



Installing Cisco Prime Access Registrar 6.1

This chapter provides information about installing Cisco Prime Access Registrar software. The software is available in DVD-ROM form and can also be downloaded from the Cisco.com website. The installation instructions differ slightly depending on whether you install the software from the Prime Access Registrar DVD-ROM or from downloaded software.



Note

Prime Access Registrar can be used with Red Hat Enterprise Linux 5.3/5.4/5.5/6.0/6.1/6.2 32-bit /64-bit operating system (with 32-bit library is only for 64-bit operating system) using kernel 2.6.18-128.el5 or later versions of 2.6, and Glibc version: glibc-2.5-34 or later.

This chapter contains the following sections:

- [Installing the Prime Access Registrar 6.1 License File, page 2-1](#)
- [Installing Prime Access Registrar 6.1 Software on Linux, page 2-2](#)



Note

For installing Prime Access Registrar, we have set `/opt/CSCOar` as the install location. However, you can change the install location as required.

Installing the Prime Access Registrar 6.1 License File

You must have a license file in a directory on the Prime Access Registrar machine before you attempt to install Prime Access Registrar software. After purchasing Prime Access Registrar, you will receive a license file in an e-mail attachment. Save or copy this license file to a directory on the Prime Access Registrar workstation. If you have not installed the Prime Access Registrar license file before beginning the software installation, the installation process will fail.

You can store the Prime Access Registrar license file in any directory on the Prime Access Registrar machine. During the installation process, you will be asked the location of the license file, and the installation process will copy the license file to the `/opt/CSCOar/license` directory or to the base installation directory you specify when you install the software if you are not using the default installation location.

The license file might have the name `ciscoar.lic`, but it can be any filename with the suffix `.lic`. To install the Prime Access Registrar license file, you can copy and paste the text into a file, or you can simply save the file you receive in e-mail to an accessible directory.

**Note**

Cisco Prime Access Registrar can be used with Red Hat Enterprise Linux 5.3/5.4/5.5/6.0/6.1/6.2 32-bit /64-bit operating system using kernel 2.6.18-128.el5 or later versions of 2.6, and Glibc version: glibc-2.5-34 or later versions of 2.5. When you use 64-bit operating system, ensure that 32-bit libraries are installed as per the recommendations at [Installing Prime Access Registrar 6.1 Software on Linux, page 2-2](#).

**Note**

Prime Access Registrar 6.1 evaluation license can be generated using your Cisco.com account in the Product License Registration tool at <http://www.cisco.com/web/go/license/index.html>. The evaluation license is valid only for 90 days. The generated Prime Access Registrar license works for Linux servers.

Installing Prime Access Registrar 6.1 Software on Linux

This section describes the software installation process when installing Prime Access Registrar software on a Linux workstation for the first time. This section includes the following subsections:

- [Deciding Where to Install, page 2-2](#)
- [Installing Downloaded Software, page 2-3](#)
- [Installing Cisco Prime Access Registrar Software from DVD-ROM, page 2-3](#)
- [Common Linux Installation Steps, page 2-4](#)

**Tips**

Before you begin to install the software, check your workstation's **/etc/group** file and make sure that group **staff** exists. The software installation will fail if group **staff** does not exist before you begin.

**Note**

When you install Prime Access Registrar on RHEL (64-bit Operating System), you must download the necessary rpm files and install to ensure that the libncurses.so (version 5.5 or above) and libnssutil3.so library files are available in the **/usr/lib** directory. Also, you need to install **glibc-32bit-2.10.1-10.5.1.x86_64.rpm** rpm file so that installation on Linux can be completed successfully.

Deciding Where to Install

Before you begin the software installation, you should decide where you want to install the new software. The default installation directory for Cisco Prime Access Registrar software is **/opt/CSCOar**. You can use the default installation directory, or you can choose to install the Prime Access Registrar software in a different directory.

Installing Downloaded Software

This section describes how to uncompress and extract downloaded Prime Access Registrar software and begin the software installation.

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- Step 1** Log into the Prime Access Registrar workstation as a root user.
- Step 2** Change directory to the location where you have stored the uncompressed tar file.
- ```
cd /tmp
```
- Step 3** Use the following command line to uncompress the tarfile and extract the installation package files.

```
zcat CSCOar-6.1.0.0-sol10-K9.tar.gz | tar xvf -
```

**Step 4** Enter the following command to begin the installation:

```
pkgadd -d /tmp CSCOar
```

where */tmp* is the temporary directory where you stored and uncompressed the installation files.

