> @prepare_11222_import_windows.sql SES_admin_password dump_dir_name  
dump_dir_path
```

where, `dump_dir_name` is the name of the directory where the dump files to be imported should be stored, and `dump_dir_path` is the absolute path of the `dump_dir_name` directory that already exists on the system.

### Transfer Data Files

1. Transfer all the dump files (`expTTS.dmp`, `expSEQ.dmp`, `expVIEW.dmp`, and `expTYPE.dmp`) to the import directory that was created after running the `prepare_11222_import_windows.sql` file.
2. Transfer all the DBF files listed in the `dump_tts.info` file to the Oracle SES 11.2.2.2 database DBF file location.

### Import Tablespaces, Sequences, Views, and Types

1. Set the `DBFDIR` environment variable to the absolute path of the directory containing the DBF files. For example, if the DBF files are in the directory `C:\ses11222\oradata`, then run the following command:  

```
set DBFDIR=C:\ses11222\oradata
```
2. Run the `impdp` command in the Oracle SES 11.2.2.2 instance to import Oracle SES 11.1.2.2 tablespaces, views, sequences, and types into the Oracle SES 11.2.2.2 database.

#### a. Import tablespaces

```
oracle_home\bin\impdp system/SES_admin_password dumpfile=expTTS.dmp  
directory=db_directory_object  
REMAP_SCHEMA=EQSYS:SEARCHSYS,EQ_TEST:SEARCHSYS  
transport_datafiles=$DBFDIR/OES_01.dbf,$DBFDIR/OES_02.dbf,$DBFDIR/  
OES_ASSM.dbf,  
$DBFDIR/OES_ASSM2.dbf,$DBFDIR/OES_ITAB.dbf,$DBFDIR/OES_PUSH.dbf,$DBFDIR/  
SA1.dbf,$DBFDIR/SA2.dbf logfile=impTTS.log
```

#### b. Import sequences

```
oracle_home\bin\impdp system/SES_admin_password  
REMAP_SCHEMA=EQSYS:SEARCHSYS,EQ_TEST:SEARCHSYS dumpfile=expSEQ.dmp  
directory=db_directory_object logfile=impSEQ.log
```

#### c. Import views

```
oracle_home\bin\impdp system/SES_admin_password  
REMAP_SCHEMA=EQSYS:SEARCHSYS,EQ_TEST:SEARCHSYS dumpfile=expVIEW.dmp  
directory=db_directory_object logfile=impVIEW.log
```

#### d. Import types

```
oracle_home\bin\impdp system/SES_admin_password
REMAP_SCHEMA=EQSYS:SEARCHSYS,EQ_TEST:SEARCHSYS dumpfile=expTYPE.dmp
directory=db_directory_object logfile=impTYPE.log
```

---

**Note:**

After you run the `impdp` command, you will see hundreds of error messages in the log files `impTTS.log`, `impTYPE.log`, and `impVIEW.log`. You can safely ignore these error messages. The following are some of the error messages that will be shown in the log files:

```
ORA-39082: Object type .... created with compilation warnings
ORA-39083: Object type .... failed to create with error:
ORA-31684: Object type .... already exists
ORA-39111: Dependent object type OBJECT_GRANT:.... skipped, base object ....
already exists
ORA-01775: looping chain of synonyms
ORA-00942: table or view does not exist
```

---

### Importing Oracle SES 11.1.2.2 Skin Bundle Resources into Oracle SES 11.2.2.2 Instance

Copy the exported Skin Bundle resource dump file (*skin\_bundle\_resource.dmp*) from the Oracle SES 11.1.2.2 instance to the Oracle SES 11.2.2.2 instance.

Run the `imp` command of Oracle sqlplus in the Oracle SES 11.2.2.2 instance to import the Oracle SES 11.1.2.2 Skin Bundle resources into the Oracle SES 11.2.2.2 instance.

