

Deployment of CX switches with Aruba Central

Contents

1.1	Revision History	1
2	6300 Stack Configuration	2
2.1	Introduction	2
2.2	Topology	2
2.3	Factory Default	2
2.4	CX App Configuration	3
2.5	Aruba Central Initial Onboarding	6
2.6	Aruba Central Template groups	8
2.7	Aruba Central Monitoring	10
3	832X Configuration	13
3.1	Aruba Central Template	13
4	Appendix – Template and Variables	15
4.1	Aruba Central VSF Template	15
4.2	Aruba Central VSF Template Variables	17
4.3	Aruba Central 832X Template	18
4.4	Aruba Central 832X Template Variables	22

1.1 Revision History

DATE	VERSION	EDITOR	CHANGES
15 Jan 2021	0.1	Ariya Parsamanesh	Initial version
20 Jan 2021	0.2	Ariya Parsamanesh	Added the core switches

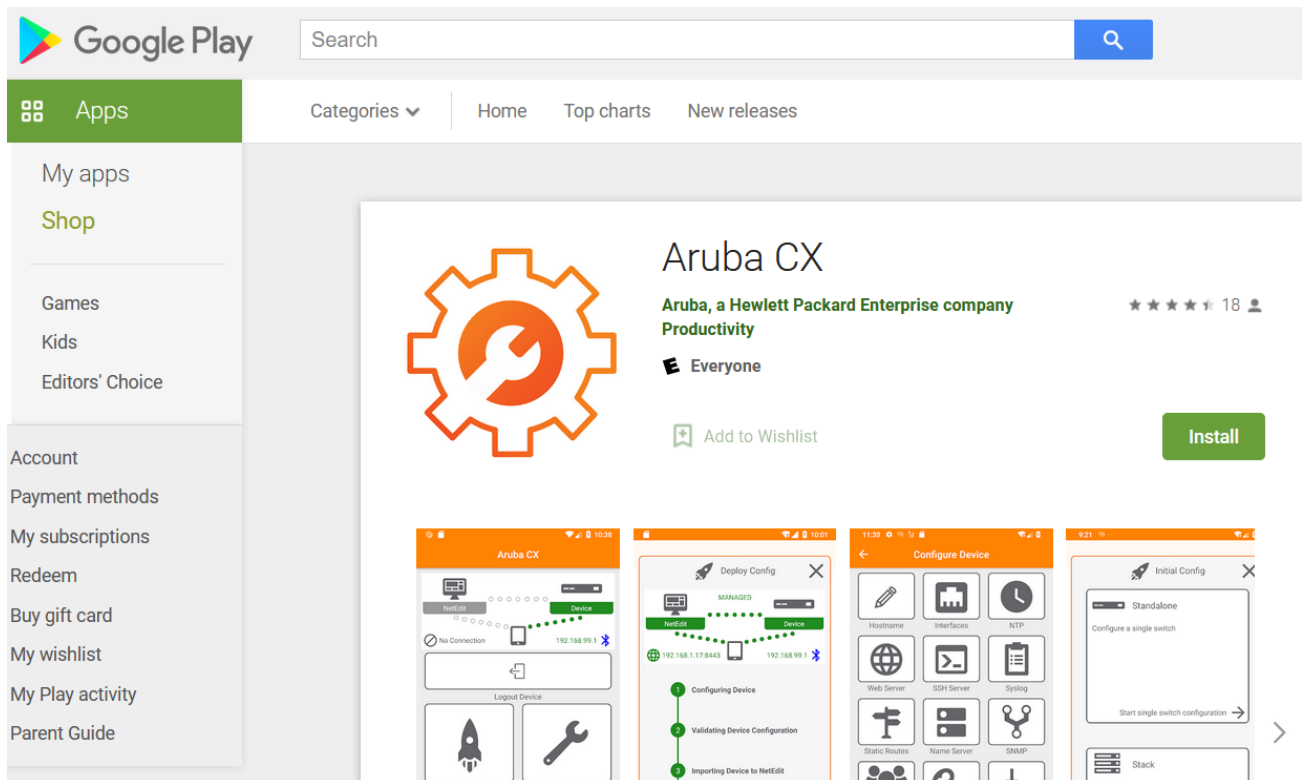

```
Build SHA      : 3cbfcce609617b0cf84a6b941a2b36c43dfef2cb
Active Image   : secondary

Service OS Version : FL.01.07.0002
BIOS Version      : FL.01.0002
6300-1#
6300-1# erase all zeroize
This will securely erase all customer data and reset the switch
to factory defaults. This will initiate a reboot and render the
switch unavailable until the zeroization is complete.
This should take several minutes to one hour to complete.
Continue (y/n)? y
The system is going down for zeroization.
6300-1#
```