**Step 5** Proceed to [“Common Linux Installation Steps”](#) section on page 2-4.

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## Installing Cisco Prime Access Registrar Software from DVD-ROM

The following steps describe how to begin the software installation process when installing software from the Cisco Prime Access Registrar DVD-ROM. If you are installing downloaded software, proceed to [“Installing Downloaded Software”](#) section on page 2-3.

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- Step 1** Place the DVD-ROM in the Prime Access Registrar workstation DVD-ROM drive.
- Step 2** Log into the Prime Access Registrar workstation as a root user and find a temporary directory, such as */tmp*, to store the Linux installation file.



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**Note** The temporary directory requires at least 70 MB of free space.

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- Step 3** Change directory to the CD-ROM.

```
cd /cdrom/cdrom0/kit/linux-2.6
```

**Step 4** Copy the *CSCOar-6.1.0.0-lnx26-install-K9.sh* file to the temporary directory.

```
cp CSCOar-6.1.0.0-lnx26-install-K9.sh /tmp
```

**Step 5** Change the permissions of the *CSCOar-6.1.0.0.-lnx26-install-K9.sh* file to make it executable.

```
chmod 777 CSCOar-6.1.0.0-lnx26-install-K9.sh
```

**Step 6** Run set SELinux to permissive mode:

```
setenforce 0
```

**Note**

The above command will set SELinux to permissive mode temporarily until you reboot the system. To start the system in permissive mode permanently, edit `/etc/selinux/config` and change `SELINUX=enforcing` to `SELINUX=permissive` and reboot the system.

To continue the installation, proceed to [“Common Linux Installation Steps”](#) section on page 2-4.

## Common Linux Installation Steps

This section describes how to install the downloaded Prime Access Registrar software for Linux and begin the software installation.

**Note**

The Prime Access Registrar Linux installation automatically installs **aregcmd** and **radclient** as setgid programs in group **adm**.

**Step 1** Log into the Prime Access Registrar workstation as a root user.

**Step 2** Change the directory to the location where you have stored the **CSCOar-6.1.0.0-lnx26-install-K9.sh** file.

```
cd /tmp
```

**Step 3** Enter the name of the script file to begin the installation:

```
./CSCOar-6.1.0.0-lnx26-install-K9.sh
```

```
Name : CSCOar Relocations: /opt/CSCOar
Version : 6.1.0.0 Vendor: Cisco Systems, Inc.
Release : 1313485543 Build Date: Mon 28 Oct 2013 02:18:57 AM PDT
Install date: (not installed) Build Host: harvey-ar1
Signature : (none)
and accounting server.
build_tag: [Linux-2.6.20, official]
```

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```
Where do you want to install <CSCOar>? [/opt/CSCOar] [?,q]
```

You will encounter the following error, if you fail to install the RedHat Enterprise Linux 5.x compatible SCTP library which is a prerequisite for Cisco AR 5.0.0.1 or later installation:

The following library required for proper operation of Cisco Prime Access Registrar is missing:

```
/usr/lib/libsctp.so => SCTP library
```

Please install a RedHat Enterprise Linux 5.x compatible SCTP library

prior to installing Cisco Prime Access Registrar.

- Step 4** Press **Enter** to accept the default location of `/opt/CSCOAr`, or enter a different directory to be used as the base installation directory.

Cisco Prime Access Registrar requires FLEXlm license file to operate. A list of space delimited license files or directories can be supplied as input; license files must have the extension ".lic".

Where are the FLEXlm license files located? [] [?,q]

- Step 5** Enter the directory where you have stored the Prime Access Registrar license file.

Cisco Prime Access Registrar provides a Web GUI. It requires J2RE version 1.6.\* to be installed on the server.

If you already have a compatible version of J2RE installed, please enter the directory where it is installed. If you do not, the compatible J2RE version can be downloaded from:

<http://java.sun.com/>

Where is the J2RE installed? [] [?,q]

The J2RE is required to use the Cisco Prime Access Registrar GUI. If you already have a Java 2 platform installed, enter the directory where it is installed.



**Note**

If you do not provide the JRE path, or if the path is empty or unsupported, the installation process exits. Prime Access Registrar requires either JRE 1.6.x or JRE 1.7.x version.

If you are not using ORACLE, press Enter/Return to skip this step. ORACLE installation directory is required for ODBC configuration. ORACLE\_HOME variable will be set in `/etc/init.d/arserver` script

Where is ORACLE installed? [] [?,q]



**Note**

For OCI related services, install Oracle client version 10.2.0.1.0, 11.1.0.6.0, or 11.2.0.1.0 for Linux. For ODBC related services, install Oracle 10g client for Linux using `10201_client_linux32.zip` and `instantclient-basic-linux32-10.1.0.5-20060511.zip`.

- Step 6** Enter the location where you have installed Oracle, otherwise press **Enter**.

If you want to learn about Cisco Prime Access Registrar by following the examples in the Installation and Configuration Guide, you need to populate the database with the example configuration.

Do you want to install the example configuration now? [n]: [y,n,?,q] y

- Step 7** Specify whether you want to install SIGTRAN\_M3UA. If you select the option 'Y', SIGTRAN-M3UA process will run.

Do you want to install SIGTRAN-M3UA functionality now? [n]: [y,n,?,q] n

If you want to learn about Cisco Prime Access Registrar by following the examples in the Installation and Configuration Guide, you need to populate the database with the example configuration.

NOTE: If you are using DIRECTOR/DIRECTOR NEXT GEN Licenses, please do not try installing Example configuration, Give the

option for Example configuration as "n"



**Note** You must install the rpm versions relevant to the RHEL OS versions while installing Prime Access Registrar. For more information, see [“Prerequisites, page 1-2.”](#)

**Step 8** When prompted whether to install the example configuration now, enter **Y** or **N** to continue.



**Note** You can delete the example configuration at any time by running the command `/opt/CSCOar/usrbin/aregcmd -f /opt/CSCOar/examples/cli/delete-example-configuration.rc`.

```

unpack the rpm file done
Preparing... ##### [100%]
 1:CSCOarui-add ##### [100%]
setting up the web server.....
configuring the web server.....
extracting the web application.....
Preparing... ##### [100%]
 1:CSCOar ##### [100%]
relink arserver
JAVA_ROOT /opt/jdk1.6.0_17
JAVA_HOME /opt/jdk1.6.0_17
setting ORACLE_HOME and JAVA_HOME variables in arserver
ORACLE_HOME
JAVA_HOME /opt/jdk1.6.0_17
set JAVA_HOME
flushing old replication archive
creating initial configuration database
Rollforward recovery using "/opt/CSCOar/data/db/vista.tjf" started Wed Nov 6 17:09:07 2013
Rollforward recovery using "/opt/CSCOar/data/db/vista.tjf" finished Wed Nov 6 17:09:07
2013
add-example-config y
ln: creating symbolic link `/opt/CSCOar/lib/libsctp.so.1' to `/opt/CSCOar/lib/libsctp.so':
File exists
calling gen-tomcat
We will now generate an RSA key-pair and self-signed certificate that
may be used for test purposes
Generating a 1536 bit RSA private key
.++++
.....++++
writing new private key to '/cisco-ar/certs/tomcat/server-key.pem'

Server self-signed certificate now resides in /cisco-ar/certs/tomcat/server-cert.pem
Server private RSA key now resides in /cisco-ar/certs/tomcat/server-key.pem
Remember to install additional CA certificates for client verification
Tomcat private RSA key now resides in /cisco-ar/certs/tomcat/server-key.pem
Starting Cisco Prime Access Registrar Server Agent...completed.
The Radius server is now running

hostname root /tmp###

```



**Note** After the installation process, run the command `service iptables stop` to disable the iptables firewall.

**Note**

If the Prime Access Registrar server restarts and the RADIUS process is not started on installation of Prime Access Registrar 6.1 in RHEL 5.3/5.4/5.5/6.0/6.1/6.2, you must create a softlink to libscpt.so file. See [Creating a Softlink to libscpt.so, page 2-7](#) for more details.

## Creating a Softlink to libscpt.so

Complete the following steps to create a softlink to libscpt.so file.

- 
- Step 1** Change the directory to **/cisco-ar/lib**
- ```
cd /cisco-ar/lib
```
- Step 2** Create a soft link to libscpt.so file.
- ```
ln -s libscpt.so libscpt.so.1
```
- Step 3** Restart the Prime Access Registrar server using the following command:
- ```
/cisco-ar/bin/arserver restart
```
-

Configuring SNMP

If you choose not to use the SNMP features of Prime Access Registrar, the installation process is completed. To use SNMP features, complete the configuration procedure described in “[Configuring SNMP](#)” section on page 5-15.

