



CHAPTER 12

Performing Maintenance Operations

This chapter provides routine procedures for maintaining WCS. It contains these sections:

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Checking the Status of WCS

This section provides instructions for checking the status of WCS on either a Windows or Linux server.

Checking the Status of WCS on Windows

Follow these steps to check the status of WCS when it is installed as a Windows application or Windows service. You can check the status at any time.

Step 1 Log into the system as administrator.

Step 2 Perform one of the following:

- From the Windows Start menu, click **Programs > Wireless Control System> WCSStatus**.
- From the command prompt, navigate to the WCS installation directory (such as C:\Program Files\WCS4.2.47.0) and enter **WCSAdmin status**.

The WCSAdmin window appears and displays messages indicating the status of WCS.

- Step 3** Close the WCSAdmin window when the Close button becomes active.
-

Checking the Status of WCS on Linux

Follow these steps to check the status of WCS when it is installed as a Linux application or Linux service. You can check the status at any time.

- Step 1** Log into the system as **root**.

- Step 2** Using the Linux CLI, perform one of the following:

- Navigate to the installation directory (such as /opt/WCS4.2.47.0) and enter **./WCSStatus**.
- Navigate to the installation directory (such as /opt/WCS4.2.47.0) and enter **WCSAdmin status**.

The CLI displays messages indicating the status of WCS.

Stopping WCS

This section provides instructions for stopping WCS on either a Windows or Linux server.

Stopping WCS on Windows

Follow these steps to stop WCS when it is installed as a Windows application or Windows service. You can stop WCS at any time.



Note

If any users are logged in when you stop WCS, their WCS sessions stop functioning.

- Step 1** Log into the system as administrator.

- Step 2** Perform one of the following:

- From the Windows Start menu, click **Programs > Wireless Control System > StopWCS**.
- From the command prompt, navigate to the WCS installation directory (such as C:\Program Files\WCS4.2.47.0\bin) and enter **WCSAdmin stop**.

The WCSAdmin window appears and displays messages indicating that WCS is stopping.



Note

If WCS is installed as a service, messages also appear to indicate that the Nms_Server service is stopping.

- Step 3** Close the WCSAdmin window when the Close button becomes active.
-

Stopping WCS on Linux

Follow these steps to stop WCS when it is installed as a Linux application or Linux service. You can stop WCS at any time.

**Note**

If any users are logged in when you stop WCS, their WCS sessions stop functioning.

Step 1 Log into the system as root.

**Note**

To see which version of WCS you currently have installed, enter **nmsadmin.sh version**.

Step 2 Using the Linux CLI, perform one of the following:

- Navigate to the /opt/WCS4.2.47.0 directory (or the directory chosen during installation) and enter **./StopWCS**.
- Navigate to the /opt/WCS4.2.47.0/bin directory and enter **WCSAdmin stop**.

The CLI displays messages indicating that WCS is stopping.

Backing Up the WCS Database

This section provides instructions for backing up the WCS database. You can schedule regular backups through the WCS user interface or manually initiate a backup on either a Windows or Linux server.

Scheduling Automatic Backups

Follow these steps to schedule automatic backups of the WCS database.

Step 1 Log into the WCS user interface.

Step 2 Click **Administration > Background Tasks** to display the Scheduled Tasks page.

Step 3 Click **WCS Server Backup** to display the Task > WCS Server Backup page.

Step 4 Check the **Enabled** check box.

Step 5 Check the **Enabled** check box if you want to run a report history backup.

Step 6 In the Max Backups to Keep field, enter the maximum number of backup files to save on the server.

Range: 7 to 50

Default: 7

**Note**

To prevent the WCS platform from running out of disk space, the server automatically deletes old backup files when the number of files exceeds the value entered for this field.

- Step 7** In the Interval (Days) field, enter a number representing the number of days between each backup. For example, 1 = a daily backup, 2 = a backup every other day, 7 = a weekly backup, and so on.

Range: 1 to 360

Default: 7

- Step 8** In the Time of Day field, enter the time when you want the backup to start. It must be in this format: *hh:mm* AM/PM (for example: 03:00 AM).



Note Backing up a large database affects the performance of the WCS server. Therefore, Cisco recommends that you schedule backups to run when the WCS server is idle (for example, in the middle of the night).

- Step 9** Click **Submit** to save your settings. The backup file is saved as a .zip file in the *ftp-install-dir/ftp-server/root/WCSBackup* directory using this format: *dd-mmm-yy_hh-mm-ss.zip* (for example, 11-Nov-05_10-30-00.zip).

Performing a Manual Backup

This section provides instructions for backing up the WCS database on either a Windows or Linux server.

Backing Up the WCS Database (for Windows)

Follow these steps to back up the WCS database on a Windows server.

- Step 1** Log into the system as administrator.

- Step 2** Create a backup directory for the WCS database with no spaces in the name, such as *C:\WCS4.2.47.0_Backup*.



Note Make sure that the directory name does not contain spaces. Spaces can generate errors.

- Step 3** Perform one of the following:

- Follow these steps from the Windows Start menu:
 - a. Click **Programs > Wireless Control System > Backup**. The Enter Information window appears.
 - b. Browse to the backup directory that you created and choose the filename or enter the full path of the backup directory that you created and a name for the backup file (such as *C:\WCS4.2.47.0_Backup\Nov11*) and click **OK**.
- Follow these steps from the command prompt:
 - a. Navigate to the WCS installation directory (*C:\Program Files\WCS4.2.47.0\bin*).
 - b. Enter **DBAdmin backup backup-filename**, where *backup-filename* is the full path of the backup directory that you created plus a name for the backup file (such as *C:\WCS4.2.47.0_Backup\Nov11*).