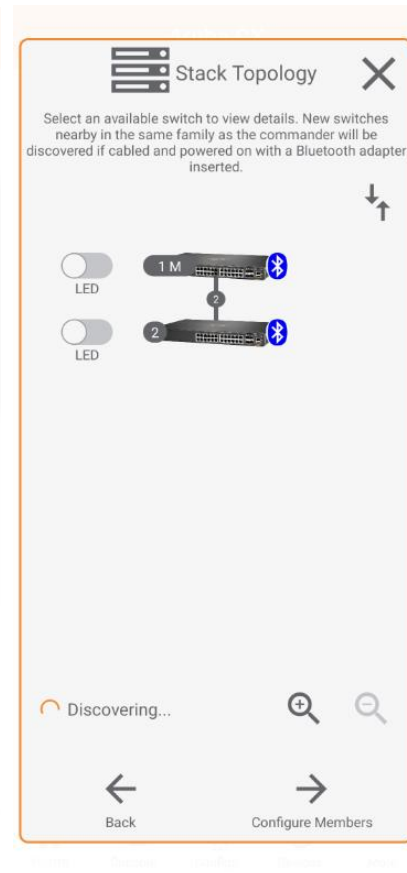
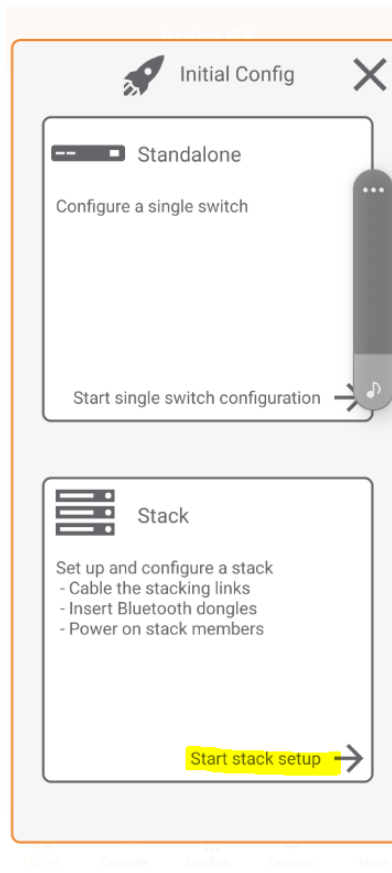
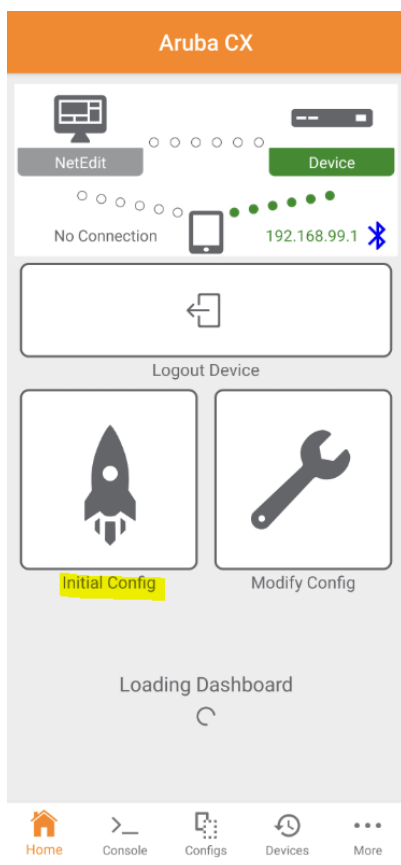
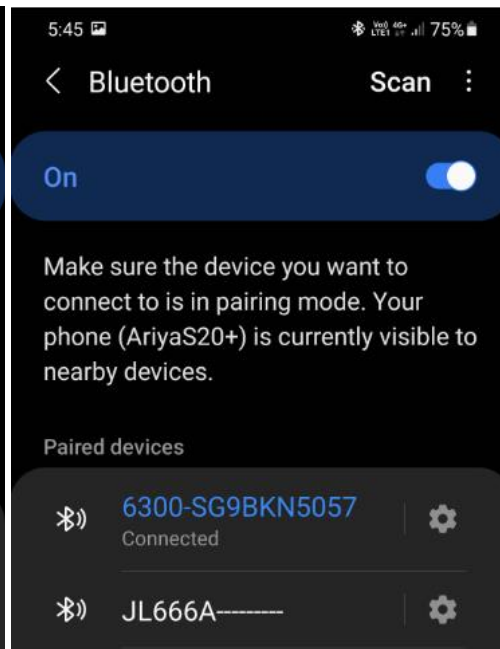
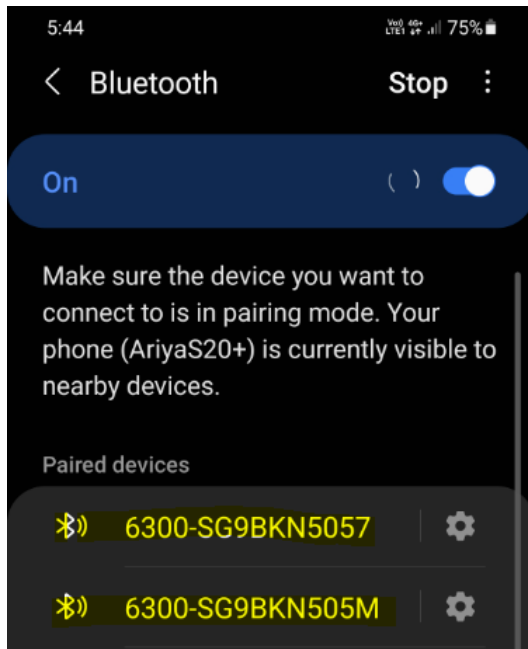
Once the switches have rebooted, you'll just connected them with the 2x stack DAC cables.



2.4 CX App Configuration


You can download the CX App from Google Play, the CX App version we are using here is 2.3.1





Once you have installed it ensure that the blue tooth and GPS are enabled and then try to connect to the switches. Here are the relevant screenshots on an android phone.





 Configure Stack 

Validating... 


Booting... 



 Waiting for member(s) to boot



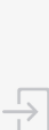
NetEdit Login




☒ Stay Logged In


Please enter NetEdit credentials to import the device.

