Installing Broadband Access Center

This chapter describes how to work with the Cisco BAC program to install the Cisco BAC components—RDU, DPE, Cisco Network Registrar Extension Points and Cisco Access Registrar Extension Points.

You can install the Cisco BAC components from the CLI. Both interfaces are supplied with the product.

⚠️
Caution   If you interrupt the installation program after it begins copying files, you must manually clean up the locations of copied files, specifically *BPR_HOME*. For detailed information, see Uninstalling Cisco BAC, page 5-1.

This chapter includes:

Installation Notes

This section describes some notes and recommendations to consider before and during the installation process. Use this information along with the installation startup processes and checklists described in Before Installing Broadband Access Center, page 2-1.

- Be sure to install the RDU before installing the DPE. If you choose to install the DPE without installing the RDU, or without an RDU already installed on your system, the DPE fails to function normally.

- When the program prompts you to enter a value during installation, note that the values in square brackets are default values. If you press **Enter** without entering fresh values, the program takes the default value.

- The installation program, by default, installs the data directory (*BPR_DATA*) in a location other than that of the home directory (*BPR_HOME*). The default location for the data directory is */var/CSCObac*.

  We recommend that the data directory be on a different physical disk than the home directory; for example, */var/disk0/CSCObac*. Your disk should have a free space of minimum 1 GB and maximum of 30 GB. The disk should have at least 1 GB and up to 30 GB of free space.

  The directory specified becomes the top-level directory under which the installation program creates a number of subdirectories; for example, */var/disk0/CSCObac/rdu/db*.

- The installation program, by default, installs the database transaction logs directory (*BPR_DBLOG*) in the same directory as the data directory (*BPR_DATA*). The default location for the database transaction logs is */var/CSCObac*.

  We recommend that you locate the database transaction logs directory on the fastest disk on the system. Also, ensure that 1 GB disk space is available.

- You must enter a listening port number for the RDU. This port is the interface that the RDU uses to communicate with the DPE. The default port is 49187.

- During installation, the program generates a definitions file (*bpr_definitions.sh*), which is copied to the target home directory (*BPR_HOME*). The definition file stores the values for the:

  – Installation location (*BPR_HOME*)

  – Data location (*BPR_DATA*)

  – Database transactions log location (*BPR_DBLOG*)

  – Cisco BAC class path (*BPR_CP*)

  – All installed components (*COMPONENTS*)

  The *bpr_definitions.sh* file is updated whenever new components are installed or added.

Installing Cisco BAC

This section describes the procedures that you follow to install the individual components of Cisco BAC: the RDU, the DPE, Cisco Network Registrar and Cisco Access Registrar.

![Note icon]

Note   To ensure a smooth installation, we recommend that you install the RDU before you install the DPE.

You can install the Cisco BAC components from the CLI, as described in:

- Installing the RDU, page 3-2
- Installing the DPE, page 3-5
- Installing CNR Extension Point, page 3-7
- Installing the CAR Extension Point, page 3-10

Installing the RDU

This section describes how to install the RDU. You must install the RDU on a Solaris 10 server that meets the requirements described in the Minimum Hardware Requirements, page 1-3.

![Note icon]

Note   Before installation, remove */rdu/db* from */var/CSCObac/* directory.

To install RDU:

Step 1   Log in to the intended Cisco BAC host as *root*.

Step 2   At the solaris system prompt, change directory to your CD-ROM drive or other installation media. The installation program, *pkgadd* is at the root of this drive.

Step 3   Enter this command to start the installation program:

```
# pkgadd -d file-path/BAC_3.6_SolarisK9/CSCObac.pkg CSCObac
```

where file-path specifies the complete path to the directory in which the BAC_3.6_SolarisK9 directory has been created.

The installation program verifies that you have installed the required patches to the Solaris operating system. When the verification ends, the following welcome information appears:

```
Welcome to the Cisco Broadband Access Center for TW (BAC 3.6) installation
program. This installation program installs BAC 3.6 on your system.
```

Step 4   Press **Enter** to continue.