```
oracle_home\bin\imp userid="sys/password as sysdba" file=skin_bundle_resource.dmp
fromuser=sys touser=searchsys log=imp_resource.log
```

where,

*skin\_bundle\_resource.dmp* is the name of the Skin Bundle resource dump file with its full file path.

*imp\_resource.log* is the name of the log file along with its full file path that is generated by the import operation.

### Running Scripts to Complete the Upgrade Process

After importing Oracle SES 11.1.2.2 tablespaces into Oracle SES 11.2.2.2, run the following scripts to upgrade the schemas, reload types and packages, recreate views and triggers, and repopulate the initial data in the Oracle SES 11.2.2.2 instance:

1. Set the `SES_HOME` environment variable to the absolute path of the SES home directory. For example, if the SES home directory absolute path is `C:\ses11222\middleware_home\Oracle_SES1`, then run the following command:

```
set SES_HOME=C:\ses11222\middleware_home\Oracle_SES1
```

2. Connect to the Oracle SES 11.2.2.2 database as the `sys` user by using sqlplus.

```
oracle_home\bin\sqlplus "sys/SES_admin_password as sysdba"
```

3. Run the SQL script file `eq0upgrade-11-122-windows.sql` present in the Oracle SES 11.2.2.2 instance directory `ses_home\search\admin\upgrade\11.1.2.2`.

```
SQL> @eq0upgrade-11-122-windows.sql 'SEARCHSYS'
```

---

**Note:**

The `EQ$UPG_STATUS_11222` table stores the status of running the script `eq0upgrade-11-122-windows.sql`. The status shows `COMPLETE` for the event type of `TASK` when the script runs successfully.

---

4. Connect to the Oracle SES 11.2.2.2 database as the Oracle SES administrator by using `sqlplus`.

```
oracle_home\bin\sqlplus "searchsys/SES_admin_password"
```

5. Run the SQL script `equ11-122-skinrc.sql` present in the Oracle SES 11.2.2.2 instance directory `ses_home/search/admin/upgrade/11.1.2.2`. Running this script completes the migration of Skin Bundle resources from Oracle SES 11.1.2.2 instance to Oracle SES 11.2.2.2 instance.

```
SQL> @equ11-122-skinrc.sql
```

6. Copy `all_schedules.xml` and `index_optimizer.xml` files that were exported from Oracle SES 11.1.2.2 instance as described in the section "[Export the Existing Oracle SES Crawler Schedules](#)", to the Oracle SES 11.2.2.2 directory `ses_home\search\data\config`.
7. Open the script file `ses_home\search\admin\upgrade\11.1.2.2\post_11222_import.bat` in a text editor and specify Oracle SES 11.2.2.2 Administration URL and password.
8. Check that the Oracle SES 11.2.2.2 instance is up by accessing the Oracle SES Administration URL.
9. Run the script file `post_11222_import.bat`:

```
post_11222_import
```

---

**Note:**

In Oracle SES 11.1.2.2, the crawler job is a database job. In Oracle SES 11.2.2.2, the crawler job is an Oracle ESS job. Due to this difference, after migrating the crawler schedules from Oracle SES 11.1.2.2 instance to Oracle SES 11.2.2.2 instance, all the migrated jobs have the status `Scheduled` in Oracle SES 11.2.2.2 instance.

---

### Applying Patch 17246573

Download patch 17246573 from My Oracle Support Web site <https://support.oracle.com> and apply it over the Oracle SES 11.2.2.2 database instance.

### Manually Configuring Oracle SES 11.2.2.2 Instance



After executing the upgrade scripts, you must manually configure the Oracle SES 11.2.2.2 instance to complete the upgrade process.

- [Copy Oracle SES 11.1.2.2 Plug-in Files to Oracle SES 11.2.2.2 Instance](#)
- [Configure Oracle SES 11.2.2.2 Data Source Types](#)
- [Configure Oracle SES 11.2.2.2 Single Sign-On Settings](#)
- [Configure Other Oracle SES 11.2.2.2 Settings](#)

#### **Copy Oracle SES 11.1.2.2 Plug-in Files to Oracle SES 11.2.2.2 Instance**

All the JAR files and configuration files of the Oracle SES 11.1.2.2 plug-ins that are not shipped out-of-box must be copied to the directories accessible from the Oracle SES 11.2.2.2 instance. The configuration information about these plug-ins should then be updated using the Oracle SES 11.2.2.2 Administration application (Administration GUI or Administration API). The following are the plug-in types for which you should verify the configuration information in the Oracle SES 11.2.2.2 instance:

- Source Types
- Identity Plug-in
- Authorization Plug-in
- Document Service Plug-in
- UrlRewriter

#### **Copy Oracle SES 11.1.2.2 Identity Plug-in Truststore Files to Oracle SES 11.2.2.2 Instance**

Verify the Truststore location file paths of the following Identity plug-ins using the Oracle SES 11.2.2.2 Administration GUI page Global Settings - Identity Management Setup and make sure that the file paths specified in the configuration parameter `Truststore location for SSL` of these Identity plug-ins are accessible from the Oracle SES 11.2.2.2 instance.

- OpenLDAP Directory
- Sun Java System Directory Server
- Active Directory

#### **Configure Oracle SES 11.2.2.2 Data Source Types**

Verify various file paths of the following data source types using the Oracle SES 11.2.2.2 Administration GUI page Home - Sources - Edit - Source Configuration and make sure that these file paths are accessible from the Oracle SES 11.2.2.2 instance.

The following table lists various data source types with their file path configuration parameters in the Oracle SES 11.2.2.2 Administration GUI.

---

<b>Data Source Types</b>	<b>Configuration Parameters</b>
Database, Siebel 7.8, Siebel 7.8 (Public)	Query File

---

Data Source Types	Configuration Parameters
Oracle Fusion, PeopleSoft, Oracle WebCenter, Oracle Content, Oracle E-Business, Siebel 8	Configuration, Scratch Directory
E-mail	Archive
Federated User Authorization	Remote Cache Config File

### Configure Oracle SES 11.2.2.2 Single Sign-On Settings

If Oracle SES 11.1.2.2 instance was configured for single sign-on, then apply the same settings to Oracle SES 11.2.2.2 instance using the Administration GUI page Global Settings - Configure Single Sign-On Settings.

### Configure Other Oracle SES 11.2.2.2 Settings

The configuration settings that are stored in the following files in Oracle SES 11.1.2.2 are no longer stored in files in Oracle SES 11.2.2.2 and are stored in database instead:

- `oracle_home\search\data\config\crawler.dat`
- `oracle_home\search\webapp\config\search.properties`
- `oracle_home\search\webapp\config\ranking.xml`
- `oracle_home\search\tools\weblogic\deploy\plans\QueryPlan.xml`

Oracle SES 11.2.2.2 contains the following object types corresponding to the above mentioned Oracle SES 11.1.2.2 configuration files.

Oracle SES 11.2.2.2 Object Type	Corresponding Oracle SES 11.1.2.2 Configuration File	Description
<code>crawlerSetting</code>	<code>crawler.dat</code>	Crawler configuration
<code>queryUiConfig, clustering</code>	<code>search.properties</code>	Query application configuration
<code>relevanceRanking</code>	<code>ranking.xml</code>	Query ranking configuration

The following are the steps to copy the configuration settings from the above Oracle SES 11.1.2.2 configuration files to Oracle SES 11.2.2.2 instance:

1. Run the `searchadmin` command of Oracle SES 11.2.2.2 Admin API to export XML files for the object types - `queryUiConfig, clustering, crawlerSetting, and relevanceRanking`.

```
ses_home\bin\searchadmin -u username -p password -c http://ses_admin_url/search/api/admin/AdminService export objectType -o filename.xml
```

where,

`objectType` is one of the object types - `queryUiConfig, clustering, crawlerSetting, or relevanceRanking`.

*filename.xml* is the name of the XML file to which the specified object type configuration settings are exported to.

2. Update the exported XML configuration file with the settings in the Oracle SES 11.1.2.2 configuration files.

---

---

**See Also:**

*Oracle Secure Enterprise Search Administration Java API Guide* for information about the configuration settings of the Oracle SES 11.2.2.2 object types.

---

---

3. Run the `searchadmin` command of Oracle SES 11.2.2.2 Admin API to store the updated object type configuration settings in the Oracle SES 11.2.2.2 database.

