

CCBOOTCAMP

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Wireless

REMOTE RACK ACCESS FAQ v1.0.2

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Read Me First

Do you have the latest version of this FAQ? If you followed the FAQ link in your shift-reminder e-mail message, then you are now viewing the latest version, otherwise click the link and verify the date on the cover of the document to ensure the information you are reviewing is accurate. We often make changes to the racks that will affect your session, so you need the most current information concerning your rack layout.

Before beginning each rack session, review this document THOROUGHLY!

----- WE PRACTICE AGGRESSIVE POWER MANAGEMENT -----

Idle racks will be powered off. We periodically run scripts (at least once per hour) that check racks for idle sessions and power off rack devices if there are no active sessions from the terminal server (access-server) to a host (e.g. to R1, WISM, BR2, or some other host), or if all open host connections have been idle for three hours or longer. Save your configurations often and do not log off if you take a break during your shift.

At the start of your shift, you must access the APC to power on the rack equipment (See *Remote Power Cycle Instructions*). Our normal practice is to power off rack equipment between shifts, but if you have consecutive shifts scheduled through the Rack Reserve Web system, we will NOT power your rack off at shift change. Nevertheless, remember to save your configurations often.

Usage Guidelines for Wireless Racks

1. *Very important!* If you set passwords on your devices please use the word *cisco* as the password in case you forget to erase your configurations. This saves us from having to clear passwords for the next customer.
2. Your 8-hour session will be terminated exactly on time so please allow yourself enough time to save-off a copy of your configurations if desired and to clear the configurations from all of your devices.
3. Your 8-hour session may begin up to five minutes after the start time because we run scripts to terminate the previous customer and prepare the racks for the next shift. These scripts take a few minutes to complete.
4. If you encounter hardware or access problems, please use the following web form to report the issue: <http://www.ccbootcamp.com/rackhelp.html>. This will send a page to the on-call technician and will result in the quickest response time. We do not normally monitor our email after hours, so the above rack support web form is the most effective way to request assistance.
5. **Customers are expected to erase all the configs at the end of their session.** Extend this courtesy to the next person using the rack, just as you would expect the previous customer to do for you.
6. Our rack shifts are available in three time blocks. All times are U.S. Pacific times. The current time is displayed on the [Rack Reserve](#) main page and on the [Rack Support](#) web page.

Shift 1 - 00:00-08:00

Shift 2 - 08:00-16:00

Shift 3 - 16:00-24:00

7. Remote rack reservations must be paid in advance before they are secured. Refunds are not provided for scheduled lab access. You can reschedule your shift up to two hours prior to your timeslot through the Rack Reserve system for a small fee. A valid credit card will be required.

8. Wireless racks have a dedicated Cisco 2511 (terminal server/access-server) for reverse telnet to the console ports of the rack devices. This router will only be configured for reverse telnet and will not be used for any other purpose. You will not have executive privileges on this device.

FAQ for Most Common Remote Rack Usage Questions

Where can I find files such as lab starting configurations and other documents related to Wireless Racks?

All available Wireless Rack support documents can be downloaded from the following link: <http://www.ccbootcamp.com/downloads/!Wireless/>

How do I access my wireless rack?

By creating a VPN tunnel to the rack using an IPSec VPN client. You will need to download the correct Cisco VPN Client profile for the specific rack that you will be working on and place it in the profile directory of your Cisco VPN client, or import it into your VPN Client application (if it supports Cisco profile imports). See the *VPN Access* section of this document.

How do I gain console access to my rack devices?

After creating a VPN tunnel to the rack, use telnet client software such as SecureCRT or Putty to connect to the terminal server (also called the access-server). This is a Cisco 2511 and the IP address is 192.168.200.240. After establishing a telnet session with the terminal server, you can then access the rack devices from the command-line of the terminal server (via reverse telnet sessions). Type *show hosts* to see the list of devices to which you have console access. To access a device (e.g. cat6503-1, rswlc, hq3560, etc.) via reverse telnet, type the name exactly as it appears in the host list (e.g. cat6503-2), and then press *Enter* and you will be at the console port of the device.

How do I navigate between devices?

Press *ctrl+shift+6* then *x* on your keyboard to return to the terminal server command-line (the Cisco 2511). Once you have created a session to a device, that session remains open even if you return to the command-line of the terminal server. To return to a device to which you already have an open session, type *resume* and the name of device (see example below). Pressing the *Enter* key at the terminal server command line without entering any command will return you to the last accessed host (device). Other useful commands for viewing open sessions are *show sessions* and *show users*.

Example: to connect to cat3560, type *cat3560* and press *Enter*. To exit back to the terminal server, press *ctrl+shift+6* and then *x*. To resume your connection to cat3560, type *resume cat3560* and press *Enter*.

