

# Oracle® Secure Enterprise Search

Quick Installation Guide

10g Release 1 (10.1.6) for AIX 5L Based Systems (64-Bit)

**B28818-01**

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This document describes how to install Oracle Secure Enterprise Search (SES). It includes the following sections:

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## System Requirements

Following are the software requirements:

1. Oracle SES can be installed on one of the following operating system versions:
  - AIX 5.2 ML01 (64-bit)
  - AIX 5.3 (64-bit)
2. The following filesets must be installed and committed:
  - bos.adt.base
  - bos.adt.lib
  - bos.adt.libm
  - bos.perf.libperfstat
  - bos.perf.perfstat
  - bos.perf.proctools

To ensure that the system meets these requirements, perform the following steps:

1. To determine which version of AIX is installed, enter the following command:

```
# oslevel -r  
5200-01
```

If the operating system version is lower than AIX 5.2.0.0 Maintenance Level 1 (5200-01), upgrade your operating system to this level or higher. AIX maintenance packages are available from the following IBM Web site:

<https://techsupport.services.ibm.com/server/aix.fdc>

2. To determine whether the required filesets are installed and committed, enter the following command:

```
# lslpp -l bos.adt.base bos.adt.lib \  
bos.adt.libm bos.perf.perfstat \  
bos.perf.libperfstat bos.perf.proctools
```

If a fileset is not installed and committed, then install it from the operating system CD-ROM. See your operating system or software documentation for information about installing filesets.

Oracle SES requires a minimum of 4 GB of disk space. This includes 3 GB to install and approximately 500 MB to create the initial Oracle SES index.

Additional Oracle SES requirements are based on the amount of data that you need to search. Here are some configuration examples:

To index 100,000 documents:

- 6 GB disk space
- 1 GB RAM

The system must meet the following minimum hardware requirements:

- 512 MB of physical RAM
- Swap space equal to twice the size of RAM or 2 GB (2097152 KB), whichever is smaller
- 400 MB of disk space in the /tmp directory
- Between 3 GB and 4 GB of disk space for the Oracle software, depending on the installation type and platform.

To ensure that the system meets these requirements, perform the following steps:

1. To determine the physical RAM size, enter the following command:

```
# /usr/sbin/lssattr -E -l sys0 -a realmem
```

If the size of the physical RAM installed in the system is less than 512 MB, you must install more memory before continuing.

2. To determine the size of the configured swap space, enter the following command:

```
# /usr/sbin/lssps -a
```

3. To determine the amount of free disk space available in the /tmp directory, enter the following command:

```
# df -k /tmp
```

If there is less than 400 MB of disk space available in the /tmp directory, complete one of the following steps:

- Delete unnecessary files from the /tmp directory to achieve the required disk space.
  - Extend the file system that contains the /tmp directory. If necessary, contact your system administrator for information about extending file systems.
4. To determine the amount of free disk on the system, enter the following command:

```
# df -k
```

To index 1,000,000 documents:

- 20 GB disk space
- 6 GB RAM

For installation help, including pre-installation tips, see the Oracle SES tutorial:

<http://st-curriculum.oracle.com/tutorial/SESAdminTutorial/index.htm>

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**Note:** The Oracle SES administration tool and default query application are certified on the following browsers:

- Firefox 1.0, 1.0.1, 1.0.6, 1.0.7, 1.5
  - Internet Explorer 6.0
  - Netscape 7.1, 7.2
  - Mozilla 1.7.3
- 
- 

## Configure Shell Limits and System Configuration Parameters

On AIX systems, you do not need to configure kernel parameters. However, Oracle recommends that you set shell limits and system configuration parameters as described in this section.

### Configure Shell Limits

Verify that the shell limits shown in the following table are set to the values shown. The procedure following the table describes how to verify and set the values.