The DBAdmin window appears and displays messages indicating the status of the backup.

- Step 4** Close the DBAdmin window when the Close button becomes active.

**Note**

In the example above, the backup file would appear in the C:\WCS4.2.47.0_Backup directory as Nov11.nmsbackup.

Backing Up the WCS Database (for Linux)

Follow these steps to back up the WCS database on a Linux server.

Step 1 Log into the system as root.

Step 2 Using the Linux CLI, navigate to the /opt/WCS4.2 directory (or any other directory).

Step 3 Create a backup directory for the WCS database with no spaces in the name (for example, **mkdir WCS4.2.47.0_Backup**).

**Note**

Make sure that the directory name does not contain spaces. Spaces can generate errors.

Step 4 Perform one of the following:

- Navigate to the /opt/WCS4.2.47.0 directory (or the directory chosen during installation) and enter **./Backup**. Enter a name for the backup file when prompted (such as WCS4.2.47.0_Backup/Nov11).
- Navigate to the /opt/WCS4.2.47.0/bin directory (or the directory chosen during installation) and enter **DBAdmin backup backup-filename**, where *backup-filename* is the full path of the backup directory that you created plus a name for the backup file (such as WCS4.2.47.0_Backup/Nov11).
- Using KDE or X-Windows, enter **DBAdmin - gui backup**, browse to the backup directory, and choose the file.

The CLI displays messages indicating the status of the backup.

**Note**

In the example above, the backup file would appear in the WCS4.2.47.0_Backup directory as Nov11.nmsbackup.

Restoring the WCS Database

This section provides instructions for restoring the WCS database on either a Windows or Linux server.

Restoring the WCS Database (for Windows)

Follow these steps to restore the WCS database from a backup file on a Windows server.

Step 1 Log into the system as administrator.

Step 2 Perform one of the following:

- Follow these steps from the Windows Start menu:
 - a. Click **Start > Programs > Wireless Control System> Restore**. The DBAdmin and Enter Information window appears.
 - b. Browse to the backup directory that you created and choose the filename or enter the full path and filename of the backup file (such as C:\WCS4.2.47.0_Backup\Nov11.nmsbackup) and click **OK**.
- < OR >
- Follow these steps from the command prompt:
 - a. Navigate to the WCS installation directory (C:\Program Files\WCS4.2.47.0\bin).
 - b. Enter **DBAdmin restore *backup-filename***, where *backup-filename* is the full path and filename of the backup file (for example, C:\WCS4.2.47.0_Backup\Nov11.nmsbackup).

**Note**

If you are restoring data larger than 8-GB unzipped from a WCS version prior to 4.1, you must instead enter **dbadmin.bat -gui -largedb restore**.

**Note**

If you are restoring from WCS version 4.0.96.0, some previous client data may not be collected.

Step 3 If you have a large event table to migrate, you must limit the size of the event table. You cannot decline this process, but it generally only affects pre-5.1 to 5.2 or later migration. The following warning message appears:

WARNING: You are migrating from a pre-5.1 database to a post-5.1 database. This may take a very long time -- possibly several hours. You can considerably speed this migration by retaining only the most recent events from the restored database. Even if you do this, the event table will be repopulated within seven days. This does not affect current alarms. This does not affect the backed-up database.

Would you like to retain only recent events?

If you type **Y** or **Yes** (or click **Yes** from the GUI prompt), the restore retains only the most recent 40,000 events.

**Note**

You can also type **-dropoldevents** at the CLI prompt as an equivalent to answering yes here.

Step 4 Click **Yes** if a message appears indicating that WCS is running and needs to be shut down.**Step 5** The DBAdmin window appears and displays messages indicating that WCS is shutting down (if applicable) and the WCS database is being restored. Close the DBAdmin window when the Close button becomes active.**Note**

If the restore process shuts down WCS, a restart is attempted after a successful restore.

Restoring the WCS Database (for Linux)

Follow these steps to restore the WCS database from a backup file on a Linux server.

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- Step 1** If possible, stop all WCS user interfaces to stabilize the database.
- Step 2** Log into the system as root.
- Step 3** Using the Linux CLI, perform one of the following:
- Navigate to the /opt/WCS4.2.47.0 directory (or the directory chosen during installation) and enter **./Restore** to start the restoration process. Enter the backup filename when prompted (such as WCS4.2.47.0_Backup/Nov11.nmsbackup).
 - Navigate to the /opt/WCS4.2.47.0/bin directory (or the directory chosen during installation) and enter **DBAdmin restore backup-filename**, where *backup-filename* is the full path and filename of the backup file (such as WCS4.2.47.0_Backup/Nov11.nmsbackup).

**Note**

If you are restoring from a WCS version prior to 3.2, you must enter a directory rather than a backup file because tar/gzip did not exist prior to 3.2. Enter **DBAdmin restore directory**, where *directory* is the backup directory that you created.

-
- Step 4** Click **Yes** if a message appears indicating that WCS is running and needs to be shut down.
- Step 5** The DBAdmin window appears and displays messages indicating that WCS is shutting down (if applicable) and the WCS database is being restored. Close the DBAdmin window when the Close button becomes active.

