

# Saving Lab Configurations

**IMPORTANT! THIS GUIDE ASSUMES THAT THE AOS-CX OVA HAS BEEN INSTALLED AND WORKS IN GNS3 OR EVE-NG. PLEASE REFER TO GNS3/EVE-NG INITIAL SETUP LABS IF REQUIRED.**

<https://www.eve-ng.net/index.php/documentation/howtos/howto-add-aruba-cx-switch/>

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### Lab Objective

In this lab you will learn how to save configurations of your virtual lab switches and restore them on a clone of the original lab. This procedure will allow you to preserve configurations between subsequent labs in the same lab series.

### Lab Overview

In this lab you will:

1. Create a small network with a simple configuration
2. Save the configurations
3. Clone the lab
4. Restore and test the configurations on the new lab switches

### Lab Network Layout

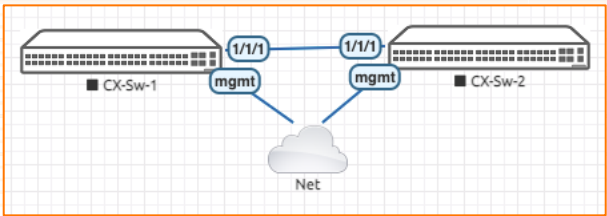


Figure 1. Lab topology

## Task 1. Create and configure the network

- Create a new lab called **CXConfigSave**
- Create the network topology shown in Figure 1, using the same device names.
- Remember that the small cloud in the diagram represents a connection to the outside network. You will need this connection to access the management interface of the switches.
- Start the switches and access their console

### Configure CX-Sw-1

- Login using
  - Username: admin
  - Password: (no password)
- When prompted assign the password: admin
- Configure the hostname and the management interface

**Note:** you can replace the management IP addresses used in this example to fit in your virtual environment.

```
configure
hostname CXSw01
interface mgmt
ip static 10.0.18x.1/24
default-gateway 10.0.18x.250
exit
```

x 代表LabID, 如您是Lab1, IP可设为10.0.181.YY/24, YY建议1-99都可用  
也可以用ip dhcp自动获取

- Prepare the configuration you will want to save and restore later
- Configure interface 1/1/1 as routed, with IP address 10.0.0.1/30 and enable it

```
interface 1/1/1
ip address 10.0.0.1/30
routing
no shutdown
end
```

- Save the configuration

```
write memory
```

### Configure CX-Sw-2

- Login using
  - Username: admin
  - Password: (no password)
- When prompted assign the password: admin
- Configure the hostname and the management interface

**Note:** you can replace the management IP addresses used in this example to fit in your virtual environment.

```
configure
hostname CXSw02
interface mgmt
ip static 10.0.18x.2/24
default-gateway 10.0.18x.250
exit
```

- Prepare the configuration you will want to save and restore later

- Configure interface 1/1/1 as routed, with IP address 10.0.0.1/30 and enable it

```
interface 1/1/1
 ip address 10.0.0.2/30
 routing
 no shutdown
 end
```

- Test connectivity with CXSw01

```
ping 10.0.0.1
```

```
108 bytes from 10.0.0.1: icmp_seq=1 ttl=64 time=21.7 ms
108 bytes from 10.0.0.1: icmp_seq=2 ttl=64 time=1.51 ms
108 bytes from 10.0.0.1: icmp_seq=3 ttl=64 time=1.69 ms
108 bytes from 10.0.0.1: icmp_seq=4 ttl=64 time=1.80 ms
108 bytes from 10.0.0.1: icmp_seq=5 ttl=64 time=1.59 ms

--- 10.0.0.1 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4004ms
rtt min/avg/max/mdev = 1.514/5.668/21.733/8.033 ms
```

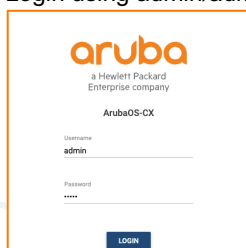
- Save the configuration

```
write memory
```

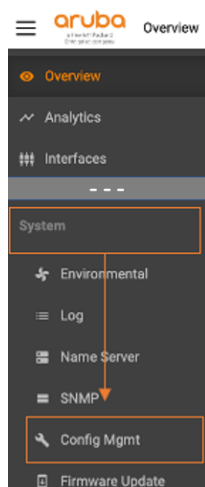
## Task 2. Access the WebUI of the switches and save their configurations to your PC

### Access CX-Sw-1

- In your browser open the WebUI of CXSw01  
<https://10.0.18x.1/>
- Login using admin/admin



- On the left menu, go to **System / Config Mgmt**



- Click on **+ ADD** to create a checkpoint called CXSw01SaveCFG

Checkpoints			+ ADD	DOWNLOAD	COPY TO RUNNING	COPY TO STARTUP	VIEW
Name	Date	Version					
startup-config	06/27/21 13:43:42	Virtual.10.06.0110					

**Configuration Checkpoint**

Enter checkpoint name

CXSw01SaveCFG

CREATE CHECKPOINT CANCEL

- Select the new checkpoint and download it to your PC

Checkpoints			+ ADD	DOWNLOAD	COPY TO RUNNING	COPY TO STARTUP	VIEW
Name	Date	Version					
CXSw01SaveCFG	06/27/21 13:52:50	Virtual.10.06.0110					

**Note:** the process adds a timestamp at the end of the checkpoint name (you can see it in the download list of your browser or in your Downloads folder)

- Close this browser tab

## Access CX-Sw-2

- In your browser open the WebUI of CXSw01  
<https://10.0.18x.2/>
- Login using admin/admin