Shell Limit (As Shown in smit)	Recommended Value
Soft FILE size	-1 (Unlimited)
Soft CPU time	-1 (Unlimited)
	<b>Note:</b> This is the default value.
Soft DATA segment	-1 (Unlimited)
Soft STACK size	-1 (Unlimited)

To view the current value specified for these shell limits, and to change them if necessary, follow these steps:

1. Enter the following command:

```
# smit chuser
```

2. In the **User NAME** field, enter the user name of the Oracle software owner, for example `oracle`.
3. Scroll down the list and verify that the value shown for the soft limits listed in the previous table is -1.  
If necessary, edit the existing value.
4. When you have finished making changes, press F10 to exit.

## Configure System Configuration Parameters

Verify that the maximum number of processes allowed per user is set to 2048 or greater, as follows:

1. Enter the following command:

```
# smit chgsys
```

2. Verify that the value shown for **Maximum number of PROCESSES allowed per user** is greater than or equal to 2048.  
If necessary, edit the existing value.
3. When you have finished making changes, press F10 to exit.

## Installing on a Port Number Less Than 1024

Oracle SES must be installed by a non-root user. On UNIX platforms, only root users can bind to ports less than 1024. To install Oracle SES on a port number less than 1024, follow these steps:

1. During installation, specify the port (for example, 80).
2. After the installation is complete, log in as the root user.
3. Run the following commands:

```
chgrp -R root $ORACLE_HOME/jdk  
$ORACLE_HOME/bin/searchctl start
```

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### Note:

- The `searchctl start` command must be run by a root user. However, the `searchctl stop` command can be run by either a root user or the user who installed Oracle SES.
  - `$ORACLE_HOME` represents the directory where Oracle SES was installed.
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If your installation completes on a port greater than 1024 and you want to change to a port less than 1024, then take the following steps:

1. Shutdown the middle tier with the following command:

```
$ORACLE_HOME/bin/searchctl stop
```

2. Edit the value for the port attribute in `$ORACLE_HOME/oc4j/j2ee/OC4J_SEARCH/config/http-web-site.xml`. (Ensure that the new port is not already in use.)
3. Log in as the root user.
4. Run the following commands:

```
chgrp -R root $ORACLE_HOME/jdk  
$ORACLE_HOME/bin/searchctl start
```

## Mounting the DVD

Follow these steps if your computer does not automount the DVD:

1. If necessary, enter a command similar to following to unmount the currently mounted disc, then remove it from the drive:

```
# umount /dvd
```

In this example, `/dvd` is the mount point directory for the DVD drive.

2. Insert the disc into the DVD.
3. To mount the disc, enter a command similar to the following:

```
# /usr/sbin/mount -rv cdrfs /dev/cd0 /dvd
```

## Running the rootpre.sh Script

The root user is required to perform certain preinstallation operating system preparations. The root user should run the shell script `rootpre.sh` before the Oracle SES installation.

To run the `rootpre.sh` script, use the following procedure:

1. Switch user to root:

```
$ su - root
```

2. Run `rootpre.sh`:

```
# /dvd/rootpre/rootpre.sh
```

3. Exit from the root account:

```
# exit
```

## Installing Oracle Secure Enterprise Search

For easy instructions on installing Oracle SES, see the Installation Tips tutorial:

<http://st-curriculum.oracle.com/tutorial/SESAdminTutorial/index.htm>

In the following instructions, the disc mount point is referred to as `/dvd`. If your mount point is different, then substitute the correct mount point name for all references to `/dvd`.

To start the installer:

1. Ensure that you have checked all the minimum requirements, as described in ["System Requirements"](#).
2. Log in to the computer as the user who will install Oracle SES.
3. Insert the Oracle Secure Enterprise Search DVD.
4. If your computer does not have automount, then see ["Mounting the DVD"](#) for steps on mounting the DVD manually.
5. Start up the installer:

```
prompt> cd  
prompt> /dvd/runInstaller
```

This launches Oracle Universal Installer.

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**Note:** Do not run the installer from the mount point directory. The `cd` command changes your current directory to your home directory, so you do not start the installer from the mount point.