Skip >




Log In

 Select Template



OOBM





Input Parameters

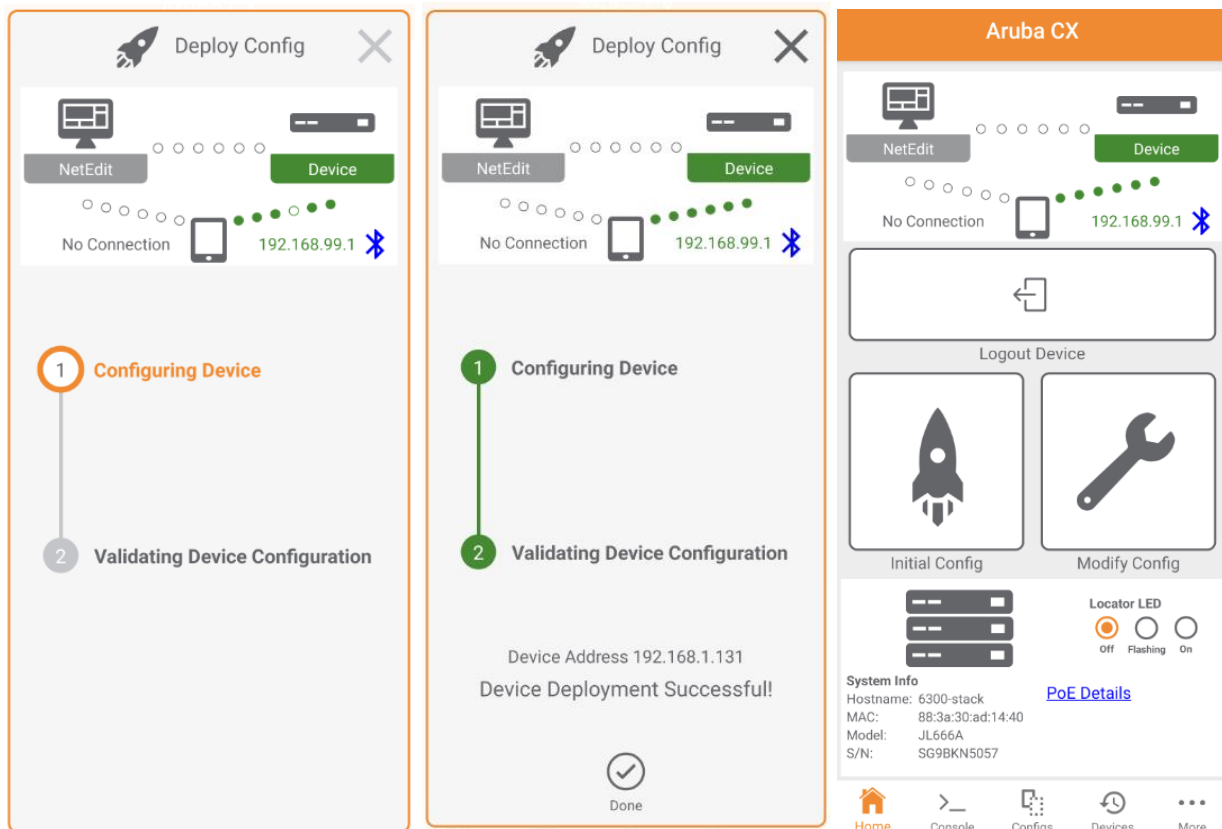
hostname
6300-stack

admin_password
.....
.....|

use_dhcp
☒ Yes ☐ No

 Back

 Next



At this point the CX stack will use the mgmt. interface and if the DHCP services are available on that network, it will contact and register with Aruba Central.

2.5 Aruba Central Initial Onboarding

You need to add the serial number and the MAC addresses of the CX switches to the Aruba Central inventory and once subscribe them. The following screen shot is showing that we have added the devices.

[GO TO ACCOUNT HOME](#)

DEVICE INVENTORY

View the devices in your inventory and manually add devices here.

View Devices								
Serial Number	MAC Address	Type	IP Address	Name	Model	Part Number	Group	Subscription
SG9BKN5057	88:3A:30:AD:14:40	switch	192.168.1.119	6300-stack	6300	JL666A	unprovision...	✓
SG9BKN505M	88:3A:30:AD:66:40	switch	192.168.1.127	SG9BKN505M	6300	JL666A	unprovision...	✓

Then you need to ensure these switches are also subscribed as show below.

SUBSCRIPTION ASSIGNMENT

Use the options below to assign Foundation and Network Service subscriptions to devices.

DEVICE MANAGEMENT SUBSCRIPTIONS i

A device management subscription entitles the subscribed AP or Switch to be managed in Aruba Central.

☐ **Auto Subscribe OFF**
You must select devices below to assign subscriptions to them

ACCESS POINT AND SWITCH SUBSCRIPTIONS (0 TO BE SUBSCRIBED 0 TO BE UNSUBSCRIBED)

<input type="checkbox"/> SUBSCRIBED		▽ SERIAL NUMBER	▽ MAC ADDRESS	▽ MODEL
<input checked="" type="checkbox"/>	YES	SG9BK1 [REDACTED]	88:3A:3 [REDACTED]	6300
<input checked="" type="checkbox"/>	YES	SG9BK1 [REDACTED]	88:3A:3 [REDACTED]	6300

Once this is done and the CX switches are configured to be in a stack using CX App, they will contact Aruba Central and will end up in the un-provision group.

Global

Groups

Sites and Labels

Certificates

Install Manager

Manage

Overview

Devices

Clients

Guests

Applications

Security

Network Services

Analyze

Alerts & Events

Audit Trail

Tools

Reports

Maintain

Firmware

Organization

GROUPS

A group in Aruba Central acts like a primary configuration container for devices. You can combine devices with common configuration requi configuration settings to all the devices in the group.

MANAGE GROUPS

DRAG AND DROP CLUSTERS AND SWITCHES BETWEEN GROUPS

TO SELECT MULTIPLE DEVICES SHIFT+CLICK OR CTRL+CLICK

▽ Group Name	Devices
ALL CONNECTED DEVICES	5
UNASSIGNED DEVICES	2
Ariya-BGWs	2
TG CX-Core	0
TG CX-Stack	0
default	0
SD-vGW	1

▽ Name	▽ Location	▽ Type
6300-stack	-	Aruba CX
SG9 [REDACTED]	-	Aruba CX

And now we'll move them into the CX-stack group.

Global

Groups

Sites and Labels

Certificates

Install Manager

Manage

Overview

Devices

Clients

Guests

Applications

Security

Network Services

Analyze

Alerts & Events

Audit Trail

Tools

Reports

Maintain

Firmware

Organization

GROUPS

A group in Aruba Central acts like a primary configuration container for devices. You can combine devices with common configuration requi configuration settings to all the devices in the group.

MANAGE GROUPS

DRAG AND DROP CLUSTERS AND SWITCHES BETWEEN GROUPS

TO SELECT MULTIPLE DEVICES SHIFT+CLICK OR CTRL+CLICK

▽ Group Name	Devices
ALL CONNECTED DEVICES	5
UNASSIGNED DEVICES	0
Ariya-BGWs	2
TG CX-Core	0
TG CX-Stack	2
default	0
SD-vGW	1

▽ Name	▽ Location	▽ Type
6300-stack	-	Aruba CX
SG9B [REDACTED]	-	Aruba CX

2.6 Aruba Central Template groups

So now when the switches are powered on again you should see a stack

The screenshot shows the Aruba Central interface with the 'Switches' tab selected. A summary bar indicates 1 switch is ONLINE and 0 are OFFLINE. Below, a table lists the switches:

Device Name	Clients	Alerts	Model	Config Status	Last Seen	Usage	Group
Comms1-6300M-Stack	0	2	ARUBA6300	In sync	-	368 bps	CX-Stack

We then create the variables and upload it.