The installation program prompts you to select one or more components.

Step 5   Enter **y** and press **Enter** at the RDU prompt.

To skip installing a DPE, CNR extension points and CAR extension points, enter **n** and press **Enter**. You can choose to install these components later.

For example:

```
-------------- Installation Components ------------

Regional Distribution Unit (RDU) (y/n)? [n] y
Device Provisioning Engine (DPE) (y/n)? [n] n
Cisco Network Registrar extension points (y/n)? [n] n
Cisco Access Registrar extension points (y/n)? [n] n
```

Step 6   Enter **y** and press **Enter**.

The program prompts you to confirm the components that you want to install.

```
------------------ Confirmation --------------
Install RDU: y
Install DPE: n
Install CNR_EP: n
Install CAR_EP: n
Is this correct (y/n/q)? [y] y
```

Step 7   Enter **y** and press **Enter** to continue.

The Home Directory Destination prompt appears.

Step 8   To accept the default directory, */opt/CSCObac*, press **Enter**; or enter a different directory.

For example:

```
-------------- Home Directory -----------

    Home Directory [/opt/CSCObac]
```

Step 9   Enter **y** and press **Enter** to confirm the directory.The data directory destination prompt appears. To accept the default directory, */var/CSCObac*, press **Enter**; or enter another directory.

For example:

```
-------------- Data Directory -----------

    DB Data Directory [/var/CSCObac]
```

Step 10   Enter **y** and press **Enter** to confirm the directory.

Step 11   Enter the database transaction logs destination. To accept the default directory, */var/CSCObac*, press **Enter**; or enter another directory.

For example:

```
----------------- DB Log Directory -------------

    DB Logs Directory [/var/CSCObac]
```

Enter **y** and press **Enter** to confirm the directory.

Step 12   Enter the listening port for the RDU. To accept the default value, 49187, press **Enter**; or enter another port number.

> ⚠
>
> **Caution**   If you change the default listening port value, ensure that the new value does not conflict with any existing port assignments. Also, ensure that you configure all DPEs with the correct RDU port number. See the *Cisco Broadband Access Center DPE CLI Reference, Release 3.6,* for details on configuring the DPE.

The installation program obtains the IP address of the RDU automatically. You need not enter this value manually.

For example:

```
------------------ RDU information ----------------

Enter the listening port of Regional Distribution Unit (RDU).

    RDU Listening Port [49187]
```

Step 13   Enter **y** and press **Enter** to confirm the listening port number.

Step 14   Enter the shared secret password that you want to use for authentication between the Cisco BAC servers; the default password is **secret**.

> ✎
>
> **Note**   You must use the same shared secret password for all RDUs and DPEs in your network.

For example:

```
    Enter the Shared Secret Password [secret]
```

Press **Enter** to continue the installation.

Step 15   The program displays the installation parameters that you selected. Enter **y** and press **Enter** to confirm the parameters, and install the RDU component.

For example:

```
------------------- Confirmation ---------------------
Home directory: /opt/CSCObac
DB Data directory: /var/CSCObac
DB Log directory: /var/CSCObac
RDU Port: 49187

    Is this correct (y/n/q)? [y] y
```

Step 16 Enter **y** and press **Enter**.

The program prompts you to continue with the installation.

For example:

```
This package contains scripts which will be executed with super-user
permission during the process of installing this package.
Do you want to continue with the installation of <CSCObac> [y,n,?] y
```

Step 17 Enter **y** and press **Enter**.

After a successful installation, the following message appears:

```
Installation of <CSCObac> was successful.
```

> **Note** When the previously backed-up database is being restored to Cisco BAC 3.6 RDU, the user must run the script *AddProperties.kiwi script*, available in *<file-path>/BAC_3.6_SolarisK9/kiwi/* directory, through the Cisco BAC tools.
>
> Here *<file-path>* specifies the complete path to the directory in which the *BAC_3.6_SolarisK9* directory has been created.