**Note**

If the restore process shuts down WCS, a restart is attempted after a successful restore.

The CLI displays messages indicating that the WCS database is being restored.

Importing the Location Appliance into WCS

Cisco 2700 series location appliances operate within the Cisco Wireless LAN Solution infrastructure. Location appliances compute, collect, and store historical location data using Cisco wireless LAN controllers and access points to track the physical location of wireless devices.

Up to 2,500 laptop clients, palmtop clients, VoIP telephone clients, active Radio Frequency Identifier (RFID) asset tags, rogue access points, and clients can be tracked.

**Note**

Even though all clients are loaded in the map, the display has a limit of 250 clients per floor to prevent overcrowding. You can do an advanced search of the map to see the items of interest.

To import a location appliance into WCS, follow the steps below.

-
- Step 1** Navigate to **Mobility > Mobility Service Engines**. Choose **Add Location Server** from the drop-down menu and click **GO**.

- Step 2** Enter any name for the appliance, its IP address, and a contact name on the Import window (see [Figure 12-1](#)). Keep the username, password, port, and HTTPS fields unaltered and click **Save**.

Figure 12-1 General Properties

The screenshot shows the Cisco Wireless Control System (WCS) interface. The left sidebar contains a navigation menu with options like System, Location, Maintenance, Accounts, Status, Logs, and Partner Engine. The main content area displays the 'General Properties' for a 'Mobility Service Engine > 'ls-mse''. The 'General' tab is selected, showing fields for Server Name (ls-mse), Version (5.1.14.0), Start Time (4/9/08 4:09 PM), IP Address (172.19.35.103), Mobility Service(s) (Location Service (5.1.14.0)), Contact Name, User Name (admin), Password (masked with asterisks), HTTP (unchecked), HTTP Port (80), HTTPS (checked), HTTPS Port (443), Legacy Port (8001), and Legacy HTTPS (unchecked). The 'Save' button is highlighted at the bottom.

- Step 3** After you import the new location appliance, a pop-up window reminds you that WCS contains data that needs to be transported to the location appliance. Those controllers and network diagrams that are available to be synchronized are listed. From the Select a command drop-down menu, choose **Synchronize Servers**.

The Synchronize WCS and Location Servers window appears (see [Figure 12-2](#)).



Note Existing network diagrams, controllers, and event groups must be synchronized with the appropriate location appliance to provide accurate location information. Synchronization is generally recommended after any network design change. You can limit areas that the location appliance tracks by synchronizing only areas that you want to actively track. Limiting synchronization to specific areas provides optimal performance of the location appliance.

Figure 12-2 Synchronizing WCS and Location Servers

Wireless Control System

Username: root | Logout | Refresh | Print View

Monitor | Reports | Configure | Location | Administration | Help

All Location Servers > Synchronize WCS and Location Servers

Action

Synchronize: Network Designs

Network Designs	Location Servers Assigned	Sync. Status	Message
14	-- Unassigned --		Assign
Amberhill	-- Unassigned --		Assign
B1	-- Unassigned --		Assign
Cisco	-- Unassigned --		Assign
bldg-14	-- Unassigned --		Assign

Synchronize Reset Cancel

Alarm Summary

Rogue AP	0	137
Coverage Hole	0	137
Security	9	2
Controllers	1	0
Access Points	769	42
Mesh Links	0	0
Location	1	14

- Step 4** Select the **Network Designs** option from the Synchronize drop-down menu. Click the **Assign** hyperlink (far-right) of the appropriate network.
- Step 5** In the **Assign to Servers** pop up window that appears, check the box next to the appropriate server (location appliance). Click **OK**.
- Step 6** Click the check box next to the new location appliance and click **OK**.
- Step 7** Click **Synchronize**.
- Step 8** If the network diagram is properly synchronized, two green arrows appear under the Sync. Status column for each diagram. After synchronizing with the network diagram, all floor maps and access point placements associated with that diagram are copied to the location appliance; therefore, when the location appliance is set to synchronize with the diagram's controllers, it can find them.
- Step 9** To set up controller synchronization, choose **Controllers** from the Synchronize drop-down menu.
- Step 10** Each controller managed by WCS appears in a drop-down menu. Assign each controller to a specific location appliance by choosing the name of the location appliance with which the controllers will synchronize and click **Synchronize**.
- Step 11** After the location appliance is properly synchronized with controllers, green arrows appear next to each controller under the Sync. Status column.

**Note**

After synchronizing network designs and controllers, ensure that the location appliance polling parameters (**Location Server > Administration > Polling Parameters**) are enabled so that the location of the elements gets calculated.


Note

After all relevant network designs and controllers are assigned to a new location appliance and initial synchronization is complete, you can configure the location appliance to automatically synchronize with WCS. For more details, see the [“Importing and Exporting Asset Information” section on page 12-10](#).

Importing and Exporting Asset Information

This section describes how to import and export asset information stored in a flat text file to minimize manual entry.

Importing Asset Information

To import asset information for the location server using Cisco WCS, follow these steps:

- Step 1** In Cisco WCS, choose **Mobility > Mobility Service Engines**.
The All Location Servers summary window appears.
- Step 2** Click the name of the server for which you want to import asset information.
- Step 3** Click **Administration** (left) to display the administrative configuration options.
- Step 4** Click **Import Asset Information**.
- Step 5** Enter the name of the text file or browse for the file name.
Information stored in the imported file should be in the following format:
 - tag format: #tag, 00:00:00:00:00:00, categoryname, groupname, assetname
 - station format: #station, 00:00:00:00:00:00, categoryname, groupname, assetname
- Step 6** Click **Import**.

