

Wireless Control System (WCS) Troubleshoot FAQ

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Questions

Introduction

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Introduction

This document provides information on the most frequently asked questions (FAQ) about how to troubleshoot the Cisco Wireless Control System (WCS).

Refer to Cisco Technical Tips Conventions for more information on document conventions.

WCS Troubleshoot FAQ

Q. What are the minimum requirements to run Cisco WCS?

A. These are the minimum requirements that are necessary to install the Cisco WCS:

- ◆ **WCS Version 2.0:** The Cisco WCS software can be run on a workstation/server class WCS server: Pentium 4, 2.4 GHz or faster, with 1 GB or more RAM, that runs Windows® 2000/SP4 or Windows 2003 with all critical and security Windows updates installed. The web browser needs to be Microsoft Internet Explorer (IE) 6.0/SP 1 or later.
- ◆ **WCS Version 2.1:** The Cisco WCS software can be run on a workstation/server class WCS server: Pentium 4, 2.4 GHz or faster, with 1 GB or more RAM, that runs Windows 2000/SP4 with all critical and security Windows updates installed. The web browser needs to be IE 6.0/SP 1 or later.
- ◆ **WCS Version 2.2:** The Cisco WCS software can be run on a workstation/server class system: Pentium 4, 2.4 GHz or faster, with 1 GB or more RAM. These operating systems are supported: Windows 2000/SP4 or Windows 2003 with all critical and security Windows updates installed. The Linux Red Hat® Enterprise Linux ES Version 3 is supported. The Cisco WCS web interface requires IE 6.0/SP1 or later.
- ◆ **WCS Version 3.0:** The Cisco WCS can be run on a workstation/server class system:
 - ◇ For up to 500 Cisco 1000 Series lightweight access points: 2.4 GHz Pentium with 1 GB RAM.
 - ◇ For over 500 Cisco 1000 Series lightweight access points: Dual Processors (at least 2.4 GHz each) with minimum 2 GB RAM.
 - ◇ 20 GB Hard Drive

These operating systems are supported:

1. Red Hat Enterprise Linux ES release 3.0
2. Windows 2000/SP4 or later, or Windows 2003/SP1 or later with all critical and security Windows updates installed

- ◆ **WCS Version 4.0:** The Cisco WCS can be run on a workstation or server, and access points can be distributed unevenly across controllers.

High End Server Supports up to 3000 Cisco Aironet lightweight access points and 250 Cisco wireless LAN controllers.

- ◇ 3.15 GHz Intel Xeon Quad processor with 8 GB RAM and 200 GB hard drive

- ◇ 80 GB minimum free disk space is needed on your hard drive

Standard Server Supports up to 2000 Cisco Aironet lightweight access points and 150 Cisco wireless LAN controllers.

- ◇ 3.0 GHz Intel Dual Core processor with 4 GB RAM and 80 GB hard drive

- ◇ 40 GB minimum free disk space is needed on your hard drive

Low End Server Supports up to 500 Cisco Aironet lightweight access points and 50 Cisco wireless LAN controllers.

- ◇ 2.4 GHz Intel processor with 1 GB RAM and 30 GB hard drive

- ◇ 20 GB minimum free disk space is needed on your hard drive

These operating systems are supported:

- ◇ Windows 2003/SP1 or later with all critical and security Windows updates installed

- ◇ Red Hat Linux Enterprise Server 4.0 or Advanced Server 4.0: only 32-bit operating-system installations are supported; 64-bit operating-system installations are not supported.

- ◆ **WCS Version 4.1:** Cisco WCS can be run on a workstation/server class system and access points can be distributed unevenly across controllers. It requires this Cisco WCS:

High End Server – Supports up to 3000 Cisco Aironet lightweight access points and 750 Cisco wireless LAN controllers.

- ◇ 3.15-GHz Intel Xeon Quad processor with 8-GB RAM and 200-GB hard drive.

- ◇ 80-GB minimum free disk space on your hard drive.

These operating systems are supported on the high end server:

- ◇ Windows 2003/SP1 or later with all critical and security Windows updates installed.