Installing the DPE

This section describes how to install the DPE.

> **Note** Before proceeding to install the DPE, ensure that the RDU resides on your system. For details on installing the RDU, see the .

To install the DPE from the CLI:

Step 1 Log in to the intended Cisco BAC host as *root*.

Step 2 At the Solaris system prompt, change directory to your CD-ROM drive or other installation media. The installation program, *pkgadd,* is at the root of this drive.

Step 3 Enter this command to start the installation program:

pkgadd -d file-path/**BAC_3.6_SolarisK9**/**CSCObac.pkg CSCObac**

where file-path specifies the complete path to the directory in which the BAC_3.6_SolarisK9 directory has been created.

The installation program verifies that you have installed the required patches to the Solaris operating system. When the verification ends, welcome information appears as:

```
Welcome to the Cisco Broadband Access Center for TW (BAC 3.6) installation
program. This installation program installs BAC 3.6 on your system.
```

Step 4 Press **Enter** to continue. The installation program prompts you to select one or more components.

Step 5   Enter **y** and press **Enter** at the DPE prompt.

To skip installing a RDU, CNR extension points and CAR extension points, enter **n** and press **Enter**. You can choose to install these components later.

For example:

```
-------------- Installation Components ------------

Regional Distribution Unit (RDU) (y/n)? [n] n
Device Provisioning Engine (DPE) (y/n)? [y] y
Cisco Network Registrar extension points (y/n)? [n] n
Cisco Access Registrar extension points (y/n)? [n] n
```

Step 6   Confirm the components that you want to install; enter **y** and press **Enter**.

The program prompts you to confirm the components that you want to install.

```
----------------- Confirmation --------------
Install RDU: n
Install DPE: y
Install CNR_EP: n
Install CAR_EP: n
Is this correct (y/n/q)? [y] y
```

Step 7   Enter **y** and press **Enter** to continue.

The Home Directory Destination prompt appears.

Step 8   To accept the default directory, */opt/CSCObac*, press **Enter**; or enter a different directory.

For example:

```
-------------- Home Directory -----------

    Home Directory [/opt/CSCObac]
```

Step 9   Enter **y** and press **Enter** to confirm the directory. The data directory destination prompt appears. To accept the default directory, */var/CSCObac*, press **Enter**; or enter another directory.

For example:

```
-------------- Data Directory -----------

    DB Data Directory [/var/CSCObac]
```

Step 10   To confirm the directory, press **y** and **Enter**. The program prompts you to enter the RDU information required to install DPE.

Step 11   Enter the IP address (or hostname) and the listening port of the host on which you have installed the RDU. To accept the default information, press **Enter**; or enter alternative information.

For example:

```
----------------- CNR EP Info --------------

    Enter RDU IP Address or Hostname [bacdev3-t5240-1-d3]
    Enter RDU Listening Port [49187
```

Step 12   Enter the IP address (or hostname) and the listening port of the host on which you have installed the RDU. To accept the default information, press Enter; or enter alternative information.

For example:

```
------------------ DPE Information ---------------
Enter RDU IP Address or Hostname [bacdev3-t5240-1-d3]
Enter RDU Listening Port [49187]
```

Step 13   Enter the shared secret password that you want to use for authentication between the Cisco BAC servers; the default password is secret. Press **Enter** to continue.

✎

Note   You must use the same shared secret password for all RDUs and DPEs in your network.

For example:

```
Enter the Shared Secret Password [secret]
Press Enter to continue the installation.
```

The program prompts you to continue with the installation.

For example:

```
This package contains scripts which will be executed with super-user
permission during the process of installing this package.
Do you want to continue with the installation of <CSCObac> [y,n,?] y
```

Step 14   Enter **y** and press **Enter**.

After a successful installation, the following message appears:

```
Installation of <CSCObac> was successful.
```

Installing CNR Extension Point

Install Cisco BAC extensions on all Cisco Network Registrar servers in your Cisco BAC environment. If you are deploying Cisco BAC in a failover environment, you also must install the extensions on the failover servers. After you install extensions, you must configure them.