Exporting Asset Information

To export asset information from the location server to a file using Cisco WCS, follow these steps:

- Step 1** In Cisco WCS, choose **Mobility > Mobility Service Engines**.
The All Location Servers summary window appears.
- Step 2** Click the name of the server from which you want export asset information.
- Step 3** Click **Administration** (left) to display the administrative configuration options.
- Step 4** Click **Export Asset Information**.
- Step 5** Click **Export**.

You are prompted to **Open** (display to screen) or **Save** (to external PC or server) the asset file or to Cancel the request.

**Note**

If you select **Save**, you are asked to select the asset file destination and name. The file is named “assets.out” by default. Click **Close** from the dialog box when download is complete.

Auto-Synchronizing Location Appliances

After all relevant network designs and controllers are assigned to a new location appliance and initial synchronization is complete, you can configure the location appliance to automatically synchronize with WCS by enabling the **Location Server Auto-Synchronization** feature.

Enabling auto-synchronization ensures that all future map modifications such as adding access points, changing access point positions or orientations, and any resizings are accurately reflected in the map in case a manual synchronization (Mobility > Synchronize Servers) is not performed after element changes. You can configure the frequency (minimum of 24 hours) and time of day that the automatic synchronization occurs.

Step 1 Choose **Administration > Background Tasks**.

The Background Tasks summary window appears (see [Figure 12-3](#)).

Figure 12-3 Administration > Background Tasks

CISCO

Wireless Control System

Monitor | Reports | Configure | Mobility | Administration | Tools | Help

User: root | Virtual Domain: root | Refresh | Print View | Logout

Background Tasks

-- Select a command -- GO

Data Collections

Data Set	Enabled	Interval	Status	Data Aggregation	Non-Aggregation Data Retain Period (Days)
<input type="checkbox"/> Autonomous AP Status	Enabled	30 min.	Idle	No	31
<input type="checkbox"/> Client Statistics	Enabled	15 min.	Idle	Yes	31
<input type="checkbox"/> Controller Performance	Enabled	15 min.	Idle	Yes	31
<input type="checkbox"/> Location Service Performance	Enabled	15 min.	Idle	Yes	31
<input type="checkbox"/> Mesh Link Performance	Enabled	10 min.	Idle	Yes	31
<input type="checkbox"/> Radio Performance	Enabled	15 min.	Idle	Yes	31
<input type="checkbox"/> Rogue AP	Enabled	120 min.	Idle	No	31
<input type="checkbox"/> Traffic Stream Metrics	Enabled	0 min.	Idle	Yes	31
<input type="checkbox"/> VS Client Statistics	Enabled	60 min.	Idle	Yes	31

Other Background Tasks

Data Set	Enabled	Interval	Status
<input type="checkbox"/> Configuration Backup	Disabled	1 day at 22:00	Disabled
<input type="checkbox"/> Configuration Sync	Enabled	1 day at 01:00	Idle
<input type="checkbox"/> Data Cleanup	Enabled	1 day at 01:00	Idle
<input type="checkbox"/> Device Status	Enabled	5 min.	Idle
<input type="checkbox"/> Location Service Backup	Disabled	7 day at 01:00	Disabled
<input type="checkbox"/> Location Service Status	Enabled	5 min.	Idle
<input type="checkbox"/> Location Service Synchronization	Enabled	1 day at 01:00	Idle
<input type="checkbox"/> WCS Server Backup	Disabled	7 day at 01:00	Disabled
<input type="checkbox"/> Wireless Status	Enabled	5 min.	Idle

Alarm Summary

Hardware AP

Coverage Hole

Security

Controllers

Access Points

Location

Mesh Links

WCS

Step 2 Select the **Location Server Synchronization** link.

Step 3 In the window that appears ([Figure 12-4](#)), check the **Enabled** box next to the **Auto Synchronization** option.

Figure 12-4 Location Server Synchronization Page

Wireless Control System Username: root | Logout | Refresh | Print View

Monitor | Reports | Configure | Location | Administration | Help

Task > Location Server Synchronization

Last Execution Start Time	End Time	Elapsed Time (secs)	Result	Message
Mar 18, 2007 1:00:00 AM	Mar 18, 2007 1:00:00 AM	0	Success	
Mar 19, 2007 1:00:00 AM	Mar 19, 2007 1:00:00 AM	0	Success	
Mar 20, 2007 1:00:00 AM	Mar 20, 2007 1:00:00 AM	0	Success	
Mar 21, 2007 1:00:00 AM	Mar 21, 2007 1:00:00 AM	0	Success	
Mar 22, 2007 1:00:14 AM	Mar 22, 2007 1:00:14 AM	0	Success	

Modify Task

Description: Location Server(s) synchronization

Out of Sync Alerts: ☒ Enabled

Auto Synchronization: ☐ Enabled

Interval (days):

Time of Day (hh:mm AM|PM):

Alarm Summary

Rogue AP	0	135
Coverage Hole	0	137
Security	9	2
Controllers	1	0
Access Points	768	42
Mesh Links	0	0
Location	1	14

Step 4 Enter the frequency of the automatic synchronization in the **Interval (days)** field.

The value entered represents number of days. One day is the minimum value.

Step 5 Enter the Time of Day (hh:mm AM | PM) for the synchronization to occur.