- ◇ Red Hat Enterprise Linux Enterprise Server 4.0 or Advanced Server 4.0. Only 32-bit OS installations are supported. 64-bit installations are not supported.

- ◇ Windows 2003 version support on VmWare ESX 3.0.1 version and above. When you run WCS on a dedicated VmWare server, these minimum hardware requirements are necessary based on WCS high-end server hardware specifications:

- Quad CPU run at 3.15 GHz
- 8 GBs RAM
- 200 GB hard drive

Standard Server – Supports up to 2000 Cisco Aironet lightweight access points and 500 Cisco wireless LAN controllers.

- ◇ 3.2–GHz Intel Dual Core processor with 4–GB RAM and 80–GB hard drive.
- ◇ 40–GB minimum of free disk space on your hard drive.

Low End Server – Supports up to 500 Cisco Aironet lightweight access points and 125 Cisco wireless LAN controllers.

- ◇ 3.06–GHz Intel processor with 2–GB RAM and 30–GB hard drive.
- ◇ 30–GB minimum free disk space on your hard drive.

These operating systems are supported on the Low end and standard servers.

- ◇ Windows 2003/SP1 or later with all critical and security Windows updates installed.
- ◇ Red Hat Enterprise Linux Enterprise Server 4.0 or Advanced Server 4.0.
Only 32–bit OS installations are supported. 64–bit OS installations are not supported.

Q. What are the three primary components of WCS?

A. WCS is made up of three primary components: the Solid database engine, the Apache web server engine, and the Java–based SNMP engine. WCS has its own version of Java built in so Java should never be installed on a machine that's going to run WCS else a Java conflict will occur. All three components work together to provide the complete WCS functionality. The Apache web server is what is called as GUI of the WCS. It provides web interface to the user. SNMP engine on WCS is used to communicate with the WLC. It helps to push the configurations to the WLC and gather logs and traps from the WLC. It uses SNMP protocol for all communications with the WLC.

To check if all the three major components of WCS are running and its states, click on **Start >Programs > WCS > Status**

Q. The WCS installation fails. What can be the issue?

A. If you try to install the WCS Version 2.2 or older, this installation failure can be due to incompatible Java versions that were previously installed on the machine. In order to resolve this, go to Windows **Add/Remove programs** and remove any old Java installations. Run the WCS installer again. The WCS includes its own Java version. Also make sure that you do not run the installer with **PCAnywhere** from a remote machine or from a remote terminal with no graphics capability.

If you try to install the WCS Version 3.0, use **InstallAnywhere**. If there is an issue with the installer, bring up the installer in debug mode. Double click on the installer icon and hold down the control key to bring up a command window in which logs of debug statements are printed. These debugs can be used to troubleshoot the root cause of the problem.

Q. The WCS was just installed, but it fails to connect when the browser comes up. Why?

A. Verify if the system was rebooted after installation, that is, if it was installed as a service.

Q. How do I get the logs for WCS?

A. For releases prior to 2.2, the user must zip up the directory **<WCS Installation Dir>\webnms\logs**.

For 2.2 and higher releases, go to the **Admin**→**Logging** section from the WCS and choose the **Download** button from the **Download Logs** section.

It is always a good idea, when you collect information about an issue, to go the **Admin**→**Logging** section of WCS, set the **Message Level** to **Trace**, reproduce the problem, and then collect the logs. After the logs are collected, return the **Message Level** to **Error** because to keep it on **Trace** will degrade performance.