**aruba**  
a Hewlett Packard  
Enterprise company

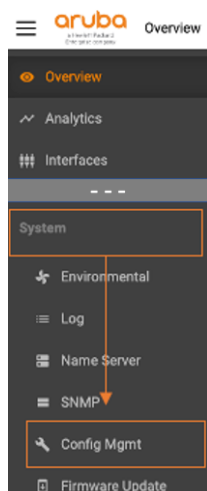
ArubaOS-CX

Username  
admin

Password  
\*\*\*\*\*

LOGIN

- On the left menu, go to **System / Config Mgmt**



- Click on **+ ADD** to create a checkpoint called CXSw02SaveCFG

Checkpoints			+ ADD	DOWNLOAD	COPY TO RUNNING	COPY TO STARTUP	VIEW
Name	Date	Version					
startup-config	06/27/21 13:43:42	Virtual.10.06.0110					

**Configuration Checkpoint**

Enter checkpoint name

CXSw02SaveCFG

CREATE CHECKPOINT CANCEL

- Select the new checkpoint and download it to your PC

Checkpoints			+ ADD	DOWNLOAD	COPY TO RUNNING	COPY TO STARTUP	VIEW
Name	Date	Version					
CXSw02SaveCFG	06/27/21 14:01:34	Virtual.10.06.0110					

**Note:** the process adds a timestamp at the end of the checkpoint name (you can see it in the download list of your browser or in your Downloads folder)

- Close this browser tab

### Task 3. Create a new lab with the same topology

**IMPORTANT:** This part will depend on your virtualization environment. This example shows how it is done in EVE-NG.

- Close the console of both switches
- Stop both switches
- Exit the lab
- Clone the lab and rename it to **CXConfigRestore**
- Open the new lab (the topology should be the same as in Figure 1.
- Start both switches and open their consoles

**Note:** the switches should be in their default configuration as this is a new lab. The login prompt should be: "switch login:"

## Task 4. Access the WebUI of the switches in the new lab, upload, apply and test the configuration checkpoints

### CX-Sw-01

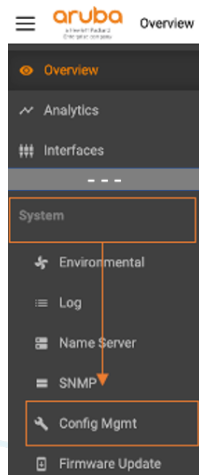
- Login as before: admin / no password
- When prompted, assign the password: admin
- Check the IP address of the management interface

```
show interface mgmt
```

```
Address Mode: dhcp
Admin State: up
Link State: up
Mac Address: 50:00:00:01:00:00
IPv4 address/subnet-mask: 10.0.18x.13/24
Default gateway IPv4: 10.1.8x.250
. . .
Secondary Nameserver: 2001:558:feed::2
```

**Note:** In this example, the DHCP server on the external network provided the IP address 10.1.8x.13. If your environment does not have a DHCP server, enter a temporary IP address in the management interface context.

- Open the browser and go to the management interface of CX-Sw-1
- Login using admin/admin
- Go to System / Config Mgmt



- At the bottom of that page, you will find the Upload tool. Use it to upload the configuration checkpoint you saved for the first switch

**IMPORTANT:** When you upload a checkpoint through the WebUI, it is applied directly to the running configuration. In this case, as the file you are uploading has a different management IP address, your browser will lose its connection to the switch.

Upload

CXSw01SaveCFG-20210627135311 - 2.93 KB

BROWSE

UPLOAD

"CXSw01SaveCFG-20210627135311" to running-config

## Prepare CX-Sw-02

- Repeat the previous procedure on the second switch.

## Test the configurations

On the console of each switch display the running configuration. Verify the hostnames and IP addresses on the management and 1/1/1 interfaces.

show running-config

Output CX-Sw-1	Output CX-Sw-2
<pre>Current configuration: ! !Version ArubaOS-CX Virtual.10.06.0110 !export-password: default <b>hostname CXSw01</b> user admin group administrators password ciphertext . . . led locator on ! ! ! ! ssh server vrf mgmt vlan 1 <b>interface mgmt</b>     no shutdown     ip static 10.0.18x.1/24     default-gateway 10.0.18x.250 <b>interface 1/1/1</b>     no shutdown     ip address 10.0.0.1/30 ! ! ! ! ! https-server vrf mgmt</pre>	<pre>Current configuration: ! !Version ArubaOS-CX Virtual.10.06.0110 !export-password: default <b>hostname CXSw02</b> user admin group administrators password ciphertext . . . led locator on ! ! ! ! ssh server vrf mgmt vlan 1 <b>interface mgmt</b>     no shutdown     ip static 10.0.18x.2/24     default-gateway 10.0.18x.250 <b>interface 1/1/1</b>     no shutdown     ip address 10.0.0.2/30 ! ! ! ! ! https-server vrf mgmt</pre>

- On CX-Sw-1 run a ping to CX-Sw02

ping 10.0.0.1

```
PING 10.0.0.1 (10.0.0.1) 100(128) bytes of data.
108 bytes from 10.0.0.1: icmp_seq=1 ttl=64 time=0.097 ms
108 bytes from 10.0.0.1: icmp_seq=2 ttl=64 time=0.033 ms
108 bytes from 10.0.0.1: icmp_seq=3 ttl=64 time=0.034 ms
108 bytes from 10.0.0.1: icmp_seq=4 ttl=64 time=0.034 ms
108 bytes from 10.0.0.1: icmp_seq=5 ttl=64 time=0.052 ms

--- 10.0.0.1 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4004ms
```

```
rtt min/avg/max/mdev = 0.033/0.050/0.097/0.024 ms
```

- On both switches, save the running configuration

```
write memory
```

## Summary

This procedure will allow you to stop and close a lab, and later, create a new lab with the same topology and upload the configurations of the first lab, to continue working at the end of the first lab.



