

## Wireless Networks

### LAB1: Initial Controller Setup

Student Name (Please Print): Annotated for Lab sect 011  
http://michaelanderson.ca/20S-CST8304/

Controller Number: **X** = \_\_\_\_ Check BrightSpace grades for  
your assigned PC & Controller.  
This is your "X".

#### 1 Objectives:

- Reset a wireless Controller to factory default
- Run the setup script (via serial CLI)
- Configure the L2 and L3 Interfaces (via serial CLI)
- Navigate through CLI commands (via SSH)
- Navigate through GUI interfaces (via Web Browser)
- Create start-up script for future labs
- Questions
- Sign-off

#### 2 Notes:

1. The Value **X** is your Controller ID. Substitute your Controller ID for **X** in this lab. For example, your Controller ID = 4 and your IP address is 10.1.X0.100. This address translates to 10.1.40.100.
2. This Lab must be completed by the beginning of your next lab period.
3. Complete the Brightspace Post-Lab assignment by ~~the beginning of your next lab.~~ Friday (as per announcement in BrightSpace)
4. Due to May 18 holiday, our goal is to get Labs 1-3 done within these two lab periods.

#### 3 Lab Procedure

In this lab, you will configure the Controller as shown in the Background PowerPoint, slide 11. Specifically, you will configure the Management Interface and Physical Interfaces. <sup>^</sup> and 12

Complete the following steps. You must write a configuration script in Notepad first. Please save this configuration script. You may need this for the Brightspace Lab assignment.

3.0 Connect to the lab PC: VPN to the college, and then RDP to the PC at 10.50.9.20X (student/student)

3.1 Connect the Serial (Green) and Management (Red) Interfaces 20S: pre-cabled

Log into your controller using the serial connection.

(Configure PuTTY for **9600 baud, 8 bits, No parity, 1 stop bit and flow control Xon/Xoff.**)

~~Connect the Management Ethernet Cable (red) to the management port on the controller.~~ 20S: pre-cabled

Configure your PC's internal NIC (RED) to use DHCP.

- 3.2 Reset to Factory Default (if not already done) and run setup script using the information in the ~~Command Reference above~~. Use the serial interface for this step.

^ "Aruba Controller Config Guide" that you download from BrightSpace: Content, Labs

### WRITE A SCRIPT TO CONFIGURE THE FOLLOWING STEPS.

**NOTE:** Please read section 3 of the Config Guide for info on all the commands required for this section!

- 3.3 Enable the license

Enable the licenses as shown in the Config Guide.

- 3.4 Set the system name to be ControllerX-userid.

If I am using controller 12 and my userid is kry001, then my system name will be Controller12-kry001.

- 3.5 Configure the management SVI using the following information.

This involves two steps. First you create the VLAN, X0. Then you configure the SVI on the VLAN with IP Address= 10.1. X0.100/24.

- 3.6 Configure the Controller IP Address. All devices will use this address to communicate with the controller. It is similar to the RID

The IP address of the controller is 10.1.X0.100. Therefore, configure the controller-ip using VLAN X0.

- 3.7 Disable Default VLAN 1

- 3.8 Configure the default gateway as 10.1.X0.1

- 3.9 Configure the following port as a switch trunk.

Interface: gigabitethernet 0/0/0

Configure X0 as a VLAN on the trunk and as a native VLAN.

- 3.10 Configure the following port as an access port.

Interface: gigabitethernet 0/0/1

Configure X0 as the VLAN ID.

- 3.11 Execute Your Script

Your script is now complete. Review it for errors.

Login to your controller and enter Global Configuration Mode.

Type or copy your script into puTTY, one section at a time.

**Note:** RDP is setup to allow copy & paste between the PC in T115 and your local computer. You can thus do your typing & editing on either side and then copy to the other! :-)

If you have any errors, correct the script and re-enter the code.  
If it is error free, return to Privileged EXEC mode and save using “write mem” command. This will cause the controller to also do a reload after a few seconds. If not you can force a reload by typing reload.

### 3.12 Ping Your Controller

Wait to get an IP address on your PC which could take about 1 minute. Use ipconfig to verify that your IP address (Connection 2) is in your management subnet. If not then troubleshoot.

Test connectivity by pinging your controller IP address from your management PC.

## 4 Questions

in Sect 7, p. 27 of the Configuration Guide

Use the troubleshooting commands to answer the following questions. Record the answers in your lab book. You may need the answers for the ~~Bb~~ Lab assignment.

^ BrightSpace

4.1 Login via the GUI using your username (**admin**) and password (**admin1**)

4.2 Go to Configuration/System/Controller IP to verify the management address.  
Record the configured VLAN IDs and configured IP addresses.

The screenshot shows the network controller's configuration interface. On the left is a navigation menu with categories: Dashboard, Configuration (highlighted), Services, Interfaces, System (highlighted), Tasks, Redundancy, Diagnostics, and Maintenance. Under Configuration, there are sub-items: WLANs, Roles & Policies, Access Points, AP Groups, Authentication, and Services. Under System, there are sub-items: Tasks and Redundancy. The main content area is titled 'General' and includes tabs for Admin, AirWave, CPsec, and Certificates. The 'Controller IP address' section is expanded, showing:
 

- MAC address: N/A
- IPv4 address: VLAN 240 10.1.240.100 (with a dropdown arrow)
- IPv6 address: -None- (with a dropdown arrow)

 Other expandable sections include Basic Info, Geolocation, Clock, Domain Name System, and Loopback Interface.

- 4.3 Go to Configuration/VLAN to verify that VLAN 1 has been disabled. What is the IP address of VLAN 1?

VLANs	
NAME	ID(S)
-	1,240

  

VLANs	VLAN IDs		Options						
ID	IPV4 ADDRESS	IPV6 ...	ENAB...	PORT...	ADML...	OPER...	PD CL...	DHCP...	
1	--	--	--	0/0/0...	Disa...	N/A	Disa...	None	
240	10.1.240.100...	--	--	0/0/0,...	Enabl...	Up	Disab...	None	

- 4.4 Login via SSH using your username and password. Verify the controller VLAN and IP address. Also verify the port configurations. See Troubleshooting commands in Sect 7, p. 27 of the Configuration Guide.
- 4.5 Ping your Controller IP address (i.e. your management station) from the Controller Console. Was it successful? If not, verify that the firewall is disabled on the management station.
- 4.6 Show the inventory information and record the Controller serial number.
- 4.7 Show the VLANs and record them.
- 4.8 Show the IP Interfaces and record them.
- 4.9 What ArubaOS version is running on your default partition?
- 4.10 Review your running-config. Using your running-config, what vlan is assigned to port 3 (i.e. gigabitethernet 0/0/3).

## 5 Demonstration and Signoff:

- 5.1 Answer the questions in your lab notebook.
- 5.2 Demonstrate 4.7 and 4.8.

5.3 Put a copy of your script into the drop box.

A copy of your configuration script has been saved on your memory stick. You will need it for future labs and your lab exam.

5.4 Instructor signoff\_\_\_\_\_

## 6 Cleanup:

6.1 RESET the controller to factory default. Use CLI “write erase” and enter. Enter y when asked to proceed and then enter. You do not need to wait for the reload to complete. See example below:

```
(Controller24-kry001) [mynode] #write erase
```

```
All the configuration will be deleted and the controller will be reloaded. Press 'y' to proceed : [y/n]: y  
Write Erase successful
```

System will now restart!

6.2 ~~Clean up your cabling. Be careful not to disconnect a neighbour controller.~~

Note: Omit for 20S