Q. The WCS fails to start up. What can be the issue?

A. Assume that the installation went correctly.

- ◆ If the WCS were installed as a service, make sure that you rebooted the machine.
- ◆ Check if the scripts are manually run from the bin directory. You must not manually run scripts from the bin directory. You must use the links from the Windows WCS programs menu or the scripts from Linux <Install Dir> (that is, **/usr/local/bin/WCS22/StartWCSServer**).
- ◆ The WCS requires these ports to be available in the machine:

```
*Checking for Port 1299 availability... OK
  *Checking for Port 80 availability... OK
    *Checking for Port 443 availability... OK
      *Checking for Port 8009 availability... OK
        *Checking for Port 8456 availability... OK
          *Checking for Port 8457 availability... OK
            *Checking for Port 8005 availability... OK
              *Checking for UDP Port 69 availability... OK
                *Checking for Port 21 availability... OK
```

Make sure that you do not run other applications on those ports, such as web server (80), TFTP Server (69), or FTP server (21). You can run **netstat -a** from a DOS window to see the listening ports that are used. If this is the case, shut them down and try to restart WCS.

- ◆ WCS does not start if the database is corrupt. If you reinitialize or restore the database, it fixes the issue. Navigate to the WCS installation directory and issue the **dbadmin.bat reinitdb** command from the command prompt to reinitialize the database.
- ◆ Collect the log files from the <**WCS Installation Dir**>\webnms\logs. These log files can be used to identify the root cause of the issue.
- ◆ Check if the Windows SNMP trap service is active on the server. Disable the service because it uses Port 162 that is required by WCS. For more information on list of ports used by WCS, refer to the Prerequisites section of Cisco Wireless Control System Configuration Guide, Release 5.2.

Q. The WCS was installed, but users cannot find the Programs group within the Windows Start menu. Why?

A. This can be because the user is logged on with a different user account than the one used to install WCS as a service. Make sure that the user logs on with the correct Windows account.

Q. Where can I find information about WCS licensing?

A. Licenses differ based on the number of access points they support and Cisco WCS options (Base or Location), so the licenses must be purchased based on your deployment option. Refer to the document Cisco Wireless Control System (WCS) Licensing and Ordering Guide

for detailed information about WCS licensing.

Q. How many LAPs can the WCS manage?

A. With the WCS Version 4.0, a single Cisco WCS can support up to 3000 Cisco Aironet lightweight access points. Multiple Cisco WCS systems can be deployed in a given wireless network.

Note: Once access points are added to the WCS, they are taken into account unless they are manually removed from the WCS.

Q. I do not see the alarm dashboard in the lower left corner. Why?

A. First, verify that you use the standard IE browser 6.0. Second, verify that Macromedia Flash is installed on the IE browser. The Flash player can be downloaded from the Macromedia website. Normally, the browser prompts the user to install the software. In some cases, it is possible that the dialog was cancelled inadvertently.

Note: If Flash is not properly installed, other graphs also display improperly.

Q. The Cisco WCS does not receive any traps. What can be the issue?

A. Check these aspects:

- ◆ Make sure that the port **UDP 169 (trap receiver)** is not blocked on the WCS machine with any firewall.
- ◆ Check if there are traffic rules on the network for this.
- ◆ Open the web interface of a WLC that had already been added to WCS.

◇ Go to **Management**→**Trap Recipients**.

◇ In that list, check to see the IP address of the WCS server.

If the address is there, open the **Trap Logs** in the same screen. See if there are logs sent to the WCS address, which can mean that traps are sent, but something else has them blocked.

If the WCS address is not present as **Trap Recipients**, it means that it cannot be added while it discovers the WLC; make sure that you added the WLC with a SNMP community that includes Write permissions. At this point, go to **WCS Templates** → **Management** → **Trap Receivers** and apply the template of the WCS address to the WLCs.

Q. How many alarms are kept in the WCS when are they cleared, and what is the average size of each alarm?

A. The WCS keeps the last 40,000 events in the system and clears them up after seven days. An event or alarm can have 1000 bytes on average.

Q. How can I modify the alarm capacity of the WCS and allow alarms to be kept for longer periods of time?

A. Under the <WCS_INSTALL_DIR>/webnms/conf folder, there is a file called **NmsProcessesBE.conf**. Within this file, the user needs to modify the parameter **CLEAN_EVENT_INTERVAL** (default value is seven days) and the parameter **EVENT_WINDOW_SIZE** (default value is 40,000). The server needs to be stopped and

restarted after the user makes the modifications.