What do I do if a device is frozen or not responding?

If a device is not responding, always check to make sure the electrical power is on to the device (or group of devices). See *Remote Power Cycle Instructions* below. If power is on, you may have to turn the power off and back on by controlling the electrical outlet to which the device is attached. Make sure you have saved your configurations on the other devices that are connected to that power outlet before cycling the power.

What do I do if the device refuses access when I attempt to establish a session?

If you get an error similar to "*Trying cat6503-1 (1.1.1.1, 2001)...% Connection refused by remote host,*" you will need to clear the last two digits of the associated line (20xx). In this example, type *clear line 01*

and press the Enter key to close the established session to cat6503-1. You may have to do it twice.

How do I see what reverse telnet sessions I have established?

Type `show sessions` to see a list of established sessions. You can reconnect to a specific host by typing the connection (conn) number and pressing the Enter key. See example output below.

```
wirelessrack1>show sessions
```

Conn	Host	Address	Byte	Idle	Conn Name
1	cat6503-1	1.1.1.1	0	1	cat6503-1
* 2	cat6503-2	1.1.1.1	0	0	cat6503-2

How do I determine what other devices are actively connected to a specific network device such as a router or switch?

Try the command `show cdp neighbors`. Unless you have disabled CDP, you should see a list of active neighbors and connection information. The command `show cdp neighbors detail` provides even more information.

What if I have a hardware or connectivity problem that I can't solve?

If you still need help after reading this document and troubleshooting your problem, please fill out the web form at the link below and submit it.

Rack Support: <http://www.ccbootcamp.com/rackhelp.html>

This process generates a page and email to the on-call technician, who will respond to your problem as soon as he is able. If a problem occurs Monday through Friday on a non-holiday between 7:00 A.M. and 4:00 P.M. Pacific time, you can call CCBOOTCAMP at 702.968.5100 and ask to be directed to Rack Support.

Quick Note:

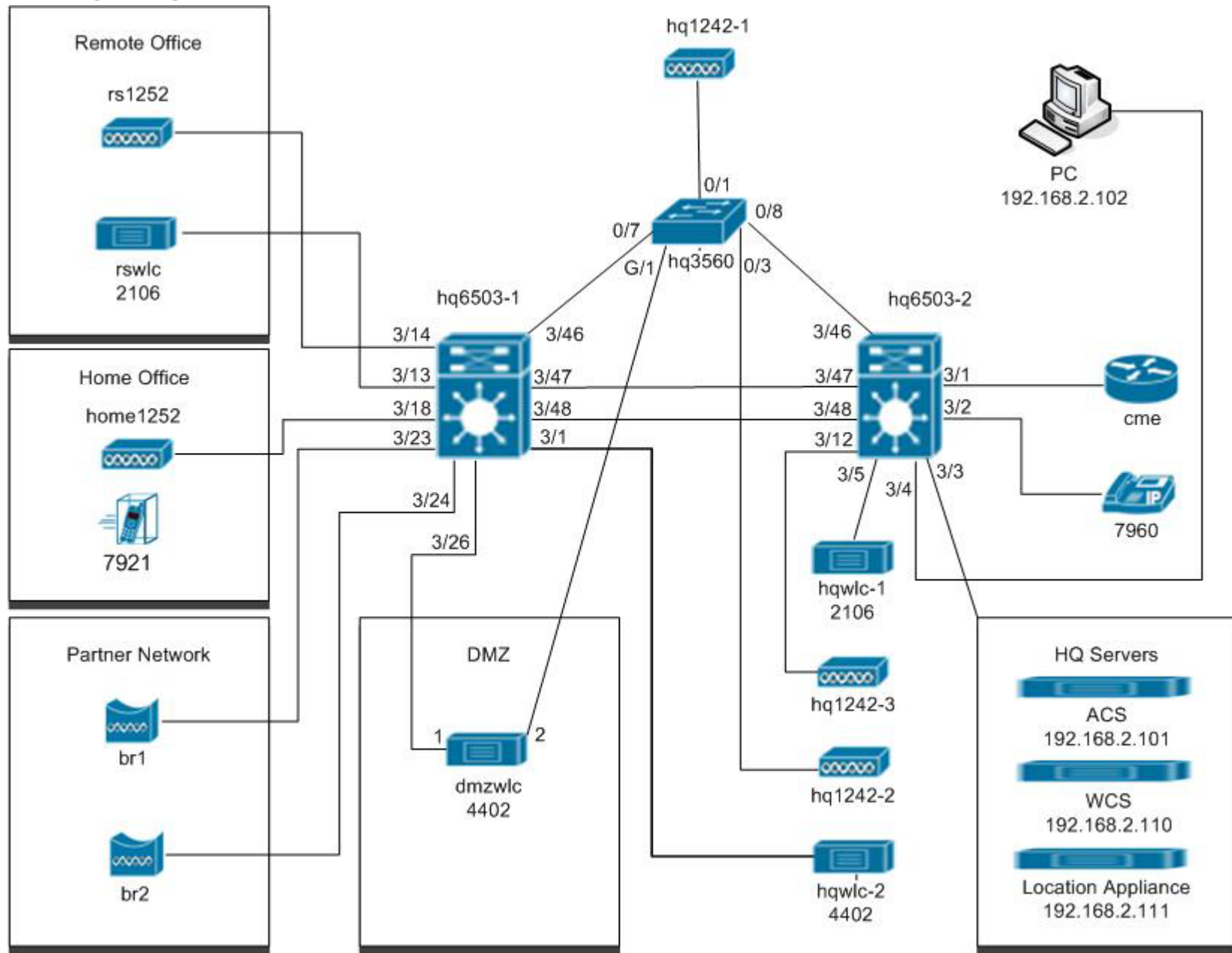
Each rack has been outfitted with two Catalyst 6503 series switches which are interconnected via two connections on switch ports 3/47 and 3/48. Each rack also contains a Catalyst 3560 series switch which is connected to each 6503 on switch port 3/46. The rack also contains one 2811 series router which houses Call Manager Express and will be preconfigured for you but accessible via the terminal server. Also included in each rack is a WiSM module in HQ6503-1, two 2106 Wireless LAN Controllers, one 4402 Wireless LAN Controller, and seven access points that will be either model 1242's or 1252's. You will also have one ACS sever, one WCS server, one Location appliance in and one PC connected to your rack.