Step 6 Click **Submit**.

You are returned to the Scheduled Tasks Summary window.



Note To disable the Auto-Synchronization, uncheck the **Enabled** box for that feature.



Note You may also want to enable the **Out of Sync Alerts** option if it is not already active. When enabled, this option generates alerts for the location appliance when elements such as network designs or controllers are not assigned to a location appliance. Modifications to elements without subsequent synchronization generate location appliance alerts as well.

Backing Up Location Appliance Data

You can configure the Cisco WCS to regularly back up the data stored on the location appliance. You can specify the frequency and the time-of-day of the backups and the number of previous backups you want to save.



Note Back-up data is saved on the FTP server specified during WCS installation.

To back up the data stored on a location appliance, follow the steps below.

Step 1 Choose **Administration > Background Tasks**.

The window shown in [Figure 12-5](#) appears.

Figure 12-5 Administration > Background Tasks

Wireless Control System User: root | Virtual Domain: root | Refresh | Print View | Logout

Monitor | Reports | Configure | Mobility | Administration | Tools | Help

Background Tasks

-- Select a command -- 60

Data Collections

Data Set	Enabled	Interval	Status	Data Aggregation	Non-Aggregation Data Retain Period (Days)
<input type="checkbox"/> Autonomous AP Status	Enabled	30 min.	Idle	No	31
<input type="checkbox"/> Client Statistics	Enabled	15 min.	Idle	Yes	31
<input type="checkbox"/> Controller Performance	Enabled	15 min.	Idle	Yes	31
<input type="checkbox"/> Location Service Performance	Enabled	15 min.	Idle	Yes	31
<input type="checkbox"/> Mesh Link Performance	Enabled	10 min.	Idle	Yes	31
<input type="checkbox"/> Radio Performance	Enabled	15 min.	Idle	Yes	31
<input type="checkbox"/> Rogue AP	Enabled	120 min.	Idle	No	31
<input type="checkbox"/> Traffic Stream Metrics	Enabled	0 min.	Idle	Yes	31
<input type="checkbox"/> VS Client Statistics	Enabled	60 min.	Idle	Yes	31

Other Background Tasks

Data Set	Enabled	Interval	Status
<input type="checkbox"/> Configuration Backup	Disabled	1 day at 22:00	Disabled
<input type="checkbox"/> Configuration Sync	Enabled	1 day at 01:00	Idle
<input type="checkbox"/> Data Cleanup	Enabled	1 day at 01:00	Idle
<input type="checkbox"/> Device Status	Enabled	5 min.	Idle
<input type="checkbox"/> Location Service Backup	Disabled	7 day at 01:00	Disabled
<input type="checkbox"/> Location Service Status	Enabled	5 min.	Idle
<input type="checkbox"/> Location Service Synchronization	Enabled	1 day at 01:00	Idle
<input type="checkbox"/> WCS Server Backup	Disabled	7 day at 01:00	Disabled
<input type="checkbox"/> Wireless Status	Enabled	5 min.	Idle

Alarm Summary

Malicious AP	0	0	0
Coverage Hole	0	0	0
Security	9	0	2
Controllers	1	3	0
Access Points	768	0	42
Mesh Links	0	0	0
Location	1	0	14
WCS	0	0	0

Step 2 Check the box next to the **Location Server Backup** link and then select the link. The Location Server Backup configuration window appears (see [Figure 12-6](#)).

Figure 12-6 Location Server Backup Configuration Page

Wireless Control System Username: root | Logout | Refresh | Print View

Monitor | Reports | Configure | Location | Administration | Help

Task > Location Server Backup

Last Execution Details
No results found.

Modify Task

Description	Location Server Backup
Enabled	<input type="checkbox"/> Enabled
Max backups to keep	<input type="text" value="7"/>
Interval (days)	<input type="text" value="7"/>
Time of Day (hh:mm AM PM)	<input type="text" value="01:00"/>

Submit **Cancel**

Alarm Summary

Rogue AP	0	0	137
Coverage Hole	0	0	137
Security	9	0	2
Controllers	1	3	0
Access Points	768	0	42
Mesh Links	0	0	0
Location	1	0	14

Step 3 Check the **Enabled** box, if not already checked from the previous step. Generally, when you check the box at the Administration > Background Tasks window, the check box auto-populates.

Step 4 Enter the number of **Maximum Backups to Keep**.

Step 5 Enter the **Interval** (in days) between backups.

Step 6 Enter the Time of Day (hh:mm AM | PM) to run the backups.

Step 7 Click **Submit**.

The Scheduled Tasks window reappears noting the location server backup as enabled along with the interval and time-of-day settings.

Uninstalling WCS

This section provides instructions for uninstalling WCS on either a Windows or Linux server. You can uninstall WCS at any time, even while WCS is running.

Uninstalling WCS on Windows

Follow these steps to uninstall WCS on a Windows server.

Step 1 Log into the system as administrator.

Step 2 From the Windows Start menu, click **Programs > Wireless Control System> Uninstall WCS**.

Step 3 When the Uninstall Wireless Control System window appears, click **Uninstall**.

Step 4 Follow the instructions on the window to continue the uninstall process.

Step 5 When the WCS Uninstaller window indicates that the program is uninstalled, click **Finish** to close the window.



