

atmosphere'22

BELGIUM

Switch Management

Aruba Central

What Is Common Cloud Services

Featured Applications

Aruba Central
Network management system designed to simplify the deployment and maintenance of Aruba wired and wireless infrastructure at scale

Launch

[View Networking Products](#)

Data Services Cloud Console
Data Services Cloud Console

Get Started

[View Storage Products](#)

Compute Ops Management
Securely manage your compute infrastructure, wherever it lives.

Get Started

[View Compute Products](#)

HPE GreenLake Central
Manage your cloud services and view usage, cost, and more.

Launch

[View Cloud Products](#)

HPE InfoSight
AI-driven Intelligence across servers, storage, virtual machines and more.

Launch

HPE GreenLake Developer Portal
Integrate apps and services.

Launch

Quick Actions

Invite Users
Send a sign-up link to users so you can collaborate with your team.

Send an Invite

Assign User Access
Assign a custom role or built-in roles to your team.

Assign Roles

Onboard Devices
Add and tag your compute, networking, and storage devices.

Add Devices

Manage Subscriptions
Add and manage your device and service subscriptions.

Add Subscriptions

Recommended for You

HPE GreenLake for

Aruba networking

In-depth Intelligence and Insights on your network-as-a-service consumption.

Learn More

Get the latest news about HPE GreenLake

Get weekly news on releases, updates, and more as we make HPE GreenLake the go to edge-to-cloud platform.

Subscribe Now



What Is Common Cloud Services

Device Subscriptions

Manage and add device subscription keys.

Add Device Subscription

Search Subscription Keys

1

Clear Filters

33 Subscription Key(s)

| Subscription Key | Device Type | Tier | Add-Ons | Available | Total Count | Start Date | Expiration Date | |
|-------------------|-------------|--|---------|-----------|-------------|--------------|-----------------|-----|
| ENNHB8EXAZGOVYPV | SWITCH | Foundation-Switch-62XX/29xx | -- | 5 | 5 | Jan 25, 2021 | Expired | ... |
| EUYMDJHG5BTONKVI | SWITCH | Foundation-Switch-61XX/25XX/41XX/8-12p | -- | 1 | 5 | Jan 25, 2021 | Apr 29, 2023 | ... |
| EFUJZJWNUKCCDNU | SWITCH | Foundation-Switch-62XX/29xx | -- | 0 | 5 | Jan 25, 2021 | Apr 29, 2023 | ... |
| EC9PQRWTAOMTUBJG | GATEWAY | Foundation-WLAN-Gateway | -- | 9 | 10 | Jan 25, 2021 | Apr 29, 2023 | ... |
| ESNYGTFKFXRKCRL2X | SWITCH | Foundation-Switch-63xx/38xx | -- | 4 | 5 | Jan 25, 2021 | Apr 29, 2023 | ... |
| EWN6BQUSONTFKRLU | GATEWAY | Advanced with Security | -- | 8 | 10 | May 7, 2020 | Apr 29, 2023 | ... |
| E3HCCWOND2U9GKK | GATEWAY | Advance-72xx/92xx | -- | 2 | 2 | May 7, 2020 | Apr 29, 2023 | ... |
| EALCDFCUVMTYQ6AS | GATEWAY | Foundation-72xx/92xx | -- | 2 | 2 | May 7, 2020 | Apr 29, 2023 | ... |
| EQAW6POPVZCH8JDV | GATEWAY | Advance-70XX | -- | 6 | 10 | May 7, 2020 | Apr 29, 2023 | ... |
| ESFDTTC8KWNWPCHW | GATEWAY | Foundation-70XX | -- | 10 | 10 | May 7, 2020 | Apr 29, 2023 | ... |

Devices

Manage your devices and their subscriptions.

Inventory

Auto-Subscribe

Inventory

View and onboard devices in your inventory.

Add Devices

Require App Assignments

4

Require Subscriptions

0

Assigned & Subscribed

35

Total Devices

39

Search by Serial, Model, or MAC Address

1

Clear Filters

Actions

39 Device(s)



Onboard Workflows

- Adding switches to the Inventory
- License Management
- Create a new group

Customer: vercammen@...

Global

Manage

- Overview
- Devices
- Clients
- Guests
- Applications
- Security
- Network Services

Analyze

- Alerts & Events
- Audit Trail
- Tools
- Reports

Launch

- App Catalog

Maintain

- Firmware

Organization

Add Group

Name
Switches_demo

Group will contain:

- ☐ Access points
- ☐ Gateways
- ☒ Switches

Configure using templates
Enable this option to use scripts/templates instead of device configuration pages.