The screenshot shows the 'Variables' tab in Aruba Central. It displays a table of variables for 26 devices. The table has columns for Device MAC Address, Device Serial Number, Variable Name, and Variable Value.

Device MAC Address	Device Serial Number	Variable Name	Variable Value
88:3a:30:...	SG9B00...	_sys_hostname	Comms1-6300M-Stack
88:3a:30:...	SG9B00...	_sys_ip_address	192.168.1.21
88:3a:30:...	SG9B00...	_sys_lan_mac	88:3a:30:ad:14:40
88:3a:30:...	SG9B00...	_sys_serial	SG9B0015057
88:3a:30:...	SG9B00...	lag_id	10
88:3a:30:...	SG9B00...	lag_interface_1	1/1/25
88:3a:30:...	SG9B00...	lag_interface_2	2/1/25
88:3a:30:...	SG9B00...	lag_interface_3	3/1/25
88:3a:30:...	SG9B00...	lag_interface_4	4/1/25

After that we have to create the template.

The screenshot shows the 'Templates' tab in Aruba Central. The table is empty, displaying 'No data to display'.

Template Name	Device Type	Model	Version	Last Modified
---------------	-------------	-------	---------	---------------

ADD TEMPLATE

BASIC INFO

Select device type, model, part name and version

TEMPLATE

Template Configuration

BASIC INFO

The template configuration should match the running configuration CLI order and format.

TEMPLATE NAME
6300-VSF

DEVICE TYPE
Aruba CX

MODEL
ALL

VERSION
ALL

CANCEL

BACK

NEXT

BASIC INFO
Select device type, model, part name and version

TEMPLATE
Template Configuration

TEMPLATE
IMPORT CONFIGURATION AS TEMPLATE
Show Variables List

```

1 hostname %_sys_hostname%
2 allow-unsupported-transceiver
3 user admin group administrators password plaintext aruba123
4 clock timezone australia/melbourne
5 ntp server 216.239.35.12 iburst
6 ntp server 216.239.35.4 iburst
7 ntp server 216.239.35.8 iburst
8 ntp enable
9 ntp vrf mgmt
10 ssh server vrf default
11 ssh server vrf mgmt
12
13 %if vsf_sec_mbr%
14 vsf secondary-member %vsf_sec_mbr%
15 %endif%
```

CANCEL
BACK
SAVE

As soon as you save the template Aruba Central will try to push it to the switches in that group.

CX-Stack

Access Points
Switches
Gateways

List
Summary
Config

Manage

Overview

Devices

Clients

Applications

Security

Analyze

Templates
Variables
Configuration Audit

TEMPLATES (1)
🔍 + 🔄

Template Name	Device Type	Model	Version	Last Modified
6300-VSF	CX	ALL	ALL	Sat, 16 Jan 2021 00:32:31 GMT

Here is the sample where the push has failed.

Access Points
Switches
Gateways

Templates
Variables
Configuration Audit

OVERVIEW

In Aruba Central, the configuration of a virtual controller or switch can be individually modified. Modifications at the device level over changes between devices and their parent group. Occasionally a Central managed device will fail to receive a configuration change from Central, and if this condition exists for any device, the group will be set to Auto commit state ON.

AUTO COMMIT STATE

The group is set to Auto commit state **ON** [Change to Auto commit state OFF](#)

The group auto-commit is not applicable for Gateways and MAS devices on the Configuration Audit page.

Auto Commit State: ON

1 Device

[View & Edit](#)

Auto Commit State: OFF

0 Device

[View & Edit](#)

TEMPLATE ERRORS & CONFIGURATION SYNC ISSUES

Template Errors

0 Device

[View Template Errors](#)

Failed / Pending Changes

1 Device

[Failed / Pending config changes](#)

Access Points | **Switches** | Gateways

Templates | Variables

CONFIG DIFFERENCE

OVERVIEW

In Aruba Central, changes between templates are occasionally a C...

AUTO COMMIT

The gro...

The gro...

Auto Com...

1 Device

[View & Edit](#)

Config Difference

Name	Action
SG9B...	View Config Difference

Close

Config Difference - SG9B...

Note: Config push failed because of login failure due to template password not being same as device password.

```

hostname Comms1-6300M-Stack
allow-unsupported-transceiver
user admin group administrators password plaintext
aruba123
clock timezone australia/melbourne
ntp server 216.239.35.12 iburst
ntp server 216.239.35.4 iburst
ntp server 216.239.35.8 iburst
ntp enable
ntp vrf mgmt
ssh server vrf default
ssh server vrf mgmt
vrf secondary-member 2
vrf member 1
  type vrf mbr_1_type#
  link 1 1/1/27_type#
  link 2 1/1/28
vrf member 2
  type vrf mbr_2_type#
  link 1 2/1/27

```

Page: 1/1

TEMPLATE ERRORS & CONFIGURATION SYNC ISSUES

Template Errors

0 Device

[View Template Errors](#)

Failed / Pending Changes

1 Device

[Failed / Pending config changes](#)

2.7 Aruba Central Monitoring

Once you are finished with the configuration, you can view the stack from the monitoring section.