Q. Is there any document available that has the list of commands to manage the WCS database?

A. The WCS database can be managed with the **dbadmin.bat** commands from the command prompt if you navigate to the WCS installation directory in the bin directory. For more information about how to manage the database, refer to **Wireless Control System (WCS) – Usage of Dbadmin Commands**.

Q. The client counts in the WCS are inaccurate as compared to the actual clients on the network. Why?

A. The client count is calculated every 15 minutes. There can be a discrepancy of the numbers of clients present now versus the number calculated since the previous polling cycle.

Q. Can I print the Map pages or other pages without the side panel and top panel?

A. No, you cannot do this through the browser print button, but you can take a screen shot of the WCS web page, cut out the portion that you do not need, and print it as an image.

Q. I get an out-of-memory error within proposal generation. Why?

A. Make sure that your floor plan image file is less than 1 MB in size. If it is greater than that, edit the image file in Paint® or Photoshop®, reduce the resolution to less than 1 MB in size, go to the **Floor->Edit** page, and import this new, low-resolution image. Then regenerate the proposal.

Q. With walls, it takes a very long time to compute heatmaps. Why?

A. The heatmap computation time is proportional to the number of APs and the number of walls. If you have 400 walls instead of 40 walls, computational time will be 10 times greater.

Note: DRAW YOUR OWN WALLS and DO NOT use the auto-detection-of-walls feature that is available in the old Floor Plan Editor (FPE).

The newer versions have Flash-based FPE, which is integrated within the WCS. This does not allow auto detection of walls, and you have to manually draw your walls. Try to keep the number of walls low. Fewer than 200-300 is optimal.

Q. Can I import an old FPE file into the WCS Version 3.0 and then edit it in the new Flash editor?

A. Yes, you can. First, you have to create the floor in the WCS and then go to **Edit->Floor** to import the legacy FPE file. Once it is imported, the walls will be converted to the new format and will appear in the new Flash editor.

Q. Can I convert walls in the Flash editor to the old FPE file in the WCS Version 3.0 so that I can import that into WCS Version 2.2?

A. No, you cannot do this. If you use the WCS Version 2.2, you must use the old FPE to draw walls and generate the FPE file.

Q. What is the maximum size for an imported floor plan?

A. The WCS does not currently have size restrictions. Prior to Version 2.2, it had been 1750 by 1750 feet. It is possible that the FPE or map editor has problems with large sizes, so it is highly recommended that the floor plans be kept to 1 Mb or less.

Q. My browser Back button does not work with the WCS Version 2.2. It used to work before; why not now?

A. Yes, this is due to the periodic alarm refresh which is now set to 15 seconds; earlier, it had been five minutes. Once the alarm panel refreshes after 15 seconds, the browser history is overwritten by alarm refreshes. If you hit the Back button within 15 seconds after you go to a page in WCS, the browser Back button will work.

The periodic alarm refresh interval is configurable:

1. Open this file: <install dir>\webnms\webacs\WEB-INF\classes\com\bsn\webui\resources\AlarmControlResources.properties
2. Open this file with the Notepad application: Configuration Parameters to Control Alarm Viewing AlarmSummaryRefreshIntervalInSecs=15
3. Change the value from default to 15. (It had been 300 in earlier releases.)
4. Restart the server.

Q. When I apply a template to an AP with the WCS, it shows the wrong MAC address under the Ethernet MAC Address column. Why?

A. It depends on what APs you use. For the 1000 Series APs, the wireless control system (WCS) sees the Ethernet media access control (MAC) and base Radio MAC as the same thing. On the 1130, 1230, and 1240 Series APs, you see the actual Ethernet MAC displayed.

Q. When I create a WLAN template in WCS, there is a drop-down menu for WPA, WPA-2, and WPA1+WPA2. When I use the WPA-2 option, an attempt to push this template to a controller fails with this error: WPA2 Security Not Supported in this controller version What is the difference between WPA-2 and WPA1+WPA2 in this case?