Note

If any part of the C:\Program Files\WCS4.2.27.0 folder remains on the hard drive, manually delete the folder and all of its contents. If you fail to delete the previous WCS installation, this error message appears when you attempt to reinstall WCS: “Cisco WCS already installed. Please uninstall the older version before installing this version.”

Uninstalling WCS on Linux

Follow these steps to uninstall WCS on a Linux server.

Step 1 Stop WCS.

Step 2 Log into the system as root through an X terminal session.

Step 3 Using the Linux CLI, navigate to the /opt/WCS4.2.47.0 directory (or the directory chosen during installation).

Step 4 Enter **./UninstallWCS**.

Step 5 Click **Yes** to continue the uninstall process.

Step 6 Click **Finish** when the uninstall process is complete.

**Note**

If any part of the /opt/WCS4.2.47.0 directory remains on the hard drive, manually delete the directory and all of its contents. If you fail to delete the previous WCS installation, this error message appears when you attempt to reinstall WCS: “Cisco WCS already installed. Please uninstall the older version before installing this version.”

Upgrading WCS

This section provides instructions for upgrading WCS on either a Windows or Linux server. An automated upgrade is available in software release 4.2 and later. It handles the steps you would normally follow to accomplish an upgrade (shut down WCS, perform a backup, install new version, restore the backup, remove the old WCS version, and start WCS). If you choose to use the installer, it searches for any previous WCS versions.

**Note**

You must have software release 4.1.91.0 before you can automatically upgrade to 4.2.

If you choose to use the easy upgrade process, it provides error checking at each step and gives an informative message if an error causing an exit occurs. An *upgrade-version.log* is also produced and provides corrective measures.

**Note**

Scheduled task settings are not preserved when you upgrade from WCS 4.0 or earlier releases. Make sure to record your settings manually if you wish to retain them or go to Administration > Background Tasks after starting WCS to check or change the settings as necessary.

**Note**

If you upgrade to a WCS software release later than 4.0.87.0 from a release prior to 4.0.87.0, the users, user groups, tasks, and user passwords do not migrate. Upgrading to 4.0.87.0 before upgrading to a later release migrates the users, user groups, tasks, and user passwords.

Using the Installer to Upgrade WCS for Windows

Follow these steps to upgrade WCS (on a Windows platform) using the automated upgrade:

- Step 1** Insert the Windows Cisco WCS CD into the CD-ROM drive and double click the WCS-STANDARD-K9-4.2.X.Y.exe file where 4.2.X.Y is the software build. If you downloaded the installer from Cisco.com, double click the WCS-STANDARD-WB-K9-4-2-X-Y.exe file that you downloaded to your local drive.
- Step 2** The Install Anywhere window appears and prepares the system for installation. After a few seconds, the Introduction window appears, followed by the license agreement window. You must click the “I accept the terms of the License Agreement” option to continue.

- Step 3** At this point, the install wizard detects whether a previous version of WCS is installed and specifies whether the current version is eligible for an automated upgrade. If your most recent WCS version cannot participate in the automated upgrade, you receive a notification as shown in [Figure 12-7](#). If your WCS version is eligible for an automated upgrade, you receive a notification as shown in [Figure 12-8](#).