CNR Extension Point Prerequisite

As a prerequisite to install CNR_EP, you must have installed Cisco Network Registrar. For Cisco Network Registrar installation information, see Installation Guide for Cisco Network Registrar, Release 7.2.

This section explains how to install, configure, and validate these extensions.

✎

Note   Cisco BAC 3.6 has been tested with Cisco Network Registrar 7.2. Cisco Network Registrar 7.2 has the fix for co-resident Cisco Network Registrar and Cisco Access Registrar.

We recommend that you configure the Cisco Network Registrar server to use a static IP address.

To install the CNR Extension Point from the CLI:

Step 1   Log in to the intended Cisco BAC host as *root*.

Step 2   At the Solaris system prompt, change directory to your CD-ROM drive or other installation media. The installation program, *pkgadd* is at the root of this drive.

Step 3   Enter this command to start the installation program:

```
# pkgadd -d file-path/BAC_3.6_SolarisK9/CSCObac.pkg CSCObac
```

where file-path specifies the complete path to the directory in which the BAC_3.6_SolarisK9 directory has been created.

The installation program verifies that you have installed the required patches to the Solaris operating system. When the verification ends, the following welcome information appears:

```
Welcome to the Cisco Broadband Access Center for TW (BAC 3.6) installation
program. This installation program installs BAC 3.6 on your system.
```

Step 4   Press **Enter** to continue.

The installation program prompts you to select one or more components.

Step 5   Enter **y** and press **Enter** at the CNR prompt.

To skip installing a RDU, DPE and CAR extension points, enter **n** and press **Enter**. You can choose to install these components later.

For example:

```
-------------- Installation Components ------------

Regional Distribution Unit (RDU) (y/n)? [n] n
Device Provisioning Engine (DPE) (y/n)? [n] n
Cisco Network Registrar extension points (y/n)? [y] y
Cisco Access Registrar extension points (y/n)? [n] n
```

Step 6   Enter **y** and press **Enter**.

The program prompts you to confirm the components that you want to install.

```
----------------- Confirmation --------------
Install RDU: n
Install DPE: n
Install CNR_EP: y
Install CAR_EP: n
Is this correct (y/n/q)? [y] y
```

Step 7   Enter **y** and press **Enter** to continue.

The Home Directory Destination prompt appears. To accept the default directory, */opt/CSCObac*, press **Enter**; or enter a different directory.

For example:

```
-------------- Home Directory -----------

    Home Directory [/opt/CSCObac]
```

Step 8   Enter **y** and press **Enter** to confirm the directory.

The data directory destination prompt appears.

Step 9   To accept the default directory, */var/CSCObac*, press **Enter**; or enter another directory.

For example:

```
-------------- Data Directory -----------

    DB Data Directory [/var/CSCObac]
```

Step 10   Enter **y** and press **Enter** to confirm the directory.

The program prompts you to enter information on the RDU required to install the extensions.

Step 11   Enter the IP address (or hostname) and the listening port of the host on which you have installed the RDU. Press **Enter** to accept the default information,; or enter alternative information.

For example:

```
----------------- CNR EP Info ---------------

    Enter RDU IP Address or Hostname [bacdev3-t5240-1-d3]
    Enter RDU Listening Port [49187]
```

You are then prompted to enter the name of the extension point provisioning group.

The program prompts you to confirm the installation.

For example:

```
----------------- Confirmation -------------------
RDU IP Address: 10.10.10.10
RDU IP Port: 49187
Extention Point Provisioning Group: default

Is this correct (y/n/q)? [y]
```

Step 12   Press **y** and **Enter** to confirm and continue.

The program prompts you to continue with the installation.

For example:

```
This package contains scripts which will be executed with super-user
permission during the process of installing this package.
Do you want to continue with the installation of <CSCObac> [y,n,?] y
```

Step 13   Enter **y** and press **Enter**.