A. The options WPA1 and WPA2 were used in 3.2 and prior releases.

Security Policies

IPv6 ** Enabled

Layer 2 Security Static WEP

None

WPA

WPA-2

802.1X

Static WEP

Cranite

Fortress

Static WEP-802.1X

CKIP

WPA1+WPA2

Web Authentication ***

MFP Signature Generation

MFP Version

Layer 3 Security **

The **WPA1** or **WPA2** option is for legacy support for earlier controller releases, such as 3.2. For 4.1 controller code, the correct option for WPA is **WPA1 + WPA2**. After you choose WPA1+ WPA2, choose the appropriate parameters for WPA.

Q. How do I get the utilization per AP with the WCS?

A. The WCS does not provide a full list of clients per AP to get a list of utilization per AP. We can create the busiest AP report and extend it to 50 APs. In order to do this, complete these steps.

1. Go to **WCS > Monitor**.
2. Choose **Reports**.
3. Click **Busiest Aps**.
4. Change the Number of APs to **Top 50**.
5. Choose the desired time duration.
6. Click **Generate Report**.

In order to export the data, use one of these three methods:

1. Copy the data (from either the window or the received HTML code) and use Excel or another application to format it.
2. With a location appliance, from the WCS, go to **Location** -> **Location Server**.
 - a. Choose the server name.
 - b. Choose **Administration**.
 - c. Choose **Export Asset information** in order to have a list of PC/location/etc. in CSV format.
3. In order to connect to the location appliance, you can make queries directly to the database with SOAP API through a developer provided API if you need to build an in-house location application.

Q. I cannot update the license for the WCS because there is no licensing option under Help 3.2. Why?

A. Licensing does not come into effect until the 4.0 code. The WCS Version 3.2 is unlicensed. For the WCS software Version 4.0, you can use the previous licensing information to get the right license file.

Q. How do I update a license on the WCS?

A. Refer to WCS and End User Licenses for complete information on how to update licenses on the Cisco WCS.

Q. Is it possible to install a certificate on the WCS?

A. It is not possible to install a certificate on the WCS at this point.

Q. Can we gather logs on the action performed by users from WCS?

A. No, the accounting of user actions is not yet supported on the WCS. Since the WCS does not support accounting as a feature set, no syslog server integration is possible. Alternatively, you can enable syslog server support on Wireless LAN Controllers.

For information on the configuration of syslog on WLCs, refer to http://www.cisco.com/en/US/products/ps6307/products_configuration_example09186a00809a2d76.shtml.

Q. I have WCS Version 5.0 installed in my network. I have a requirement to downgrade my WCS 4.2.81.0. Is there anyway to preserve the floor plans and configurations if I perform the downgrade?

A. You need to take a back up of the WCS database before you downgrade and then restore the WCS after the downgrade is done. This way, you can restore the configurations, floor plans, etc. to the new version.

For information on how to perform a backup of the WCS database, refer to the Backing Up the WCS Database section of the document.

For information on how to restore the WCS database from the backup, refer to the Restoring the WCS Database section of the document.

Q. In WCS, we can bring in a .jpg or .bmp map of an office floor, place the APs on the map, draw obstacles, and take data points. Once a drawing has been calibrated, that is, obstacles drawn, we get a heat map based upon the information that we have fed into WCS. What happens if you use this map for a while, and then someone does construction and places an x-ray room in the middle of your map that has lead-lined walls? Since the APs constantly take readings of the RF and report them to the controller / WCS, will the heat maps now automatically show a coverage hole, or does that obstacle still have to be drawn in before you can see any coverage holes?

A. You must draw the obstacles in for the coverage heat maps to reflect the physical changes since these are predictive heat maps. Remember, heat maps are only for display purposes. You get coverage hole alerts if coverage profiles are violated. Profile violations include coverage, noise, and interference as defined in the controllers under the 802.11bg (or a) properties. For example, a coverage hole alert shows up if a certain number of clients falls below a certain received signal strength indicator (RSSI). Refer to Radio Resource Management under Unified Wireless Networks for a detailed explanation of coverage hole

detection and correction.