Figure 12-7 *Ineligible for Automated Upgrade*

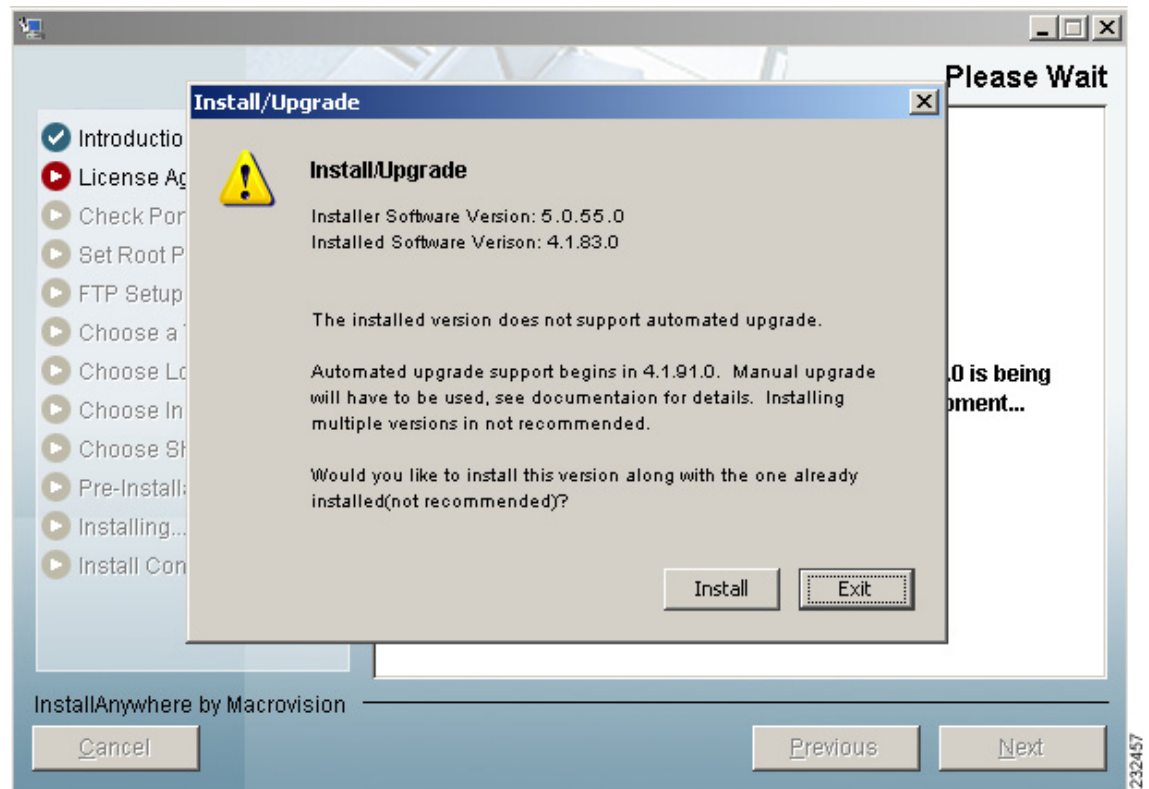
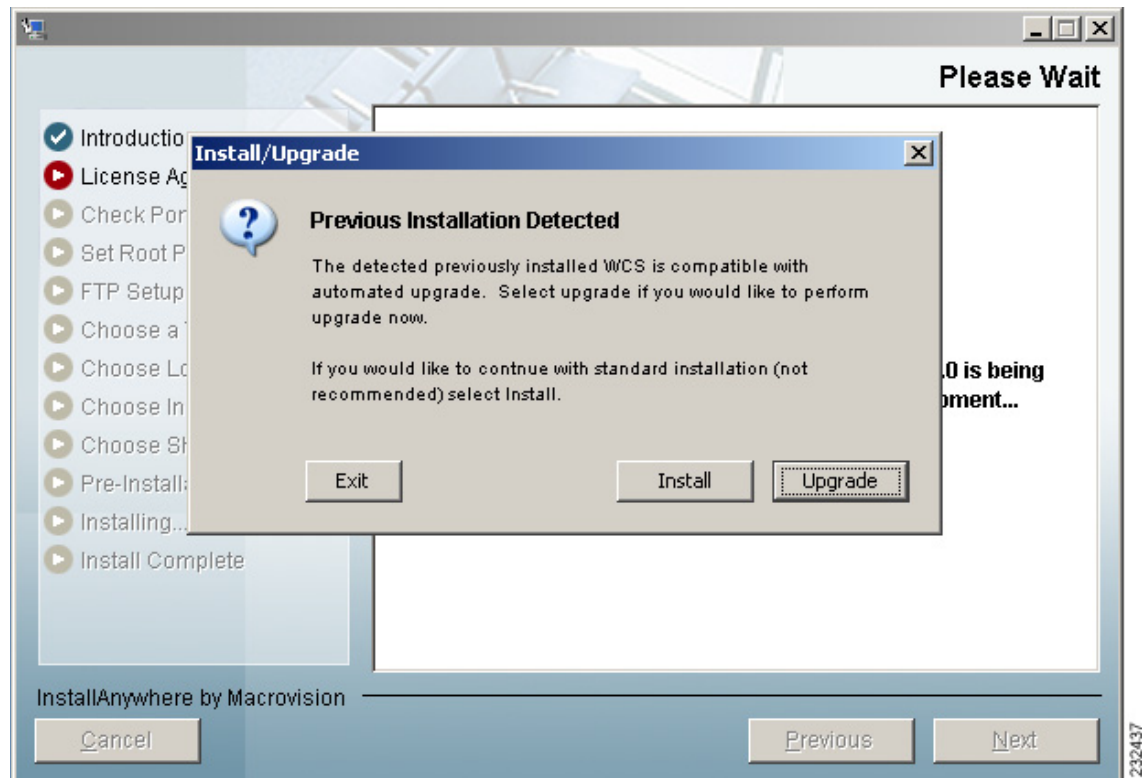


Figure 12-8 Previous Installation Detected

- Step 4** If you see a window similar to the one in [Figure 12-7](#) and choose **Install** because you cannot perform the automated upgrade, continue to the [“Manually Upgrading WCS on Windows” section on page 12-19](#). If you see a window similar to the one in [Figure 12-8](#) and choose **Install**, continue to the [“Manually Upgrading WCS on Windows” section on page 12-19](#). If you see a window similar to the one in [Figure 12-8](#) because a previous qualifying version of WCS is detected, choose **Upgrade** and continue to Step 5. This method is preferred.
- Step 5** Several of the values from the previous install are retained and carried over as part of the upgrade. These include the following:
- the ports
 - the root password
 - the root FTP password
 - the TFTP server file location
 - the FTP server file location
 - the multi-homed server interfaces
- Step 6** Choose a folder in which to install the Cisco WCS at the Choose Install Folder window. It must be a different location than the previous install. Click **Next** to continue.
- Step 7** Choose a folder location to store the shortcuts. It must be a different location than the previous install.
- Step 8** Continue to follow the prompts that appear. You are notified of checking for required space, uninstalling of previous versions, backing up files, restoring, and so on. You then see a prompt asking if you are now ready to start WCS as a service. Click **Yes**.

**Note**

The upgrade log is located in the standard log directory (\webnms\logs) if the automated upgrade completes. If the automated upgrade did not complete, the upgrade log is located in the user home directory.