After a successful installation, the following message appears:

```
Installation of <CSCObac> was successful.
```

Enabling CNR Extension Point

To enable the CNR Extension Point.

Step 1 After installing CNR Extension Point, run the below command to enable the CNR extension points:

```
NR_HOME/local/usrbin/nrcmd -s < BPR_HOME/cnr_ep/bin/bpr_cnr_enable_extpts.nrcmd
```

In case the default setting are changed, use the below options instead of -s.

List of options are:

```
-C <cluster>   the Cluster to log in to
-N <name>      the Name to log in as
-P <password> the Password to log in with
```

Step 2 And then restart the Cisco Network Registrar server using the below command:

```
/etc/init.d/nwreglocal stop
/etc/init.d/nwreglocal start
```

Note Before you can use the Cisco Network Registrar server, you must configure scopes required for DHCP server.

Installing the CAR Extension Point

Install Cisco BAC extensions on all Cisco Access Registrar servers in your Cisco BAC environment. If you are deploying Cisco BAC in a failover environment, you also must install the extensions on the fail-over servers. After you install extensions, you must configure them. This section explains how to install, configure, and validate these extensions.

CAR Extension Point Prerequisite

As a prerequisite to install CAR Extension Point, the user must have installed CAR 5.0.0.3 or later. For CAR Extension Point installation information, see *Installation Guide for Cisco Access Registrar, release 5.0*.

Note The default value for tomcat server port (8005) and web UI port (8080) are the same for both Cisco Network Registrar and Cisco Access Registrar servers. Hence, you need to change either the tomcat server port or web UI port before installing CAR Extension Point.

The tomcat server port of the Cisco Access Registrar server and web UI port can be changed in */opt/CSCOar/apache-tomcat-5.5.27/conf/server.xml*.

The tomcat server port of the Cisco Network Registrar server and web UI port can be changed in */opt/nwreg2/local/tomcat/conf/server.xml*.

You may choose to install Cisco Network Registrar or Cisco Access Registrar, first. However, we recommend that you install Cisco Access Registrar before Cisco Network Registrar. Cisco Network Registrar allows you to change the Web UI (tomcat) port as part of the installation.

Cisco Access Registrar 5.0.0.6 requires either JRE 1.5.x or 1.6.x, but CAR_EP needs JRE 1.6.x, so use JRE 1.6.x for CAR 5.0.0.6.

We recommend that you configure the Cisco Access Registrar server to use a static IP address.

To install the CAR Extension Point from the CLI:

Step 1   Log in to the intended Cisco BAC host as *root*.

Step 2   At the Solaris system prompt, change directory to your CD-ROM drive or other installation media. The installation program, *pkgadd* is at the root of this drive.

Step 3   Enter this command to start the installation program:

```
# pkgadd -d file-path/BAC_3.6_SolarisK9/CSCObac.pkg CSCObac
```

where file-path specifies the complete path to the directory in which the BAC_3.6_SolarisK9 directory has been created.

The installation program verifies that you have installed the required patches to the Solaris operating system. When the verification ends, the following welcome information appears:

```
Welcome to the Cisco Broadband Access Center for TW (BAC 3.6) installation
program. This installation program installs BAC 3.6 on your system.
```

Step 4   Press **Enter** to continue.

The installation program prompts you to select one or more components.

Step 5   Enter **y** and press **Enter** at the CAR Extention Point prompt.

To skip installing the RDU and DPE extension points, enter **n** and press **Enter**. You can choose to install these components later.

For example:

```
-------------- Installation Components ------------

Regional Distribution Unit (RDU) (y/n)? [n] n
Device Provisioning Engine (DPE) (y/n)? [n] n
Cisco Network Registrar extension points (y/n)? [n] n
Cisco Access Registrar extension points (y/n)? [n] y
```

Step 6   Enter **y** and press **Enter**.