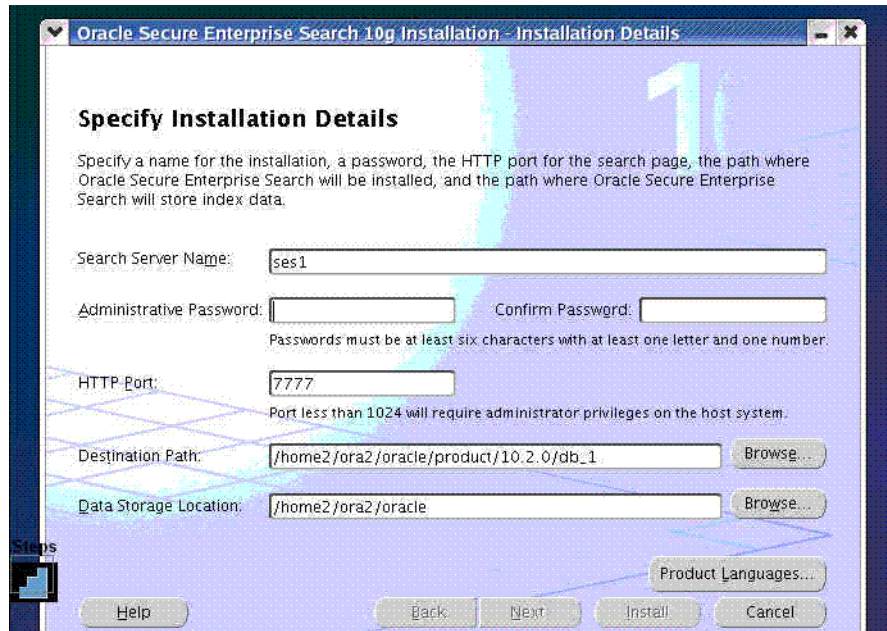
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In the Oracle Universal Installer, the only value that you must specify is the administrative password. The remaining values are set to a default, but they can be overridden. Following is the list of the installation parameters:

- **Search Server Name:** Name for your search server.
- **Administrative Password:** The password that you will later use to log on to the administration tool.
- **HTTP Port:** The port on which the Oracle SES middle tier will listen. For example, if you installed Oracle SES on host `myhost.oracle.com` and you specify port 7890, then your search page URL will be `http://myhost.oracle.com:7890/search/query/search`.
- **Destination Path:** The location where Oracle SES software is installed
- **Data Storage Location:** The location where Oracle SES will store its data.

The following screenshot shows the Oracle Universal Installer screen.



## Removing Oracle Secure Enterprise Search

To remove Oracle SES, run `$ORACLE_HOME/install/deinstall_ses` as the user who installed Oracle SES.

## Restarting Oracle Secure Enterprise Search

The tool for starting and stopping the search engine is `searchctl`. To restart Oracle SES after rebooting, navigate to the `$ORACLE_HOME/bin` directory where Oracle SES is installed and run `searchctl startall`.

For detailed steps, see the Startup / Shutdown lesson in the Oracle SES tutorial:

<http://st-curriculum.oracle.com/tutorial/SESAdminTutorial/index.htm>

## What to Do Next?

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

- Follow the Oracle Secure Enterprise Search tutorial:  
<http://st-curriculum.oracle.com/tutorial/SESAdminTutorial/index.htm>
- Log in to the Oracle SES administration tool, using the user name and password set in the installation. With the administration tool, you can:
  - Define sources to search.
  - Configure and schedule the crawling of the sources.
  - Monitor the status and performance of crawling and search.

Click the **Help** link in the top right corner of any page in the administration tool for context-sensitive help.

- Read the *Oracle Secure Enterprise Search Administrator's Guide*.
- 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 through the following URL

`http://host:port/monitor/check.jsp`

The URL should return the following message: **Oracle Secure Enterprise Search instance is up.**

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

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If Oracle Secure Enterprise Search is not available, then the URL returns either a 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 is free and can be done at

<http://www.oracle.com/technology/membership/>

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/technology/documentation>

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## Quick Reference

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Access technical resources for developers	<a href="http://www.oracle.com/technology/index.html">http://www.oracle.com/technology/index.html</a>
Access information about technical support	<a href="http://www.oracle.com/support">http://www.oracle.com/support</a>
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