Cancel Next

Network Structure Platform Integration

Groups

Combine devices with common configuration into a single group to apply the same configuration

22 Groups

0 unprovisioned devices

Install Manager

0 Site installations in progress
0 completed

1 Authorized installers
0 inactive

Device Replacement

Devices
Available for replacement

0 Devices under replacement
Manage the devices under replacement

Replacement history

Add Group

Type of switches used in this group:

☐ AOS-CX only ☐ AOS-S only ☒ Both AOS-CX and AOS-S

☐ Monitoring only for AOS-S

☐ Monitoring only for AOS-CX

☐ Make these the preferred group settings

Template or Not to Template

- Useful for Day 0/ZTP and standardized configuration
- Any CLI command can be used
- Can add variables and if...then logic
- CX Templates MUST contain a password in plaintext

```
user admin group administrators password plaintext <string>
```

EDIT TEMPLATE



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



TEMPLATE
Template Configuration

TEMPLATE

IMPORT CONFIGURATION AS TEMPLATE

```
1 #This template is imported from device "alain66" with serial "SG04KN102X"
2
3 !
4 !Version ArubaOS-CX FL.10.07.0030
5 !export-password: default
6 hostname %_sys_hostname%
7 user admin group administrators password plaintext *****
8 user alain group administrators password plaintext *****
9
10 !
11 !
12 !
```

```
# Stacking Configuration
%if stacking=enabled%
vsf split-detect mgmt
vsf secondary-member 2
vsf member 1
    type %member1_sku%
    link 1 %member1_link1%
    link 2 %member1_link2%
vsf member 2
    type %member2_sku%
    link 1 %member2_link1%
    link 2 %member2_link2%
%if stack_members>2%
vsf member 3
    type %member3_sku%
    link 1 %member3_link1%
    link 2 %member3_link2%
%endif%
%if stack_members>3%
vsf member 4
    type %member4_sku%
    link 1 %member4_link1%
    link 2 %member4_link2%
%endif%
%if stack_members>4%
vsf member 5
    type %member5_sku%
    link 1 %member5_link1%
    link 2 %member5_link2%
%endif%
%if stack_members>5%
vsf member 6
    type %member6_sku%
    link 1 %member6_link1%
    link 2 %member6_link2%
%endif%
```

Variables

- System Variables
- Create your own
 - Export/import using CSV or JSON

UPLOAD VARIABLES FILE

DOWNLOAD SAMPLE VARIABLES FILE

| Variables (4) | | | |
|--------------------|----------------------|---------------|-------------------|
| Device MAC Address | Device Serial Number | Variable Name | Variable Value |
| b8:d4:e7:ae:a2:80 | SG04KN102X | _sys_hostname | alain666 |
| b8:d4:e7:ae:a2:80 | SG04KN102X | _sys_lan_mac | b8:d4:e7:ae:a2:80 |
| b8:d4:e7:ae:a2:80 | SG04KN102X | _sys_serial | SG04KN102X |
| b8:d4:e7:ae:a2:80 | SG04KN102X | vlan_60_mbr | 1/1/11-1/1/22 |



Default System Variables

- 1. `_sys_template_header` : This represents the first two lines of the config file. This is placed first in config file.
- 2. `snmpv3 engineid "%_sys_snmpv3_engineid%"` : To populate engineid.
- 3. `_sys_module_command`: To populate module lines.
- 4. `ip default-gateway _sys_gateway`: To populate gateway IP.
- 5. `hostname _sys_hostname` : To maintain unique hostname.
- 6. `_sys_oobm_command` : Represents oobm block.
- 7. `_sys_ip_address` : IP address.
- 8. `_sys_netmask` : Netmask.
- 9. `_sys_use_dhcp` : DHCP status(true or false) of vlan 1.
- 10. `_sys_vlan_1_untag_command` : Untagged ports of vlan 1.
- 11. `_sys_vlan_1_tag_command` : Tagged ports of vlan 1.
- 12. `_sys_stack_command` : Represents stack block.



Variables

- Must be lower-case
- Can use '_' but not '-'
- Must be contained in %...%
- Three required variables in a .csv file, per row

_sys_serial : Serial number of the device

_sys_lan_mac : MAC address of the device

modified : Indicates the modification status of the device. The value for this column is set to N in the sample variables file. When you edit a variable definition, set the modified column to Y to allow Aruba Central to parse the modified definition

| A | B | C | D | E | I |
|-------------|-------------------|----------|---------------|---------------|---|
| _sys_serial | _sys_lan_mac | modified | _sys_hostname | vlan_60_mbr | |
| SG04KN102X | b8:d4:e7:ae:a2:80 | Y | | 1/1/11-1/1/22 | |

GUI config

Customer: vercammen@...

Access PointsSwitchesGateways

ArubaOS-CX

Manage

Overview

Devices

Clients

Guests

Applications

Security

Analyze

Alerts & Events

Audit Trail

Tools

Reports

Maintain

Firmware

Organization

MultiEdit

Access to AOS-CX search and custom configuration (editor & express configuration).