← Comms1-6300M-... ✓

Summary | Hardware | AI Insights

Manage

Overview

- Clients
- LAN
- Device

Analyze

- Alerts & Events
- Audit Trail
- Tools
- Reports

Maintain

- Firmware

SWITCH DETAILS

SWITCH

Model	CONDUCTOR	LOCATION	CONTACT
ARUBA6300	SG9B...	--	--

CONFIGURATION

In sync	LAST STATS RECEIVED	FIRMWARE VERSION
Last Sync: Jan 20, 2021, 10:01:01	20 Jan 2021 10:08:54	10.06.0010 Last Updated on Jan 16, 2021, 16:14:13

GROUP

CX-Stack	SITE	LABEL(S)
--	--	--

NETWORK

IP Address	DEFAULT VLAN
192.168.1.21	1

STACK/STANDALONE

STACK	STACK ID	STACK MEMBERS	STACK TOPOLOGY
STACK	632b6bb3-34f3-4b38-a1ef-12aaf37ba80e	2 / 0 Down	Chain

PORTS

STATUS	52 Down	0 Alert	0 Uplink
0 Up			

POWER OVER ETHERNET (PoE)

AVAILABLE	USED	PoE DENIED PORTS	ALERT
740W	0W	0	0

HARDWARE

CPU	MEMORY	TEMPERATURE
Good	Good	Good

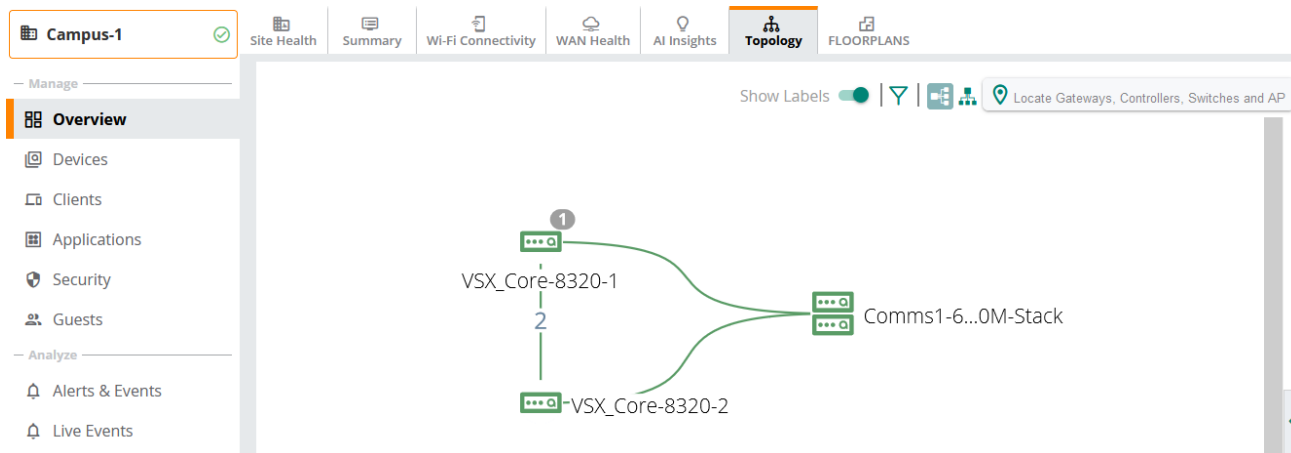
POWER SUPPLY

2 Total	2 Up

FANS

6 Total	6 Up	0 Down

Here is the Port view for the stack.



And here is the neighbor table.

Core-8320-1

Neighbours

ACTIONS

MAC ADDR...	HOSTNAME	IP ADD...	DESCRIPTION	LO...	REMOT...	CAPABILI...	VLAN ID(S)
88:3a...	Comms1-6300M-Stack	10.10.11.9	Aruba JL666A FL.10.06.0010	1/1/5	1/1/25	Bridge, Router	1,11,12,13,14,15,16
98:f2...	Core-8320-2	1.1.1.2	Aruba JL479A TL.10.06.0010	1/1/48	Keepalive-Link	Bridge, Router	1
f8:60...	Aruba-2930F-12G-PoE...	10.10.21.250...	Aruba JL693A 2930F-12G-PoE+	1/1/1	11	Bridge, Router	1,21
98:f2...	Core-8320-2	10.10.11.3	Aruba JL479A TL.10.06.0010	1/1/50	VSX-ISL-mem-por	Bridge, Router	1,11,12,13,14,15,16,21
98:f2...	Core-8320-2	10.10.11.3	Aruba JL479A TL.10.06.0010	1/1/51	VSX-ISL-mem-por	Bridge, Router	1,11,12,13,14,15,16,21

Left sidebar: Manage (Overview, Clients, LAN, VSX, Device) and Analyze (Alerts & Events).

3 832X Configuration

As with the 6300 switches, you need to add the 832X switches to the inventory and then add it to a template based group.

3.1 Aruba Central Template

Please refer to Appendix, for the details of template and variables that were used in this deployment.

The top screenshot shows the 'SWITCHES' overview page in Aruba Central. The left sidebar has 'Manage' (Overview, Devices, Clients, Applications, Security) and 'Analyze'. The top navigation has 'Access Points', 'Switches' (selected), and 'Gateways'. A summary bar shows 2 ONLINE and 0 OFFLINE switches. The main table lists switches:

Device Name	Clients	Alerts	Model	Config Status	Last Seen	Usage	MAC
Core-8320-1	0	1	8320 (JL479A)	In sync	-	96 kbps	d0:67:2
Core-8320-2	0	1	8320 (JL479A)	In sync	-	96 kbps	98:f2

The bottom screenshot shows the 'TEMPLATES' page. The left sidebar is the same. The top navigation has 'Templates' (selected), 'Variables', and 'Configuration Audit'. A summary bar shows 1 template. The main table lists templates:

Template Name	Device Type	Model	Version	Last Modified
CX-Core-8320	CX	8300	ALL	Mon, 18 Jan 2021 04:42:58 GMT

Here is the device view of Core-1 switch.