Q. I plan to migrate my WLSE based wireless network to WCS. Where can I find information on the migration procedure?

A. This product bulletin provides guidelines and outlines the steps required to migrate a CiscoWorks Wireless LAN Solution Engine (WLSE) to operate as a Cisco® Wireless Control System (WCS).

Q. How do I configure the WCS to send alerts to the syslog server or to send notifications through emails?

A. WCS cannot be used to send information to the syslog server. Use **Administration > Logging** to access the Administer Logging Options page. This logging function is only related to WCS logging and not syslog information. The logging for controller syslog information can be done on the **Controller > Management > Syslog** page.

Email Notification can be done with WCS. WCS includes a built-in email notification function that can notify network operators when critical alarms occur. Refer to the **WCS Monitor > All Alarms > Email Notification** page to view the current alarm notification settings.

1. Use **Monitor/Alarms**.
2. From a command drop-down list, choose **Email Notification**.
3. Click **GO** to access this page.

This page allows you to view the alarm categories with the critical-alarm email notification enabled and disabled, the current From and To email addresses, and the current SMTP server. This page also allows you to enable and disable email notification (check box *checked* = email notification ON; check box *unchecked* = email notification OFF) for any or all of the alarm categories, and it allows you to access an alarm category email notification setup page.

For every category except Coverage Holes, the alarm severity must be critical to trigger the email. Email notification is available only for alarms, not for events.

Note: If you do not receive emails from WCS, check whether port 25 is blocked.

Note: A WCS administrator currently has no control over which events generate alarms, when they time out, or the degree of their severity. On the controller, individual types of events can be enabled or disabled (such as management, SNMP, trap controls, etc.).

Q. How can I see the alarm history of the rogue AP in WCS after the rogue AP has been removed ?

A. Go to the Alarm page; choose **Monitor > Alarms** from the top menu. Click the **Alarm** for when the rogue AP was cleared; choose **Event History** from the pull-down menu, and click **Go**. This shows you the historical alarms for the rogue AP before it was cleared.

Q. If only one WCS is ever used for configuration, can you have multiple WCS servers for monitoring purposes? (Can you then import a database backup in case the main WCS fails?)

A. There is no problem with this. The only potential challenge is the deployability of the controller/AP templates on one of the read-only WCS systems. If you keep a scheduled DB backup to a shared file system and then do a restore on the secondary WCS box, it should do the trick.

Note: The license information is kept with the WCS server, not with the DB backup. This means that if you build up a new WCS and do a restore, you still need to enter a license for the new WCS server.

Q. How can the Internet Explorer (IE) browser display pictures in WCS?

A. Flash Player is needed to display graphs and statistics. Install this if you do not already have the software. Visit the Adobe website to download the software.

Q. I have an out-of-service AP. I have a replacement ready to install, but I am concerned with the map on the WCS. How can I replace the present AP with the new AP while I use the same name? How can I replace an AP on a WCS map?

A. After you install the new AP and synchronize it with the WLC, rename the new AP. Then delete the first (original) AP from the map and add the newly installed AP to the map.

Q. What is the difference between a guest user and a local net user when you set up guest accounts in WCS? Why does WCS have fields for both guest users and local net users, but the WLC GUI only has a field to enter guest users?

A. The difference between a guest user and a local net user is that a guest user can only log on for webauth/guest access, while the local net user can view the configurations on the controller, as well. The WCS has both local net-user and guest-user fields since this is where you can define guest users. It can be used as a template and can be pushed to all controllers.

Q. Can the controller behind a NAT/Firewall device at a remote office communicate with WCS at the main site?

A. If the Controller is behind a firewall, make sure that the UDP ports 161 and 162, which are used for SNMP communication between WCS and WLC, are opened.

WCS cannot communicate with WLC if it is behind a NAT device. This is not a supported configuration. The WCS server needs direct IP connectivity to the controller.

Q. When I attempt to access the GUI interface for my Wireless Control System or Wireless LAN Controller through Microsoft IE7 I always get the Certificate Warning in the browser. I attempt to install and update the certificate, but it does not work. I always get the "There is a problem with this Website's security certificate" warning prompt. Why?