The program prompts you to confirm the components that you want to install.

```
----------------- Confirmation --------------
Install RDU: n
Install DPE: n
Install CNR_EP: n
Install CAR_EP: y
Is this correct (y/n/q)? [y] y
```

Step 7 Enter **y** and press **Enter** to continue. The Home Directory Destination prompt appears. To accept the default directory, */opt/CSCObac*, press **Enter**; or enter a different directory.

For example:

```
-------------- Home Directory -----------

    Home Directory [/opt/CSCObac]
```

Step 8 Enter **y** and press **Enter** to confirm the directory. The data directory destination prompt appears.

Step 9 To accept the default directory, */var/CSCObac*, press **Enter**; or enter another directory.

For example:

```
-------------- Data Directory -----------

    DB Data Directory [/var/CSCObac]
```

Step 10 Enter **y** and press **Enter** to confirm the directory. The program prompts you to enter information on the RDU required to install the extensions.

Step 11 Enter the IP address (or hostname) and the listening port of the host on which you have installed the RDU. To accept the default information, press **Enter**; or enter alternative information.

For example:

```
----------------- CNR EP Info ---------------

Enter RDU IP Address or Hostname [bacdev3-t5240-1-d3]
Enter RDU Listening Port [49187]
```

The program prompts you to confirm the installation.

For example:

```
----------------- Confirmation -------------------
RDU IP Address: 10.10.10.10
RDU IP Port: 49187
Is this correct (y/n/q)? [y]
```

Step 12 Enter **y** and press **Enter** to confirm and continue.

The program prompts you to continue with the installation.

For example:

```
This package contains scripts which will be executed with super-user
permission during the process of installing this package.
Do you want to continue with the installation of <CSCObac> [y,n,?] y
```

Step 13 Enter **y** and press **Enter**.

After a successful installation, the following message appears:

```
Installation of <CSCObac> was successful.
```

Setting up CAR Extension Points

To setup the CAR Extension Point:

Step 1   After installing CAR Extension Point, run the below script to create and setup extension points in Cisco Access Registrar:

```
BPR_HOME/car_ep/bin/configARExtension.sh
```

The DPE Auth Service hosts address and port will have to be manually provisioned. By default, the host address is *localhost* and auth service port is 7551. To change the default properties run the following script with appropriate options:

```
BPR_HOME/car_ep/bin/changeARProperties.sh
```

   – To configure the DPE Auth service interface run the above script with the following option:

```
sh changeARProperties.sh -host <address>
```

Step 2   To configure the DPE Auth service port run the script with the following option:

```
sh changeARProperties.sh -port <port_number>
```

Step 3   To display the configured properties for CAR Extension Point, run the script with the following option:

```
sh changeARProperties.sh -d
```

Step 4   To list the options of the script, run the following script:

```
sh changeARProperties.sh -help
```

Cisco BAC displays the following list of options:

```
-C <cluster>   the Cluster to log in to
-N <name>      the Name to log in as
-P <password> the Password to log in with
```

Upgrading Cisco Broadband Access Center

This section describes how to upgrade a Cisco BAC 3.5.x installation to Cisco BAC 3.6.

Before upgrading to Cisco BAC 3.6, ensure that you obtain the license file that this release supports. After the upgrade is complete, the installation program deletes all existing license keys. You must then install the license file that Cisco BAC 3.6 supports, using the administrator user interface. For details on obtaining and installing the license file, see the *Release Notes for the Cisco Broadband Access Center 3.6*.

The Cisco BAC upgrade procedure requires that you upgrade the components as recommended in the following sections. Performing the upgrade in any other sequence results in error during provisioning.

Backing up the RDU

Before upgrading Cisco BAC components, ensure that you backup the RDU database files. Throttling limits the I/O bandwidth used by the DB with backup utility. Throttle option specifies the rate at which the backup tool reads the files it copies. While using this option, if the reading rate is high, the tool goes to sleep mode till the rate comes down.

Note   It is recommended to use the throttle option always since it is not an I/O intensive operation.