Using the Installer to Upgrade WCS for Linux

Follow these steps to upgrade WCS (on a Linux platform) using the automated upgrade:

- Step 1** Using the command line, perform one of the following:
 - a. If you are installing from a CD, switch to the /media/cdrom directory.
 - b. If you are installing from Cisco.com, switch to the directory in which the install file was downloaded. For example, if the install file was placed in /root/Desktop, enter **cd /root/Desktop**.
- Step 2** Enter **./WCS-STANDARD-K9-4.2.X.Y.bin** (for CD users) or **./WCS-STANDARD-LB-K9-4-2-X-Y.bin** (for Cisco.com users) to start the install script.
- Step 3** The Install Anywhere message appears and prepares the system for installation. After a few seconds, the Introduction appears, followed by the license agreement statement. You must accept the license agreement to continue.
- Step 4** At this point, the install wizard detects whether a previous version of WCS is installed and specifies whether the current version is eligible for an automated upgrade. You receive a notification whether or not your most recent WCS version is eligible for the automated upgrade.
- Step 5** If you cannot continue to the automated upgrade because your current WCS version is not eligible, choose **Install** and continue to the [“Manually Upgrading WCS on Linux” section on page 12-19](#). If you choose to do a manual upgrade rather than the recommended automated upgrade, choose **Install** and continue to the [“Manually Upgrading WCS on Linux” section on page 12-19](#). If your current WCS version is eligible for the recommended automated upgrade, choose **Upgrade** and continue to Step 6.
- Step 6** Several of the values from the previous install are retained and carried over as part of the upgrade. These include the following:
 - the ports
 - the root password
 - the root FTP password
 - the TFTP server file location
 - the FTP server file location
 - the multi-homed server interfaces
- Step 7** Choose a folder in which to install the Cisco WCS. It must be a different location than the previous install. Click **Next** to continue.
- Step 8** Choose a folder location to store the shortcuts. It must be a different location than the previous install.
- Step 9** Continue to follow the prompts that appear. You are notified of checking for required space, uninstalling of previous versions, backing up files, restoring, and so on. You then see a prompt asking if you are now ready to start WCS as a service. Click **Yes**.

**Note**

The upgrade log is located in the standard log directory (\webnms\logs) if the automated upgrade completes. For an incomplete automated upgrade, the upgrade log is located in the user home directory.

Manually Upgrading WCS on Windows

Follow these steps to manually upgrade WCS on a Windows server. This type of upgrade is not recommended.

**Note**

When upgrading from software release 4.096.0 to 4.1.82.0, only one “from” e-mail address is restored for the alarm e-mail filters. If you have multiple “from” e-mail addresses defined in the alarm e-mail filters, they are lost. The single “from” e-mail address is configured in Administration > Settings > Mail Server (refer to the [“Mail Server” section on page 16-29](#)).

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- Step 1** If possible, stop all WCS user interfaces to stabilize the database.
 - Step 2** Back up the WCS database by following the instructions in the [“Backing Up the WCS Database \(for Windows\)” section on page 12-4](#).
 - Step 3** Uninstall the WCS application by following the instructions in the [“Uninstalling WCS on Windows” section on page 12-14](#).
 - Step 4** Install the new version of WCS by following the instructions in the [“Installing WCS for Windows” section on page 2-4](#).
 - Step 5** Restore the WCS database by following the instructions in the [“Restoring the WCS Database \(for Windows\)” section on page 12-5](#).
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Manually Upgrading WCS on Linux

Follow these steps to upgrade WCS on a Linux server. This type of upgrade is not recommended.

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- Step 1** If possible, stop all WCS user interfaces to stabilize the database.
 - Step 2** Back up the WCS database by following the instructions in the [“Backing Up the WCS Database \(for Linux\)” section on page 12-5](#).
 - Step 3** Uninstall the WCS application by following the instructions in the [“Uninstalling WCS on Linux” section on page 12-14](#).
 - Step 4** Install the new version of WCS by following the instructions in the [“Installing WCS for Linux” section on page 2-11](#).
 - Step 5** Restore the WCS database by following the instructions in the [“Restoring the WCS Database \(for Linux\)” section on page 12-7](#).

Downloading a New Config or Image

When you need to download a new config or image, use the default ftp username of ftp-user. This username allows access to the wcs-ftp server.

Upgrading the Network

Network upgrades must follow a recommended procedure so that databases can remain synchronized with each other. You cannot for instance upgrade the controller portion of the network to a newer release but maintain the current WCS version and not upgrade it. The supported order of upgrade is WCS first, followed by the controller, and then any additional devices.

Reinitializing the Database

If you need to reset the database because of a synchronization problem or a corruption of some type, enter `{install directory}/bin/dbadmin.(sh|bat) reinitdb` to reinitialize the database.

Recovering the WCS Password

You can change the WCS application root user or FTP user password. This option provides a safeguard if you lose the root password. An executable was added to the installer /bin directory (passwd.bat for Windows and passwd.sh for Linux). Follow these steps to recover the passwords and regain access to WCS. For password recovery on a wireless location device, refer to chapters 8 or 9 of the *Cisco 2700 Series Location Appliance Configuration Guide*.



Note

If you are a Linux user, you must be the root user to run the command.

Step 1 Change to the WCS bin folder.

Step 2 Perform one of the following:

Enter **passwd root-user <newpassword>** to change the WCS root password. The *newpassword* is the root login password you choose.

or

Enter **passwd location-ftp-user <newuser> <newpassword>** to change the FTP user and password. The *newuser* and *newpassword* are the FTP user and password you choose.

Step 3 The following options are available with these commands:

- -q — to quiet the output
- -pause — to pause before exiting
- -gui — to switch to the graphical user interface
- -force — to skip prompting for configuration

Step 4 Start WCS.