In order to understand the topology you should first review the diagram below and use this as your guide to configuring your lab. The starting configurations can be downloaded from the configuration folder at:

<http://www.ccbootcamp.com/!Wireless>

These pre-configurations will provide you with the base layer-2 and layer-3 setup. We highly recommend you erase all configurations on each device and apply the downloaded starting configurations before beginning your rack session.

Rack Cabling Diagram



Rack Usage

The rack topology is based on a direct VPN connection to network 192.168.0.0/16. Your VPN client network interface will be assigned an IP address that will effectively put your PC on the rack's network.

Steps Needed to Use the Rack:

1. Establish a VPN connection.
2. Telnet to the terminal server.
3. Power on the devices.
4. Reset the image on all the servers (Please note that the servers will not be accessible until both cat6503 are powered on and the starting configurations applied).
5. Load all remaining starting configurations on their respective devices.

These steps will be explained in-detail on the following pages.

Files related to the Wireless Racks can be found in the following Web location: <http://www.ccbootcamp.com/download/!Wireless/>

General Info:

IP Addresses of key devices are:

Device	IP Address	Connection Methods
Terminal Server	192.168.200.240	Telnet
ACS/AD Server	192.168.2.101	RDP or VNC
WCS	192.168.2.110	Web Browser (https)
Location Appliance	192.168.2.111	From WCS (also SSH)
PC	192.168.2.102	RDP of VNC

Credentials:

Entity	Username	Password
ACS/AD Server	enablemode	enableme
WCS	root	Enable5796
Location	(From WCS) admin (Console) root	(From WCS) admin (Console) Enable5796
PC	enablemode	enableme

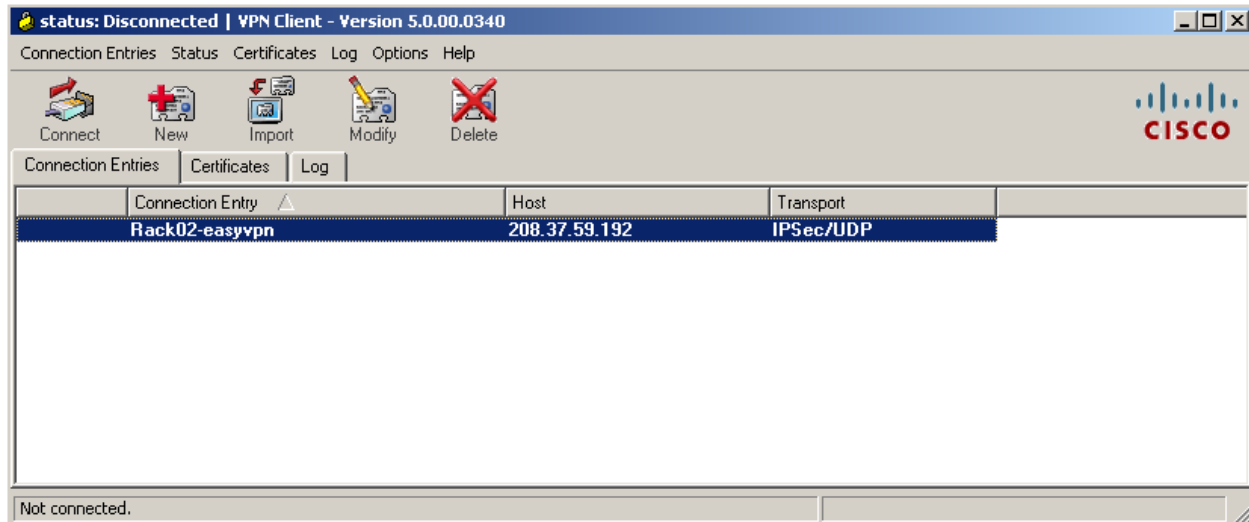
VPN Access:

All the racks profiles can also be downloaded from:

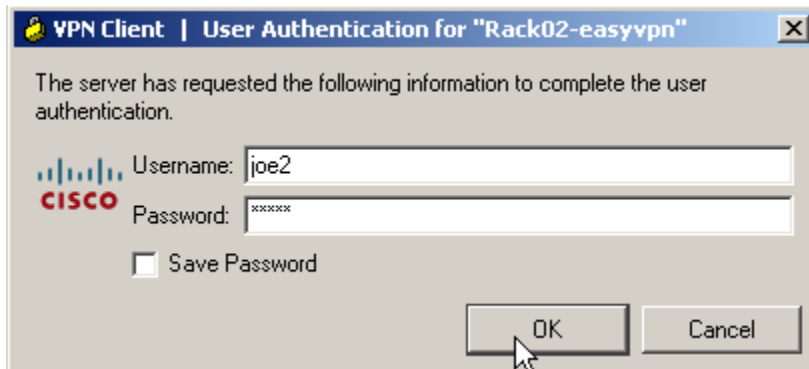
<http://www.ccbootcamp.com/download/!Wireless/wireless-rack-vpn-profiles/>

In order to get them in to the Cisco VPN client profiles directory, copy them to the profiles directory, which by default is located at "C:\program files\cisco systems\vpn client\profiles\"

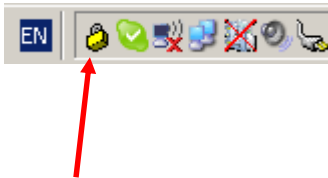
You should then see the following displayed when you load the client GUI interface (the Connection Entry name will vary according to the rack profile you have downloaded):



Highlight the rack profile and then click the Connect icon in the menu bar. You will be prompted for your username and password as shown below (the user name and password are the credentials associated with your Rack Reserve account and are contained in the shift reminder email you received just prior to the start of your shift):



A successful connection will be indicated by the minimized padlock icon in your system tray, as shown:



Test the VPN connection by pinging to 192.168.200.240, which is the IP address of the terminal server. Connect to the terminal server using a Telnet client.

Our racks are regularly accessed from customer sites around the world without hindrance, so if you have a problem connecting, the most likely cause is the configuration of your PC or local hardware firewall. Use valid troubleshooting techniques to investigate the problem before contacting us.

Remote Power Cycle Instructions for Wireless racks

1. Telnet to the terminal server. You will be at the "wireless rack-X>" prompt.
2. To access the power cycle unit (APC) from the terminal server, type `apc` then press *Enter*. When prompted for a user name, type `apcX` where X is the rack number (e.g. `apc1`, `apc2`, etc.) and press *Enter*. When prompted for a password, type `powerX` where X is the rack number (e.g. `power1`, `power2`, etc.) and press *Enter*.
3. At this point you will be at the command-line of the APC and will be presented with a number of menu choices. You have permissions to access menu items 1 and 4; 1-Device Manager / 4-logout.
4. Type 1 and press *Enter*. You will be presented with a list of electrical outlets and the devices attached to those outlets. As you move through the menus to turn outlets on or off, always use capital letters to confirm YES, as lower and mixed-case letters will be rejected as a valid response.
5. Press the <esc> key to move backwards through the menus and get back to the top menu to log off; 4-logout. You will be returned to the command-line of the terminal server; `wireless rack-x>`.

Load the base configs on all the devices.

The starting configurations are located at the following URL:

[http://www.ccbootcamp.com/download/!Wireless /](http://www.ccbootcamp.com/download/!Wireless/)

Other useful information can be found at the following url. Information such as VPN profiles, VPN client software, base configurations, and other files related to our workbooks.

<http://www.ccbootcamp.com/download/>

Always use the word `cisco` when required to set passwords.