To back up the RDU database, run the **backupDb.sh** script in the *BPR_HOME/rdu/bin* directory.

For example:

```
# backupDb.sh /var/backup -throttle 500/opt/
```

where */var/backup* identifies the database backup directory.

In this example, all backup database files are stored in a directory called */var/backup/rdu-backup-20071116-031028*. The last subdirectory (*rdu-backup-20070316-111028*) is automatically created with a current time stamp.

Note   The time-stamped subdirectory format is *rdu-backup-yyyyMMdd-HHmmss*. In this example, the subdirectory would be *rdu-backup-20071116-031028*, meaning that the directory contains a backup that was started at 3:10:28 a.m. on November 16, 2007.

For additional information on using the **backupDb.sh** tool, see the *Cisco Broadband Access Center Administrator Guide 3.6*.

Upgrading the RDU

Before upgrading the RDU, we recommend that you archive your files in the *BPR_HOME/rdu/conf* directory.

To upgrade the RDU:

Step 1   To create the necessary package information, run the script *updatepackage.sh* from *<file-path>/BAC_3.6_SolarisK9/updatepackage*

- When requested, enter the directory where the current version of Cisco BAC product was installed.

    For example: */opt/CSCObac*

- When requested, select the current installed Cisco BAC product version from the displayed list.

Step 2   To upgrade to Cisco BAC 3.6, run the following command:

 # pkgadd -d <file-path>/BAC_3.6_SolarisK9/CSCObac.pkg -a <file-path>/BAC_3.6_SolarisK9/bacadmin CSCObac

- When requested, press Enter to continue, the following message is displayed:
  For example:

    Upgrading BAC from 3.5.2 to 3.6. Are you sure? (y/n) [n]:

- Enter *y* to start the upgrade process.

Step 3   To verify if the version information indicates Cisco BAC release 3.6, enter:

 # pkgparam CSCObac VERSION

Step 4   Manually restart the RDU process to finish the upgrade process.

For example, from the command line, run:

 # /etc/init.d/bprAgent start rdu

Step 5   Run *AddProperties.kiwi* script, available in *<file-path>/BAC_3.6_SolarisK9/kiwi/* directory, through Cisco BAC Tools.

where *<file-path>* specifies the complete path to the directory in which the BAC_3.6_SolarisK9 directory has been created.

> **Note**   While upgrading from Cisco BAC 3.5.2 or 3.5.2.1 or 3.5.2.2, the program displays warning messages for the properties that are already present in the DB. For example, "*A custom property with the name [/server/rdu/allow-unknown-cpe] already exists in the system.*" Such warning messages can be ignored.

Upgrading the DPE

Before upgrading the DPE, we recommend that you archive your files in the *BPR_HOME/dpe/conf* directory.

To upgrade the DPE:

Step 1   To create the necessary package information, run the script *updatepackage.sh* from *<file-path>/BAC_3.6_SolarisK9/updatepackage*

- When requested, enter the directory where the current version of Cisco BAC product was installed.

  For example: */opt/CSCObac*

- When requested, select the current installed Cisco BAC product version from the displayed list.

Step 2   To upgrade to Cisco BAC 3.6, run the following command:

 # pkgadd -d <file-path>/BAC_3.6_SolarisK9/CSCObac.pkg -a <file-path>/BAC_3.6_SolarisK9/bacadmin CSCObac

- When requested, press Enter to continue, the following message is displayed:
  For example:

  Upgrading BAC from 3.5.2 to 3.6. Are you sure? (y/n) [n]:

- Enter *y* to start the upgrade process.

Step 3   To verify if the version information indicates Cisco BAC release 3.6, enter:

 # pkgparam CSCObac VERSION

Step 4   You must manually restart the DPE process to finish the upgrade process.

For example, from the command line, run:

 # /etc/init.d/bprAgent start dpe

where *<file-path>* specifies the complete path to the directory in which the BAC_3.6_SolarisK9 directory has been created.