The top screenshot shows the 'SWITCH DETAILS' page for Core-8320-1. The left sidebar has 'Manage' (Overview, Clients, LAN, VSX, Device) and 'Analyze' (Alerts & Events, Audit Trail). The top navigation has 'Summary' (selected), 'Hardware', and 'AI Insights'. The main content area shows switch details:

SWITCH			
Model: 8320	J-NUMBER: JL479A	LOCATION: --	CONTACT: --
Serial: TW84	MAC Address: d0:67:2	UPTIME: 16 Hours 44 Minutes 1 Seconds	LAST REBOOT: Jan 19, 2021, 22:59:25
CONFIGURATION: In sync Last Sync: Jan 20, 2021, 12:32:09	LAST STATS RECEIVED: 20 Jan 2021 15:43:28	FIRMWARE VERSION: 10.06.0010	
GROUP: CX-Core	SITE: Campus-1	LABEL(S): --	

The bottom screenshot shows the 'PORTS' page for Core-8320-1. The left sidebar is the same. The top navigation has 'Ports' (selected), 'PoE', and 'VLAN'. The main content area shows port status:

PORT STATUS: Up 5, DOWN 49, ALERT 0, UPLINK 0

STANDALONE: Core-8320-1
Click on a port for port level information

Legend: UPLINK (blue), UP (green), DOWN (grey), ALERT (red), DISABLED (light grey)

SWITCH 8300: A row of 48 port status icons, with the first 5 being green (UP) and the rest being grey (DOWN).

Core-8320-1

Ports

PoE

VLAN

Manage

Overview

Clients

LAN

VSX

Device

Analyze

Alerts & Events

Audit Trail

Tools

Reports

VLANs

NAME	ID	STATUS	TAGGED PORTS	UNTAGGED PORTS	IP ADDRESS	VOICE	IGMP
DEFAULT_VLA...	1	Up		lag/1, lag/50, lag/100-lag/...		DISABLED	DISABLED
Guest	16	Up	lag/1, lag/100-lag/101			DISABLED	DISABLED
IoT	15	Up	lag/1, lag/100-lag/101			DISABLED	DISABLED
Restricted	13	Up	lag/1, lag/100-lag/101			DISABLED	DISABLED
Server	21	Up	lag/1, lag/50			DISABLED	DISABLED
Staff	11	Up	lag/1, lag/100-lag/101			DISABLED	DISABLED
Student	12	Up	lag/1, lag/100-lag/101			DISABLED	DISABLED
Voice	14	Up	lag/1, lag/100-lag/101			DISABLED	DISABLED

Core-8320-1

VSX

Manage

Overview

Clients

LAN

VSX

Device

Analyze

Alerts & Events

Audit Trail

Tools

Reports

Maintain

Firmware

VSX SUMMARY

ISL STATUS Peer Established	ISL MGMT STATE Operational	CONFIG SYNC STATUS In-Sync	NAE Peer Reachable
HTTPS SERVER Peer Reachable	LAST SYNCED 20 jan 2021 12:32:08	Role Primary	

INFO

SYSTEM

LOCAL MAC d0:67:2	PEER MAC 98:f2:t	PEER HOSTNAME Core-8320-2	PEER IP 1.1.1.2
----------------------	---------------------	------------------------------	--------------------

CONFIGURATION

CONFIG SYNC Enabled	ISL PORT lag1	PEER ISL PORT lag1	MC LAGS lag50 lag101 lag100
------------------------	------------------	-----------------------	--------------------------------------

4 Appendix – Template and Variables

Here are the templates and variables that we used.

4.1 Aruba Central VSF Template

Here is the full template for your reference. This template can be used for a single switch or VSF stack of up to 4x members.

```
hostname %_sys_hostname%
allow-unsupported-transceiver
user admin group administrators password plaintext aruba123
clock timezone australia/melbourne
ntp server 216.239.35.12 iburst
ntp server 216.239.35.4 iburst
ntp server 216.239.35.8 iburst
ntp enable
ntp vrf mgmt
ssh server vrf default
ssh server vrf mgmt

https-server rest access-mode read-write
https-server vrf default
https-server vrf mgmt

snmp-server vrf default
snmp-server vrf mgmt
snmp-server community Thisisgreat
ip dns server-address 192.168.1.1 vrf mgmt

%if vsf_mbr1_link_1%
interface %vsf_mbr1_link_1%
    no shutdown
interface %vsf_mbr1_link_2%
    no shutdown
%endif%
%if vsf_mbr2_link_1%
interface %vsf_mbr2_link_1%
    no shutdown
interface %vsf_mbr2_link_2%
    no shutdown
%endif%

%if vsf_mbr3_link_1%
interface %vsf_mbr3_link_1%
    no shutdown
interface %vsf_mbr3_link_2%
    no shutdown
%endif%

%if vsf_mbr4_link_1%
interface %vsf_mbr4_link_1%
    no shutdown
interface %vsf_mbr4_link_2%
    no shutdown
%endif%

vsf split-detect mgmt
%if vsf_sec_mbr%
```

```

vsf secondary-member %vsf_sec_mbr%
%endif%

%if vsf_mbr_3_type%
vsf member 1
  %if vsf_mbr1_link_1%
  link 1 %vsf_mbr1_link_1%
  %endif%
  %if vsf_mbr1_link_2%
  link 2 %vsf_mbr1_link_2%
  %endif%
%else%
  %if vsf_mbr_2_type%
  vsf member 1
    link 1 %vsf_mbr1_link_1%-%vsf_mbr1_link_2%
  vsf member 2
    link 1 %vsf_mbr2_link_1%-%vsf_mbr2_link_2%
  %else%
    %if vsf_mbr_2_type%
    vsf member 2
      %if vsf_mbr2_link_1%
      link 1 %vsf_mbr2_link_1%
      %endif%
      %if vsf_mbr2_link_2%
      link 2 %vsf_mbr2_link_2%
      %endif%
    %endif%
  %endif%
%endif%

%if vsf_mbr_3_type%
vsf member 3
  type vsf_mbr_3_type%
  %if vsf_mbr3_link_1%
  link 1 %vsf_mbr3_link_1%
  %endif%
  %if vsf_mbr3_link_2%
  link 2 %vsf_mbr3_link_2%
  %endif%
%endif%

%if vsf_mbr_4_type%
  type vsf_mbr_4_type%
vsf member 4
  %if vsf_mbr4_link_1%
  link 1 %vsf_mbr4_link_1%
  %endif%
  %if vsf_mbr4_link_2%
  link 2 %vsf_mbr4_link_2%
  %endif%
%endif%

vlan 1
vlan 11
  name Staff
vlan 12
  name Student
vlan 13

