Wireless Networks
LAB1: Initial Controller Setup

Student Name (Please Print):_____

Controller Number: **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.**X**0.100. 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.

4. The required commands for this lab are provided below. The Complete Aruba Command Reference Guide is available on Bb.

3. Command Reference:

(<u>this is not the lab</u> – see section 4.)

3.1. Comment

Use # as the first character to add a comment.
For example: # This is a comment

3.2. Factory Default Reset (privileged exec mode)

Type yes when prompted to confirm the erase. Following the reload command, wait for the setup questions to start. The reload takes about 5 minutes.

```
write erase
reload
```

Use the following information to answer the setup questions:

System Name: Controller**X**
Role: master
Controller IP: leave default
Net Mask: leave default
Gateway: none
Country Code: CA if option is available else select yes to accept
Time Zone: default
Time: default
Date: default
Admin Password: admin1
Enable Password: enable
Shutdown Ports: no
Accept: yes
The controller will now restart. This will take about 5 minutes.

3.3. Configure an SVI (global config mode)

The operstate up command ensures the virtual interface remains active.

```
vlan vlanid optional-description
#
Interface vlan vlanid
   ip address a.b.c.d 255.255.255.0
   no shut
   operstate up
   exit
```

3.4. Disable the Default VLAN (global config mode)

The default VLAN (ID=1) is usually disabled.

```
interface vlan 1
   no ip address
   shut
   exit
```

3.5. Configure an Access Port

```
interface if-id
   switchport mode access
   switchport access vlan vlanid
   no shut
   exit
```

3.6. Configure a Trunk Port

```
interface if-id
```

```
switchport mode trunk
switchport trunk native vlan vlanid
switchport trunk allowed vlan vlanid-list
no shut
exit
```

3.7. Configure the Default Gateway

```
ip default-gateway a.b.c.d
```

3.8. Configure the Controller IP Address.

This is the management address of the controller. The default controller IP address is VLAN 1 which is usually disabled. The next default controller IP address is the first configured VLAN which is done in step 4.3. It is possible to override and change the default controller IP address using the following command. This command is not used in this lab.

```
controller-ip vlanid
```

3.9. Save Running Config

```
copy running-config  tftp: host-ip-addr  filename
```

3.10. Troubleshooting Commands

Outcome	**Command**
show running configuration:	show running config
test connectivity:	ping *a.b.c.d*
show default gateway:	show ip route
show ArubaOS version:	show image version
show controller information:	show inventory
show ip interface list:	show ip interface brief
show vlans:	show vlan
show ports:	show port status

4. Lab Procedure

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

4.1. Connect the Serial (Green) and Management (Red) Interfaces

Connect using a serial link to your controller.
(Configure PuTTY for **9600 baud, 8 bits, No parity, 1 stop bit and no flow control**.)
Connect the Management Ethernet Cable for Mangement.
Configure your PC's internal NIC (RED) to use DHCP.

4.2. Reset to Factory Default and run setup script using the information in the Command Reference above. Use the serial interface for this step.

CREATE A SCRIPT TO EXECUTE THE FOLLOWING COMMANDS.

4.3. Configure the management SVI using the following information.

VLAN ID=**X**0, IP Address= 10.1. **X**0.100/24
This SVI will be used as the controller management interface.

4.4. Disable Default VLAN 1

4.5. Configure the default gateway as 10.1.**X**0.1

4.6. Configure the following port as a switch trunk.

This is a switch trunk connection to the Cisco switch
A) 3200 Controller
Interface: gigabitethernet 1/0, where VLAN ID=**X0**
B) 6000 Controller
Interface: gigabitethernet **a**/0 where VLAN ID=**X0** and **a**=slot number (0-3)
C) 7005 Controller
Interface: gigabitethernet 0/0/0 where VLAN ID=**X0**

4.7. Configure the following port as an access port.

This port on the controller is you GUI interface to your management PC.
A) 3200 Controller
Interface: gigabitethernet 1/1, where VLAN ID=**X0**
B) 6000 Controller
Interface: gigabitethernet **a**/1 where VLAN ID=**X0** and **a**=slot number (0-3)
C) 7005 Controller
Interface: gigabitethernet **0/0**/1 where VLAN ID=**X0**

4.8. 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.
If you have errors correct the script and re-enter the code.
If it is error free, return to Privileged EXEC mode and save.
Reload and login.

4.9. Save your configuration

Test connectivity by pinging your controller IP address from your management PC.
Save your running configuration to a memory stick for use in the next lab session.
Use the following name to save your configuration: *your-name*-**X**.cfg. This will be your starting configuration for future labs.
Also save your script to the memory stick.

5. Questions

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.

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

5.1.1. Go to Configuration/Controller to verify the Controller IP and VLAN. Record these parameters.

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

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

5.2. Login via SSH using your username and password. Controller always refers to the wireless controller.

5.2.1. Ping your TFTP IP address from the Controller Console. Was it successful?

5.2.2. Show the inventory information and record the Controller serial number.

5.2.3. Show the VLANs and record them.

5.2.4. Show the IP Interfaces and record them.

5.2.5. What ArubaOS version is running on your default partition?

5.2.6. Review your running-config. Using your running-config, what vlan is assigned to port 3 (i.e. gigabitethernet 1/3).

6. Signoff:

Instructor signoff_____

```
#Solution
#
#Define the management SVI
vlan X0 mgmnt-vlan
#
interface vlan X0
  ip address 10.1.X0.100 255.255.255.0
  operstate up
  no shut
  exit
#
# Disable default VLAN 1
interface vlan 1
  no ip address
  shut
  exit
#
ip default-gateway 10.1.X0.1
#
# Configure Trunk to Cisco Switch
interface gigabitethernet 2/0
  switchport mode trunk
  switchport trunk native vlan X0
  switchport trunk allowed vlan X0
  no shut
  exit
#
# Configure GUI Interface
interface gigabitethernet 2/2
  switchport mode access
  switchport access vlan X0
  no shut
  exit
```