```
ses_home\bin\searchadmin -u username -p password -c http://ses_admin_url/  
search/api/admin/AdminService update objectType -i filename.xml -a overwrite
```

where,

*objectType* is the name of the object type and *filename.xml* is the name of the updated XML file for that object type.

4. Repeat the steps 1, 2, and 3 for the object types - `queryUiConfig`, `clustering`, `crawlerSetting`, and `relevanceRanking`.
5. To copy the configuration settings from the Oracle SES 11.1.2.2 configuration file `QueryPlan.xml` to Oracle SES 11.2.2.2 instance, go to the Oracle SES 11.2.2.2 Administration GUI page Global Settings - Query UI Configuration and update the appropriate configuration settings.

### Restoring Oracle SES 11.1.2.2 if Upgrade Fails

If the upgrade fails, then restore the previous Oracle SES release (11.1.2.2) instance from the backup that was taken before starting the upgrade process.

#### To restore Oracle SES from backup using the zip command:

1. Delete the Oracle home, `oradata`, and `oraInventory` directories.
2. Execute the following commands to restore the Oracle SES 11.1.2.2 instance files that were backed up before starting the upgrade process as described in the section "[Back Up the Existing Oracle SES Instance](#)":

```
unzip ses_orabase.zip  
unzip ses_orahome.zip  
unzip ses_orainv.zip  
unzip ses_oradat.zip
```

After restoring the previous release Oracle SES instance, you can retry the Oracle SES upgrade.

### Post-upgrade Tasks

This section describes the procedures that must be performed after the upgrade process completes.

This section contains the following topics:

- (Optional) Running the SQL script eq0flat\_attr.sql
- (Optional) Configuring Secure Sockets Layer for Oracle SES
- (Optional) Configuring Oracle Single Sign-On for Oracle SES

#### (Optional) Running the SQL script eq0flat\_attr.sql

You may run the optional post-upgrade SQL script eq0flat\_attr.sql, so as to improve the crawler performance. Make sure that no crawling process or query is running when this script is being executed.

#### To run the SQL script eq0flat\_attr.sql:

1. Connect to the Oracle SES 11.2.2.2 database as the SES admin user by using sqlplus:

```
oracle_home\bin\sqlplus "searchsys/SES_admin_password as sysdba"
```

2. Run the SQL script file eq0flat\_attr.sql present in the Oracle SES 11.2.2.2 instance directory ses\_home\search\admin\scripts.

```
SQL> @eq0flat_attr.sql
```

---



---

#### Note:

The SQL script eq0flat\_attr.sql may take several minutes to complete. You can monitor the progress of this script by opening another sqlplus session as SES admin user and periodically checking the output of the script:

```
SQL> SELECT count(*) FROM eq$attr_val_tab;
```

---



---

#### (Optional) Configuring Secure Sockets Layer for Oracle SES

As Oracle SES uses Oracle HTTP Server, Oracle recommends that Oracle SES be configured to use Secure Sockets Layer (SSL) with the client-side authentication for communication with the Oracle HTTP Server. If you have configured SSL for Oracle SES 11.1.2.2, then you must manually reconfigure SSL for Oracle SES 11.2.2.2. You can configure SSL using the WebLogic Administration Console. Refer to the section "SSL and HTTPS Support in Oracle Secure Enterprise Search" of *Oracle Secure Enterprise Search Administrator's Guide* for the steps to configure SSL for Oracle SES.

#### (Optional) Configuring Oracle Single Sign-On for Oracle SES

If you have configured Oracle Single Sign-On (SSO) for Oracle SES 11.1.2.2, then after upgrading to Oracle SES 11.2.2.2, you must manually reconfigure SSO for Oracle SES 11.2.2.2. You can configure SSO using the WebLogic Server Administration Console. Refer to the section "Configuring Secure Search with OracleAS Single Sign-On" of *Oracle Secure Enterprise Search Administrator's Guide* for the steps to configure SSO for Oracle SES.

## Starting and Stopping Oracle SES Instance

You can start and stop the Oracle SES instance (Oracle SES server, Oracle ESS server, WebLogic server, and Oracle Database server) using any of the following methods:

- [Using WebLogic Administration Console](#)
- [Using WebLogic Server scripts](#)
- [Using searchctl Command](#)

### Using WebLogic Administration Console

You can start and stop the Oracle SES middle tier components (WebLogic Server, Oracle ESS Server, and Oracle SES Server) using the WebLogic Administration Console.

### Using WebLogic Server scripts

You can use the following WebLogic Server scripts to start and stop the Oracle SES middle tier components (WebLogic Server, Oracle ESS Server, and Oracle SES Server):

WebLogic Server Script	Description
<code>wls_domain_home\ses_domain_name\startWebLogic</code>	Start the WebLogic server
<code>wls_domain_home\ses_domain_name\bin \startManagedWebLogic ess_server_name</code>	Start the Oracle ESS server
<code>wls_domain_home\ses_domain_name\bin \startManagedWebLogic ses_server_name</code>	Start the Oracle SES server
<code>wls_domain_home\ses_domain_name\bin\stopWeblogic</code>	Stop the WebLogic server
<code>wls_domain_home\ses_domain_name\bin \stopManagedWebLogic ess_server_name admin_URL user_name password</code>	Stop the Oracle ESS server
<code>wls_domain_home\ses_domain_name\bin \stopManagedWebLogic ses_server_name admin_URL user_name password</code>	Stop the Oracle SES server

### Using searchctl Command

You can use the `searchctl` command for starting and stopping the Oracle SES instance, only when both the Oracle Database and the WebLogic Server middle tier are installed by selecting the Oracle SES installation option **Install and configure Oracle Secure Enterprise Search with Database and Middle Tier**.

---

#### Note:

The `searchctl` command is not supported by Oracle SES if the Oracle SES software is installed by selecting the installation option **Install and configure Oracle Secure Enterprise Search with Middle-Tier** or **Install Oracle Secure Enterprise Search software only**.

---

The `searchctl.bat` executable is located in the `ses_home\bin` directory.

The `searchctl` command syntax is as follows:

Command	Description
<code>searchctl start</code>	Start Oracle SES server
<code>searchctl stop</code>	Shut down Oracle SES server
<code>searchctl restart</code>	Restart Oracle SES server
<code>searchctl start_midtier</code>	Start WebLogic Server middle tier
<code>searchctl stop_midtier</code>	Shut down WebLogic Server middle tier
<code>searchctl restart_midtier</code>	Restart WebLogic Server middle tier
<code>searchctl start_backend</code>	Start Oracle Database server
<code>searchctl stop_backend</code>	Shut down Oracle Database server
<code>searchctl restart_backend</code>	Restart Oracle Database server
<code>searchctl startall</code>	Start Oracle SES server, WebLogic Server middle tier, and Oracle Database server
<code>searchctl stopall</code>	Stop Oracle SES server, WebLogic Server middle tier, and Oracle Database server
<code>searchctl restartall</code>	Restart Oracle SES server, WebLogic Server middle tier, and Oracle Database server

## What to Do Next

To become familiar with Oracle Secure Enterprise Search, Oracle suggests that you complete the following tasks:

- Follow the Oracle SES tutorial:
  - [http://www.oracle.com/pls/topic/lookup?ctx=E35215-01&id=tut\\_ses\\_administration](http://www.oracle.com/pls/topic/lookup?ctx=E35215-01&id=tut_ses_administration)
- Log on to the Oracle SES Administration GUI, using the user name and password set during the installation. With the Administration GUI you can:
  - Define sources to search
  - Configure and schedule the crawling of the sources
  - Monitor the status and performance of crawling and search operations

Click the Help link on the top right corner of any page in the Administration GUI for context-sensitive help.

- In a production environment, where a load balancer or other monitoring tools are used to ensure system availability, Oracle SES can also be easily monitored using the URL: `http://host:port/monitor/check.jsp`. When the Oracle SES instance is available, the URL displays the message:

```
Oracle Secure Enterprise Search instance is up.
```

---

---

**Note:**

This message is not translated to other languages, because system monitoring tools may byte-compare this string.

---

---

If the Oracle SES instance is not available because the database server is down, but the WebLogic server middle tier is running, then the URL displays the message:

```
Oracle Secure Enterprise Search instance is down !!!
```

If the Oracle SES instance is not available because the WebLogic server middle tier is down, then the URL displays either the connection error or the HTTP error code 503.

## Additional Resources

To download free release notes, installation documentation, white papers, or other collateral, visit Oracle Technology Network (OTN). You must register online before using OTN. Registration for OTN is free and can be done at

<http://www.oracle.com/technetwork/community/join/index.html>

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Oracle® Secure Enterprise Search Installation and Upgrade Guide, 11g Release 2 (11.2.2.2) for Microsoft Windows (64-Bit)  
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