System

Properties

Contact, location, time zone and VRF

HTTP Proxy

HTTP proxy server integration

SNMP

SNMPv2 communities, SNMPv3 users and trap destinations

Logging

Log server and event severity classification

Administrator

Local device administration

Source Interface

Service communication interfaces

Stacking

Switch stacks and chassis

Routing

Static Routing

Custom network destination routing table

Fabrics

Overlay network topology

Interfaces

Ports & Link Aggregations

Specific ports, LAGs and VLAN assignments

Security

Authentication Servers

RADIUS & TACACS

Authentication

802.1X and MAC authentication

Access Control

Access policies and rules

Dynamic Segmentation

User-based tunneling

Client Roles

Client roles and local attributes

Bridging

VLANs

Virtual subnet management

Loop Prevention

Loop protection and spanning tree

Configuration Status



GUI config

Customer: vercammen@...

Access PointsSwitchesGateways

ArubaOS-CX

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Access Control

Dynamic Segmentation

Client Roles

Bridging

VLANs

Loop Prevention

Configuration Status

Access PointsSwitchesGateways

MultiEdit

Access to AOS-CX search and custom configuration (editor & express configuration).

< | VLANs (3)

Search + More

| ID | Name | Description | Admin Up | Voice |
|-----|------------------|-------------|----------|----------|
| 1 | DEFAULT_VLAN_1 | | Enabled | Disabled |
| 21 | eenentwintig | test | Enabled | Disabled |
| 999 | negennegeennegen | | Enabled | Disabled |



GUI config/MultiEdit

MultiEdit 

Access to AOS-CX search and custom configuration (editor & express configuration).

Configuration Status

Device-Level Configuration

Search and select devices and choose either of the methods below to change configuration for the selected devices.

Contextual Search Engine





Enter Search Query (e.g. nae-status:Critical AND label:access)

SEARCH & FILTER

[Check Search Documentation](#)

Devices (3)



| Name |  Firmware Version | Config Modified | Status | Config Status | NAE Status | MAC Address | IP Address |
|----------------|--|------------------------|--|---------------|------------|---------------|--------------|
| 8320-Access | 10.10.1010 | Sep 26, 2022, 15:52:07 |  Online | Sync | Normal | d06726-e257f0 | 10.10.10.113 |
| 8320-Primary | 10.10.1010 | Sep 27, 2022, 07:11:01 |  Online | Sync | Normal | d06726-e2c832 | 10.10.10.111 |
| 8320-Secondary | 10.10.1010 | Sep 27, 2022, 07:11:59 |  Online | Sync | Normal | d06726-e299c8 | 10.10.10.110 |

3 item(s) selected

Clear

[VIEW CONFIG](#)

[EDIT CONFIG](#)

[EXPRESS CONFIG](#)



GUI config/MultiEdit

MultiEdit 

Access to AOS-CX search and custom configuration (editor & express configuration).

Configuration St...

[←](#) | Edit Multi-Device Configuration Editor View Diff View

Devices



☒ Selected 3/3

Select single device for line numbers

☒ 8320-Access

☒ 8320-Primary

☒ 8320-Secondary



Configuration


```
hostname BOSTNAME
banner motd ... (8320-Primary )
user admin group administrators password ciphertext *****
user alain group administrators password ciphertext *****
user ibbo group administrators password ciphertext ***** (2/3)
profile l3-core
loop-protect re-enable-timer 15 (8320-Access )
router vrrp enable (2/3)
no usb
bluetooth disable (8320-Access )
vrf keepalive (2/3)
ntp server pool.ntp.org (8320-Access )
ntp enable
ssh server vrf default
ssh server vrf mgmt
ssh key-exchange-algorithms curve25519-sha256 curve25519-sha256@libssh.org diffie-hellman-group14-sha1 diffie-hellman-group14-sha256 diffie-hellman-group16-sha512 diffie-hellman-group18-sha512 diffie-h
vlan 1
    vxr-sync (2/3)
vlan 10
    name native (2/3)
    description native (8320-Primary )
vlan 21
    name eenentwintig
    description test
vlan 100 (8320-Access )
    name test_100 (8320-Access )
    description test_100 (8320-Access )
```

Moving Device from Template to Gui

- Supported AOS. CX in the near future.
- Caution must be taken for following settings:
 - System Properties—Only the device administrator password, if configured in the group, is updated on the switch.
 - Authentication (MAC and 802.1X)
 - Spanning Tree (Loop Prevention)
 - HTTP Proxy
 - User-based tunneling
 - Logging servers
 - SNMP
 - Port interfaces

Monitoring Only Mode

- License needed
- Configuration will be out of scope with Central.

 Add Group

Type of switches used in this group:

☐ AOS-CX only ☐ AOS-S only ☒ Both AOS-CX and AOS-S

☐ Monitoring only for AOS-S

☐ Monitoring only for AOS-CX

☐ Make these the preferred group settings

The background is a solid dark blue. In the top-left corner, there is a large, solid red circle. A large, irregular shape in the center-right of the image is filled with a pattern of small, light red dots, creating a halftone effect. The text "Demo Time" is centered horizontally and partially overlaps the dotted area.

Demo Time

atmosphere'22

BELGIUM

Thank you

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