A. This is a normal behavior. WCS uses self-sign certificates for HTTPS. Because the certificate is self-signed, Internet Explorer (IE) or any browser does not trust the certificate. Thus, it gives you a warning message, which tells you that IE has received a certificate that IE

cannot verify. IE7 further tightens up the security on certificate. It displays a page that indicates there is a certificate problem.

Q. WCS database file solid.db is not backed in the daily backups with the third-party backup software. Why?

A. The file **solid.db** is the database file for WCS. This file is locked, so any third-party backup program is not able to backup that specific file. You can backup the **solid.db** with WCS. Refer to this link to help backup the WCS database:

<http://cisco.com/en/US/docs/wireless/wcs/4.0/configuration/guide/wcsmain.html#wp1077130>

Q. We have WCS Version 3.2.40.0. We tried to install new PAK for WCS. The online tools says, "Please enter the host name of the server hardware that you will be installing your WCS software. The best way to determine the correct host name is to open the WCS About window found under the Help menu in WCS. Use the host name displayed in the About window in the field below." However, a host name is not displayed in the About windows. Is this WCS on Windows?

A. The WCS server system name is not shown in *Help/About this Software* in Version 3.2 or earlier. This feature works only with WCS Version 4.0 and later. For earlier versions than this, open a DOS command prompt, the '**ipconfig /all**' command, in order to find the hostname. This displays the server system name.

Q. I would like to use ACS/AD authentication for the management of the WCS and not the local user name/password. Is this possible?

A. This is not a supported feature in WCS. At this time, local users are the only way to authenticate into WCS for administrative purposes.

Q. Can I add existing buildings to a new campus in WCS, or do I have to re-create all the buildings/floors under the new campus?

A. Currently, you cannot add existing buildings to a new campus. You have to re-create all the buildings/floors under the new campus.

Q. I have two controllers WLC1 and WLC2. WLC1 is already deployed, and it is configured to service clients. When I set up the WLC2 at our new site, I want to use the same WLAN configuration as WLC1 on the WLC2, but I do not remember the PSK that I used for the WLANs in WLC1. Can I use WCS to copy my current (Working) WLAN from WLC1 and copy it into the WLC2, yet not know the PSK?

A. If you save the configuration for the working controller on the WCS, it creates a template for that WLAN along with the PSK, which you can then push out to another controller that does not work. The only other suggestion is to start over. Make sure that you run 4.0.96.0 code on your WCS before you push the template out.

Q. Can we have two WCSs for redundancy on the same network?

A. Actually, you can install two WCSs because WCS is just another network management tool; the problem is the WLC configuration databases. If you make changes on the WLC configuration on one WCS, the WLC configuration databases on two different WCSs cannot be the same. We do not really have a redundancy solution here.

The current suggestion is to do nightly backups and have another WCS standing by, so, if the first one goes down, you restore a nightly backup and run on the second.

Q. How can I ensure that WCS and WLC are in sync with each other?

A. In order to resync the controllers and WCS, follow these steps:

1. Go to **Configure > Controllers**, and check the box at the top of the IP Address list to choose all controllers.
2. Use the **Select a Command** drop-down list to choose **Save Config to Flash**.
3. Click **OK**. This is a basic test to verify that SNMP works correctly, and the controllers will do as the WCS tells them.
4. Go to **Configure > Controllers**, and check the box at the top of the IP Address list to choose all controllers.
5. Use the **Select a Command** drop-down list to choose **Refresh Config from Controllers**.
6. Click **OK**. This tells the WCS to believe the new information from the controllers over anything it previously had known.

Q. Is it possible to track the client history through WCS?

A. Client history can be tracked only through a Location Server that talks to a WCS. If you do not have a Location Server in your network, WCS can show you only a graph of client count versus the time under the page **Monitor > Network Summary**, but not client history.