```



```

name Restricted
vlan 14
  name Voice
vlan 15
  name IoT
vlan 16
  name Guest

interface vlan 11
  ip address %vlan11_ip_address%
interface vlan 12
  ip address %vlan12_ip_address%
interface vlan 13
  ip address %vlan13_ip_address%
interface vlan 14
  ip address %vlan14_ip_address%
interface vlan 15
  ip address %vlan15_ip_address%
interface vlan 16
  ip address %vlan16_ip_address%

spanning-tree
interface vlan1

interface mgmt
  no shutdown
  ip static %_sys_ip_address%/24

```

4.2 Aruba Central VSF Template Variables

Here is the variables in JSON format that were used in the template for your reference

```

{
  "addSerial": {
    "_sys_hostname": "Comms1-6300M-Stack",
    "_sys_ip_address": "192.168.1.21",
    "_sys_lan_mac": "addMacAddr",
    "_sys_serial": "addSerial ",
    "_sys_stack_command": "",
    "lag_id": "10",
    "lag_interface_1": "1/1/25",
    "lag_interface_2": "2/1/25",
    "lag_interface_3": "",
    "lag_interface_4": "",
    "port_count_1": "24",
    "port_count_2": "24",
    "port_count_3": "",
    "port_count_4": "",
    "vsf_mbr1_link_1": "1/1/27",
    "vsf_mbr1_link_2": "1/1/28",
    "vsf_mbr2_link_1": "2/1/27",
    "vsf_mbr2_link_2": "2/1/28",
    "vsf_mbr3_link_1": "",
    "vsf_mbr3_link_2": "",
    "vsf_mbr4_link_1": "",
    "vsf_mbr4_link_2": "",
    "vsf_mbr_1_type": "j1666a",
    "vsf_mbr_2_type": "j1666a",
  }
}

```

```

    "vsf_mbr_3_type": "",
    "vsf_mbr_4_type": "",
    "vsf_sec_mbr": "2",
    "vlan11_ip_address": "10.10.11.9/24",
    "vlan12_ip_address": "10.10.12.9/24",
    "vlan13_ip_address": "10.10.13.9/24",
    "vlan14_ip_address": "10.10.14.9/24",
    "vlan15_ip_address": "10.10.15.9/24",
    "vlan16_ip_address": "10.10.16.9/24"
  }
}

```

4.3 Aruba Central 832X Template

Here is the full template for your reference.

```

hostname %_sys_hostname%
user admin group administrators password plaintext aruba123
allow-unsupported-transceiver
clock timezone australia/melbourne
ntp server 216.239.35.12 iburst
ntp server 216.239.35.4 iburst
ntp server 216.239.35.8 iburst
ntp enable
ntp vrf mgmt
ssh server vrf mgmt
https-server rest access-mode read-write
https-server vrf mgmt
snmp-server vrf default
snmp-server vrf mgmt
snmp-server community Thisisgreat
loop-protect re-enable-timer 60
ip dns server-address 192.168.1.1 vrf mgmt
ip route 0.0.0.0/0 10.10.21.250

interface mgmt
  no shutdown
  %if use_dhcp=1%
  ip dhcp
  %endif%
  %if use_dhcp=0%
  ip static %_sys_ip_address%/24
  default-gateway 192.168.1.249
  %endif%

vrf keepalive

interface lag 1
  description Inter-Switch-Link
  no shutdown
  no routing
  vlan trunk native 1 tag
  vlan trunk allowed all
  lacp mode active

interface %ISL_1_interface%
  description VSX-ISL-mem-port-LAG-1
  no shutdown
  lag 1

```

```

interface %ISL_2_interface%
    description VSX-ISL-mem-port-LAG-1
    no shutdown
    lag 1

vlan 11
    name Staff
    vsx-sync
vlan 12
    name Student
    vsx-sync
vlan 13
    name Restricted
    vsx-sync
vlan 14
    name Voice
    vsx-sync
vlan 15
    name IoT
    vsx-sync
vlan 16
    name Guest
    vsx-sync
vlan 21
    name Server
    vsx-sync

interface lag 50 multi-chassis
    vsx-sync vlans
    no routing
    no shutdown
    description Server-VSF
    vlan trunk allow 1,21
    vlan trunk native 1
    loop-protect vlan 1
    lacp mode active
    lacp rate fast

interface lag 100 multi-chassis
    vsx-sync vlans
    no routing
    no shutdown
    description comms1-VSF
    vlan trunk allow 11-16
    vlan trunk native 1
    loop-protect vlan 1
    lacp mode active
    lacp rate fast

interface lag 101 multi-chassis
    vsx-sync vlans
    no routing
    no shutdown
    description comms2-VSF
    vlan trunk allow 11-16
    vlan trunk native 1
    loop-protect vlan 1
    lacp mode active
    lacp rate fast

interface 1/1/1
    description %lag_intf_21_desc%

```

```

lag 50
no shutdown

interface 1/1/5
description %lag_intf_1_desc%
lag 100
no shutdown

interface 1/1/6
description %lag_intf_2_desc%
lag 101
no shutdown

%if vsx_primary=1%
interface %keepalive_interface%
vrf attach keepalive
description Keepalive-Link
no shutdown
ip address 1.1.1.1/30
vsx
system-mac 02:01:00:01:00:00
inter-switch-link lag 1
role primary
keepalive peer 1.1.1.2 source 1.1.1.1 vrf keepalive
linkup-delay-timer 60
vsx-sync aaa dns mclag-interfaces snmp ssh time vsx-global

interface vlan11
description Staff
ip address %vlan11_ip_addr%/24
active-gateway ip 10.10.11.1 mac 00:00:00:00:02:01
ip helper-address 10.10.21.254
ip helper-address 10.10.21.253
interface vlan12
description Student
ip address %vlan12_ip_addr%/24
active-gateway ip 10.10.12.1 mac 00:00:00:00:02:01
ip helper-address 10.10.21.254
ip helper-address 10.10.21.253

interface vlan13
description Restricted
ip address %vlan13_ip_addr%/24
active-gateway ip 10.10.13.1 mac 00:00:00:00:02:01
ip helper-address 10.10.21.254
ip helper-address 10.10.21.253

interface vlan14
description Voice
ip address %vlan14_ip_addr%/24
active-gateway ip 10.10.14.1 mac 00:00:00:00:02:01
ip helper-address 10.10.21.254
ip helper-address 10.10.21.253

interface vlan15
description IoT
ip address %vlan15_ip_addr%/24
active-gateway ip 10.10.15.1 mac 00:00:00:00:02:01
ip helper-address 10.10.21.254
ip helper-address 10.10.21.253

interface vlan16

