



# Upgrading Cisco Prime Access Registrar Software

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Cisco Prime Access Registrar 9.1 supports software upgrades from previously installed Prime Access Registrar software while preserving the existing configuration database.



## Note

Configuration for Prepaid billing servers in Access Registrar 3.0 will no longer work in Prime Access Registrar 9.1. If you have been using a Prepaid billing server in Prime Access Registrar 3.0 and are upgrading your software to Prime Access Registrar 9.1, you must remove the Prepaid billing server configuration before installing the Prime Access Registrar 9.1 software. See “Chapter 16, Using Prepaid Billing” in the *Cisco Prime Access Registrar 9.1 User Guide* for detailed instructions on configuring Prepaid billing services for Prime Access Registrar.



## Caution

When upgrade is performed from 32-bit to 64-bit, Prime Access Registrar loses all session information.

This chapter contains the following sections:

- [Software Pre-Upgrade Tasks, page 4-1](#)
- [Upgrading Cisco Prime Access Registrar, page 4-3](#)
- [Software Post-Upgrade Tasks, page 4-6](#)

## Software Pre-Upgrade Tasks

This section describes the tasks that have to be followed before upgrading the Prime Access Registrar software. This section consists of the following subsections:

- [Disabling Replication, page 4-2](#)
- [Backup Copy of Original Configuration, page 4-2](#)
- [Backup MCD File, page 4-3](#)
- [Backup SNMP Configuration, page 4-3](#)

## Disabling Replication

If you are using the Prime Access Registrar replication feature, you must disable it before you begin the upgrade process otherwise the upgrade will fail. When completed, see [“Restarting Replication” section on page 4-8](#) for the correct way to restart replication.

To ensure that replication is disabled, complete the following steps:

- 
- Step 1** Log in as admin and launch **aregcmd**.
- Step 2** Change directory to /radius/replication and examine the RepType property.

### cd /radius/replication

```
[ //localhost/Radius/Replication ]
RepType = None
RepTransactionSyncInterval = 60000
RepTransactionArchiveLimit = 100
RepIPAddress = 0.0.0.0
RepPort = 1645
RepSecret = NotSet
RepIsMaster = FALSE
RepMasterIPAddress = 0.0.0.0
RepMasterPort = 1645
Rep Members/
```

Make sure that RepType is set to None.

- Step 3** If you make changes, issue the **save** command, then exit the **aregcmd** command interface.
- Step 4** Restart the server.
- 

## Backup Copy of Original Configuration

The upgrade process displays a message like the following to indicate where a copy of your original configuration has been stored.



### Note

Configuration files, like the tcl script file, are replaced with default files on upgrade. Hence, before upgrading, back up the existing file to prevent any loss of data. After upgrading, replace the /opt/CSCOAr/scripts/radius/tcl/tclscript.tcl with the back up file.

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```
#####

# A backup copy of your original configuration has been
# saved to the file:
#
# /opt/CSCOAr/temp/10062.origconfig-backup
#
#####
```

## Backup MCD File

Prime Access Registrar will prompt you to upgrade from 32-bit to 64-bit architecture, when you upgrade from any earlier version to Prime Access Registrar 9.1. For successful upgrade from 32-bit to 64-bit, MCD backup is required. You must ensure that you take a backup of the MCD file using the following command before uninstalling the previous version:

```
/cisco-ar/bin/mcdadmin -e <path>
```

## Backup SNMP Configuration

To use SNMP features, complete the configuration procedure described in “Configuring SNMP” section in the “Configuring Cisco Prime Access Registrar” chapter of the Cisco Prime Access Registrar 9.1 Administrator Guide.

If you have modified the `snmpd.conf` file in the `/cisco-ar/ucd-snmp/share/snmp` directory, you must back up this file before doing the upgrade process. Uninstallation of Prime Access Registrar removes the `snmpd.conf` file, even if it has been modified.

## Upgrading Cisco Prime Access Registrar

This section describes the upgrade processes on the same server and on a different server. This section consists of the following subsections:

- [Upgrading Cisco Prime Access Registrar on the Same Server, page 4-3](#)
- [Upgrading Cisco Prime Access Registrar on a New Server, page 4-5](#)



### Note

Support for Oracle ODBC has been deprecated from Prime Access Registrar 7.0. Hence, when you upgrade Prime Access Registrar from any earlier version to 7.0 or later, be aware that ODBC support is available only with MySQL configuration and OCI support is available with Oracle configuration.

## Upgrading Cisco Prime Access Registrar on the Same Server

To upgrade the software on the same server:

- 
- Step 1** Ensure that you back up a copy of your original configuration.  
See the “Backing Up the Database” section of the *Cisco Prime Access Registrar 9.1 User Guide*.
- Step 2** Ensure the replication is disabled.  
See “Disabling Replication” section on page 4-2.
- Step 3** If you have installed Prime Access Registrar with SIGTRAN\_M3UA process, ensure that the host name is not set in the HostName/SourceIPAddress field as part of the SIGTRAN\_M3UA server properties. Only IP address must be set as part of the server properties.
- Step 4** If you have modified the `snmpd.conf` file in the `/cisco-ar/ucd-snmp/share/snmp` directory, you must back up this file before doing the upgrade process. Uninstallation of Prime Access Registrar removes the `snmpd.conf` file, even if it has been modified.

**Note**

If you currently use the 3.5.2 Linux version, the **uninstall-ar** program removes **/opt/CSCOAr/data**. Before you run the **uninstall-ar** program, copy the **/opt/CSCOAr/data** directory to a temporary location such as **/tmp**. After you install the upgrade software, move the data directory back to **/opt/CSCOAr/data**.

**Step 5** If you have added any scripts or modified any existing scripts in **/cisco-ar/scripts/radius** directory, you must back up those files before doing the upgrade process.

**Step 6** Remove the old software using the **uninstall-ar** command.

For detailed information about using the **uninstall-ar** command to remove Prime Access Registrar software, see “[Uninstalling Prime Access Registrar 9.1 Software](#)” section on page 3-1.

**Step 7** If you plan to use the Prime Access Registrar SNMP features, disable the current SNMP daemon and prevent the SNMP daemon from restarting after a reboot.

**Step 8** Decide where to install the Cisco Prime Access Registrar software.

The default installation directory for Prime Access Registrar 9.1 software is **/opt/CSCOAr**.

**Note**

If you wish to install Prime Access Registrar in a different directory, you must create a softlink in the default directory to point to the installation directory.

**Step 9** Decide if you want to preserve your existing configuration database.

Preserving your existing configuration database is a compelling reason to upgrade rather than to start anew. The upgrade procedure in this chapter assumes you want to preserve your existing configuration.

**Step 10** Copy the Cisco Prime Access Registrar license file to a location on the Prime Access Registrar workstation directory such as **/tmp**.

**Step 11** Install the Cisco Prime Access Registrar software. For more information, see [Common Installation Steps](#), page 2-4.

**Step 12** During the installation process, you will be prompted to provide the following information for software upgrade:

- Whether to upgrade from 32-bit to 64-bit architecture. If you upgrade from any earlier version to Prime Access Registrar 9.1, the response must be **y** (Yes).

**Note**

Sessions will not be upgraded when you upgrade Prime Access Registrar from 32-bit to 64-bit architecture.

- The location of the MCD backup file. For successful upgrade from 32-bit to 64-bit, MCD backup is required and you must specify the location of the backup file.

**Step 13** If you configured Prime Access Registrar to use SNMP prior to upgrading, after installing Prime Access Registrar 9.1 software, you must copy the backed up **snmpd.conf** file back to the **/cisco-ar/ucd-snmp/share/snmp** directory.

**Step 14** After installing Prime Access Registrar, you must copy back the scripts to **/cisco-ar/scripts/radius** directory.

**Step 15** Restart the Prime Access Registrar server using the following command:


```
/etc/init.d/arsserver restart
```

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## Upgrading Cisco Prime Access Registrar on a New Server

To upgrade the Linux software on a new server follow the following tasks:

### Tasks in the Existing Server

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- Step 1** Ensure that you back up a copy of your original configuration.  
See the “Backing Up the Database” section of the *Cisco Prime Access Registrar 9.1 User Guide*.
- Step 2** Ensure the replication is disabled.  
See “Disabling Replication” section on page 4-2.
- Step 3** If you have installed Cisco Prime AR with SIGTRAN\_M3UA process, ensure that the host name is not set in the HostName/SourceIPAddress field as part of the SIGTRAN\_M3UA server properties. Only IP address must be set as part of the server properties.
- Step 4** If you have modified the **snmpd.conf** file in the **/cisco-ar/ucd-snmp/share/snmp** directory, you must back up this file before doing the upgrade process. The **pkgm** removes the **snmpd.conf** file, even if it has been modified.  
See *Backup SNMP Configuration*, page 4-3.
- Step 5** If you have added any scripts or modified any existing scripts in **/cisco-ar/scripts/radius** directory, you must back up those files before doing the upgrade process. The **uninstall-ar** removes some of the scripts, even if it has been modified in the existing script.
-  **Note** Configuration files, like the tcl script file, are replaced with default files on upgrade. Hence, before upgrading, back up the existing file to prevent any loss of data. After upgrading, replace the **/opt/CSCOar/scripts/radius/tcl/tclscript.tcl** with the back up file.
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- Step 6** Remove the old software using the **uninstall-ar** command.  
For detailed information about using the **uninstall-ar** command to remove Prime Access Registrar Linux software, see “Uninstalling Prime Access Registrar 9.1 Software” section on page 3-1.
- Step 7** Tar the **/opt/CSCOar/data** directory to a temporary location such as **/tmp**.

### Tasks in a New Server

- Step 8** Untar the backup **/opt/CSCOar/data** directory. Copy the SNMP file, PKI directory, and the scripts to the installed base directory (**/opt/CSCOar/**).
- Step 9** Decide where to install the Cisco Prime Access Registrar software.
- Step 10** Copy the Cisco Prime Access Registrar license file to a location on the Prime Access Registrar workstation directory such as **/tmp**.  
For detailed information about the Prime Access Registrar license and how to install the license, see “Cisco Prime Access Registrar 9.1 Licensing” section on page 1-8.

- Step 11** Install the Cisco Prime Access Registrar software. For more information, see [Common Installation Steps, page 2-4](#).
- Step 12** During the installation process, you will be prompted to provide the following information for software upgrade:
- Whether to upgrade from 32-bit to 64-bit architecture. If you upgrade from any earlier version to Prime Access Registrar 9.1, the response must be **y** (Yes).




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**Note** Sessions will not be upgraded when you upgrade Prime Access Registrar from 32-bit to 64-bit architecture.

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- The location of the MCD backup file. For successful upgrade from 32-bit to 64-bit, MCD backup is required and you must specify the location of the backup file.
- Step 13** If you configured Prime Access Registrar to use SNMP prior to upgrading, after installing Prime Access Registrar 9.1 software, you must copy the **snmpd.conf** file back to the **/cisco-ar/ucd-snmp/share/snmp** directory.
- Step 14** After installing Prime Access Registrar, you must copy back the scripts to **/cisco-ar/scripts/radius** directory.
- Step 15** Restart the Prime Access Registrar server using the following command:

```
/etc/init.d/arserver restart
```

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If you wish to upgrade Prime Access Registrar from an earlier version to 9.1 with Smart Licensing enabled:

- You must place the traditional license files for that version in the **\$INSTALLPATH/license** folder and these licenses will be automatically upgraded to smart license. You need not configure them.
- You must ensure that only valid licenses are present in the installation path folder.

## Software Post-Upgrade Tasks

This section provides information about the tasks involved in the Prime Access Registrar software upgrade process. This section consists of the following subsections:

- [Removing Old VSA Names, page 4-7](#)
- [VSA Update Script, page 4-7](#)
- [Configuring SNMP, page 4-8](#)
- [Restarting Replication, page 4-8](#)

## Removing Old VSA Names

The upgrade process provides an analysis of the configuration database, addition of new database elements, and a search for obsolete VSA names. When this is complete, a message like the following is displayed:

```
#####
#
# Sometimes VSAs get renamed from version to version of Cisco Prime AR.
# The upgrade process does not automatically remove the
# old names. The upgrade process has generated a script
# to remove the old names. The script is located in:
#
# /opt/CSCOar/temp/10062.manual-deletes
#
# Review the script to make sure you are not using any of
# these old VSAs. Modify your configuration and your
# scripts to use the new names before you attempt to run
# the script.
#
# To run the removal script, type:
#
# aregcmd -f /opt/CSCOar/temp/10062.manual-deletes
#
#####
```

At this point, you should examine the script produced by the upgrade process to make sure that your site is not using any of the old VSAs. In the example above, the script can be found at **/opt/CSCOar/temp/10062.manual-deletes**.



### Note

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The number preceding **manual.deletes** is produced from the PID of the upgrade process.

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Modify your configuration and your scripts to use the new names before you attempt to run the script generated by the upgrade process.

## VSA Update Script

The upgrade process builds a script you can use to update VSAs in your system.

```
#####
#
# VSAs for the old Cisco Prime AR version are not updated
# automatically. The upgrade process generated a script
# to perform the update. The script is located in:
#
# /opt/CSCOar/temp/10062.manual-changes
#
# Review the script to make sure it does not conflict with
# any of your VSA changes. Make sure you modify the script,
# if necessary, before you attempt to run it.
#
# To run the update script, type:
#
# aregcmd -f /opt/CSCOar/temp/10062.manual-changes
#
#####
```

- 
- Step 1** Review the script and make sure that the changes it will make do not conflict with any changes you might have made to the VSAs. Modify the script if necessary.
- Step 2** Record the location of the upgrade messages for future reference.

```
#####
#
# These upgrade messages are saved in:
#
#     /opt/CSCOar/temp/10062.upgrade-log
#
#####
```

---

## Configuring SNMP

After installing Prime Access Registrar 9.1 software, you must copy the already copied **snmpd.conf** file back to the **/cisco-ar/ucd-snmp/share/snmp** directory. Restart the Prime Access Registrar server using the following command:

```
/etc/init.d/arserver restart
```

## Restarting Replication

Before you enable replication, you must first upgrade all replication slave servers to the same version of Access Registrar software as the master server. Do not enable replication on the master server until all slave servers have been upgraded.

Use the same process you used to upgrade the master server to upgrade any slave servers. If you retained your configuration on the master, retain the configuration on the slaves, too.

After the same version of Prime Access Registrar software has been installed on all slave servers, you can enable replication on the master server again. After enabling replication on the master server, you can enable replication on each of the slave servers.

To ensure that replication is restarted, complete the following steps:

- 
- Step 1** Log in as admin and launch aregcmd.
- Step 2** Change directory to **/radius/replication** and examine the RepType property.

```
cd /radius/replication
```

```
[ //localhost/Radius/Replication ]
RepType = SMDBR
```

Make sure that RepType is set to None.

- Step 3** If you make changes, issue the save command, then exit the aregcmd command interface.
- Step 4** Restart the server.
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