Q. While I copied the configuration of one AP to another AP through WCS, the Access Point Group and the static IP Address of the AP were not copied to the destination AP. I used this copy procedure in WCS: from the WCS GUI, **Configure -> Access Point -> Copy and Replace AP**. What is the reason for this?

A. This is because of the bug CSCsi04160 (registered customers only) which notes that the **Copy And Replace AP** operation in WCS does not copy Static AP IP Address or Access Point Group to the new AP.

The currently available workaround is to arrive at the Detail page of the newly configured AP and perform the configuration manually.

Q. I am not able to access WCS. Even my default root username and password combination does not work. How can I recover my lost password in WCS?

A. Prior to WCS 4.1, there was no supported method to recover access to WCS if the root account password were lost, but, as of WCS 4.1, there is a supported method to recover

access.

Use this procedure:

1. Log on to an account with root (administrator) privileges on the host operating system.
2. Stop WCS.
3. In a terminal window, CD to the WCS bin folder, for example, C:\Program Files\WCS4.1\bin.
4. Enter this command: **passwd root–user <NEWPASSWORD>**. Use "passwd –h" to get help.
5. Start WCS.

Note: The bug CSCsg01946 (registered customers only) explains the same procedure.

Q. Explain in brief about client status polling. How can I configure it with WCS?

A. The location server polls the clients at regular intervals in order to track their location information. You can set how often the location server polls and updates its client location information. By default, the location server performs automatic polling every 15 minutes. Information updates can occur up to every 2 minutes.

Refer to Configuring Client Status Polling on how to configure it.

You can also schedule client statistics polling task to occur at regular intervals. From WCS GUI, go to **Administration > Scheduled Tasks > Client Status Poll**. Here, you can configure the poll interval.

Q. Is it possible from WCS to modify the time a tracked element remains in the location server?

A. Yes, it is possible to change the time a tracked element remains in the location server through WCS:

1. In the WCS, choose **Location > Location Servers**.
2. Choose the **Location server name**.
3. In the resultant page, choose **Administration > Advanced Parameters**.
4. From the Advanced Parameters, choose **Absent Data Cleanup Interval**.
5. If you modify this interval to the desired value, you can vary the lifetime of a tracked element to remain in the location server.

Q. In the WCS planning mode, the imported maps do not take into account obstructions such as walls, doors, windows, etc. In such cases, how should I proceed with the WCS planning mode and plan for proper AP placement?

A. The **WCS Planning Mode** enables you to calculate the number of access points required to cover an area when it places fictitious access points on a map and allows you to view the coverage area. Based on the throughput specified for each protocol (802.11a or 802.11b/g), planning mode calculates the total number of access points required to provide optimum coverage in your network.

In order to display obstacles in the WCS imported maps, choose the corresponding map in WCS. From the pull-down menu in the upper right hand corner, choose **Planning Mode** and click **Go**. Click **Map Editor**. Now, you can choose the obstacle type and add, move, or delete obstacles in the map.

Q. I want to use two WCS systems for my WLAN infrastructure: one to monitor only and one to monitor and configure. Both manage/monitor the same set of controllers. Is this supported?

A. Yes, you can do this. You can even configure on both; just make sure to refresh configurations from WLC before you do that on the second WCS.

Q. Where can I find detailed information about the WCS alarms and events?

A. For WCS alarm and event messages, refer to <http://www.cisco.com/en/US/docs/wireless/wcs/4.1/configuration/guide/wcsevent.html>.

Q. I understand that, to import multiple users to WCS, I need to follow the procedure documented at Configuring Guest User Templates. What are the maximum and minimum time values of the *life time* field when I use a CSV file for the bulk import of guest users in WCS?

A. The value of the life time field ranges between 1 minute and 35 weeks. The maximum length of disclaimer is 255 characters, and the valid characters are alphanumeric strings and special characters, such as new line, comma, period, etc.

Q. Can you configure IGMP Snooping on the WCS?

A. Yes, IGMP can be configured on WCS version 6.0. For information on configuring IGMP snooping on WCS, refer to the Configuring IGMP Snooping section of Cisco Wireless Control System Configuration Guide, Release 6.0.

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