```

```

description Guest
ip address %vlan16_ip_addr%/24
active-gateway ip 10.10.16.1 mac 00:00:00:00:02:01
ip helper-address 10.10.21.254
ip helper-address 10.10.21.253

interface vlan21
description Server
ip address %vlan21_ip_addr%/24
active-gateway ip 10.10.21.1 mac 00:00:00:00:02:01

%endif%

%if vsx_primary=0%

interface %keepalive_interface%
vrf attach keepalive
description Keepalive-Link
no shutdown
ip address 1.1.1.2/30

vsx
system-mac 02:01:00:01:00:00
inter-switch-link lag 1
role secondary
keepalive peer 1.1.1.1 source 1.1.1.2 vrf keepalive
linkup-delay-timer 60
vsx-sync aaa dns mclag-interfaces snmp ssh time vsx-global

interface vlan11
description Staff
ip address %vlan11_ip_addr%/24
active-gateway ip 10.10.11.1 mac 00:00:00:00:02:01
ip helper-address 10.10.21.254
ip helper-address 10.10.21.253
interface vlan12
description Student
ip address %vlan12_ip_addr%/24
active-gateway ip 10.10.12.1 mac 00:00:00:00:02:01
ip helper-address 10.10.21.254
ip helper-address 10.10.21.253

interface vlan13
description Restricted
ip address %vlan13_ip_addr%/24
active-gateway ip 10.10.13.1 mac 00:00:00:00:02:01
ip helper-address 10.10.21.254
ip helper-address 10.10.21.253

interface vlan14
description Voice
ip address %vlan14_ip_addr%/24
active-gateway ip 10.10.14.1 mac 00:00:00:00:02:01
ip helper-address 10.10.21.254
ip helper-address 10.10.21.253

interface vlan15
description IoT
ip address %vlan15_ip_addr%/24
active-gateway ip 10.10.15.1 mac 00:00:00:00:02:01
ip helper-address 10.10.21.254
ip helper-address 10.10.21.253

```

```

interface vlan16
  description Guest
  ip address %vlan16_ip_addr%/24
  active-gateway ip 10.10.16.1 mac 00:00:00:00:02:01
  ip helper-address 10.10.21.254
  ip helper-address 10.10.21.253

interface vlan21
  description Server
  ip address %vlan21_ip_addr%/24
  active-gateway ip 10.10.21.1 mac 00:00:00:00:02:01
%endif%

copp-policy moderate
class acl-logging priority 0 rate 468 burst 4
class arp-broadcast priority 4 rate 1406 burst 4
class arp-unicast priority 5 rate 937 burst 4
class hypertext priority 6 rate 17343 burst 16
class icmp-broadcast-ipv4 priority 4 rate 1406 burst 10
class icmp-multicast-ipv6 priority 4 rate 1406 burst 10
class icmp-unicast-ipv4 priority 5 rate 937 burst 10
class icmp-unicast-ipv6 priority 5 rate 937 burst 10
class igmp priority 7 rate 937 burst 4
class ip-exceptions priority 0 rate 468 burst 10
class ipv4-options priority 3 rate 468 burst 10
class mirror-to-cpu priority 1 rate 468 burst 2
class mld priority 7 rate 937 burst 4
class ntp priority 6 rate 468 burst 4
class sflow priority 2 rate 1406 burst 16
class ssh priority 6 rate 17343 burst 4
class unknown-multicast priority 3 rate 4218 burst 10
class unresolved-ip-unicast priority 3 rate 3281 burst 10
default-class priority 1 rate 17343 burst 16
apply copp-policy moderate

```

4.4 Aruba Central 832X Template Variables

Here is the variables in JSON format that were used in the template for your reference.

```

{
  "SERIALcore1": {
    "ISL_1_interface": "1/1/50",
    "ISL_2_interface": "1/1/51",
    "_sys_hostname": "Core-8320-2",
    "_sys_ip_address": "192.168.1.19",
    "_sys_lan_mac": "MAC-1",
    "_sys_serial": "SERIALcore1",
    "keepalive_interface": "1/1/48",
    "lag_intf_1_desc": "comms1-VSF-2",
    "lag_intf_21_desc": "server-VSF-2",
    "lag_intf_2_desc": "comms2-VSF-2",
    "use_dhcp": "0",
    "vlan11_ip_addr": "10.10.11.3",
    "vlan12_ip_addr": "10.10.12.3",
    "vlan13_ip_addr": "10.10.13.3",
    "vlan14_ip_addr": "10.10.14.3",
    "vlan15_ip_addr": "10.10.15.3",

```

```
"vlan16_ip_addr": "10.10.16.3",
"vlan21_ip_addr": "10.10.21.3",
"vsx_primary": "0"
},
"SERIALcore2": {
  "ISL_1_interface": "1/1/50",
  "ISL_2_interface": "1/1/51",
  "_sys_hostname": "Core-8320-1",
  "_sys_ip_address": "192.168.1.18",
  "_sys_lan_mac": "MAC-2",
  "_sys_serial": "SERIALcore2",
  "keepalive_interface": "1/1/48",
  "lag_intf_1_desc": "comms1-VSF-1",
  "lag_intf_21_desc": "server-VSF-1",
  "lag_intf_2_desc": "comms2-VSF-1",
  "use_dhcp": "0",
  "vlan11_ip_addr": "10.10.11.2",
  "vlan12_ip_addr": "10.10.12.2",
  "vlan13_ip_addr": "10.10.13.2",
  "vlan14_ip_addr": "10.10.14.2",
  "vlan15_ip_addr": "10.10.15.2",
  "vlan16_ip_addr": "10.10.16.2",
  "vlan21_ip_addr": "10.10.21.2",
  "vsx_primary": "1"
}
}
```