

EXTREME NETWORKS

Onboard Mgmt CLIP XIQ-SE workflow

Ludovico Stevens

Technical Marketing Engineering

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Onboard Mgmt CLIP XIQ-SE workflow



- Workflow to onboard a VOSS/Fabric Engine switch onto a dedicated switch mgmt CLIP
- Mgmt CLIP extracted from CSV file previously placed on XIQ-SE
- Ability to change the switch sysname (SNMP and ISIS) at the same time
- Ability to set the auto-sense ISIS Hello authentication key during the IP mgmt change
- Ability to re-add the device into a different XIQ-SE site after the mgmt VLAN IP change
- Ability to launch a follow up workflow once this workflow has finished
- Requires minimum VOSS 8.2 (for segmented mgmt support)

Workflow manual execution



- Workflow can be manually run against 1 or many switches simultaneously

The screenshot displays the 'Uni-Hw-Campus-map' interface, which includes a table of network devices and a context menu for manual workflow execution.

Status	Name ↑	Site	IP Address	Poll Status	Poll Details	Device Type	Family	Firmware
▲	5320-16P-4XE-DC-FabricEngine...	World/CTC/Reading/Campus/Universal-Hw-Access	20.0.48.14	Available: 1...	Up: 1212 D...	5320-16P-4XE-DC-F...	Universal P...	8.8.0.0
▲	5320-24T-8XE-FabricEngine	us/Universal-Hw-Access	20.0.48.13	Available: 1...	Up: 1213 D...	5320-24T-8XE-Fabri...	Universal P...	8.8.0.0
▲	5420F-48P-4XL-FabricEngine	us/Universal-Hw-Access	20.0.48.10	Available: 1...	Up: 1212 D...	5420F-48P-4XL-Fab...	Universal P...	8.8.0.0
▲	5420M-24W-4YE-FabricEngine	us/Universal-Hw-Access	20.0.48.11	Available: 1...	Up: 1212 D...	5420M-24W-4YE-Fa...	Universal P...	8.8.0.0
●	5520-24W-SwitchEngine	us/Universal-Hw-Access	10.8.3.10	Available: 1...	Up: 1212 D...	5520-24W-SwitchEn...	Universal P...	32.1.1.6
●	5520-STK	us/Universal-Hw-Access	20.0.48.12	Available: 1...	Up: 1213 D...	Switch Engine ARM ...	Universal P...	31.7.1.4
▲	5720-24MXW-FabricEngine	us/Universal-Hw-Access	20.0.48.16	Available: 1...	Up: 1213 D...	5720-24MXW-Fabri...	Universal P...	8.8.0.0
●	CTC-410C-3/45	us/Universal-Hw-Access	20.0.203.52	Available: 9...	Up: 1208 D...	XIQ AP	XIQ Native	10.5r1
▶	VSP7448-1	us/Universal-Hw-Access		Up: 1213 D...		VSP-7400-48Y-8C	VSP Series	8.8.0.0
▶	VSP7448-2	us/Universal-Hw-Access		Up: 1212 D...		VSP-7400-48Y-8C	VSP Series	8.8.0.0

The context menu is open, showing various actions. The 'Onboard Mgmt CLIP' option is highlighted with a red box.

- FlexView
- More Views
- Configure...
- Compass Search...
- Rediscover
- Clear Alarms...
- Upgrade Firmware...
- Add to Device Group...
- More Actions
- Archives
- Tasks
- Maps
- Network
- Policy
- Access Control
- Config
- Example
- Macro
- Provisioning
- System
- VLAN
- Apply Config Template
- CLI Custom Action - XOS SSL
- Deploy Insight VM
- Fabric Attach Enforce
- Fabric Connect Enforce
- Move to CLIP Mgmt IP
- Onboard Mgmt CLIP**
- Onboard Mgmt VLAN
- onboard CLI

Workflow automatic execution during onboarding



- Workflow can be automatically run after ZTP+ onboarding, under XIQ-SE Site Actions
- In this case script will always run against 1 switch only, the onboarding switch

The screenshot displays the 'Sandbox' configuration page in the XIQ-SE interface. The 'Actions' tab is selected, showing various workflow settings. Below the main configuration area, the 'Custom Configuration' section contains a table with a single entry for the 'Provisioning/Onboard Mgmt CLIP' task.

Configuration Settings:

- ☒ Automatically Add Devices
- ☒ Add Trap Receiver
- ☒ Add Syslog Receiver
- ☒ Add to Archive
- ☒ Add to Map

Collection Mode: Historical

Collection Interval (minutes): 10

Map Name: /World/CTC/Reading/Sandbox/Sandbox

Custom Configuration Table:

Enabled	Vendor	Family	Topology	Task
<input checked="" type="checkbox"/>	Extreme	Universal Platform Fabric Engine	Any	Provisioning/Onboard Mgmt CLIP

Buttons: Update, Cancel

Onboard Mgmt CLIP XIQ-SE workflow inputs



- A CSV file is uploaded to XIQ-SE beforehand
- CSV file has device data which can be device specific
- CSV data is looked up either by device initial (dhcp) IP or Serial Number or MAC Address
- CSV data can be referenced as \$<name> in workflow inputs
- Site variables can still also be referenced but as \${name}

- If your XIQ-SE was installed without “root” access, place the CSV file here instead:
/usr/local/Extreme_Networks/NetSight/appdata/logs/scripting/NetSight_Server

	A	B	C	D
1	serial number	mgmt clip	sysname	site name
2	JA092041G-01023	20.0.209.54	5420-bld1	/World/building1
3	TB062139K-H0210	20.0.209.53	5320-bld1	/World/building1
4	TB022131K-H0059	20.0.209.52	5320-bld2	/World/building2
5	JA102040G-00003	20.0.209.55	5420-bld2	/World/building2

Pal

Activities

Start → Move to CLIP mgmt IP → End

Gateways

Boundary

Events

Inputs

Manage Inputs...

CSV data file:
/root/mgmtdata.csv

Index into CSV file:
Serial Number

Mgmt CLIP and re-add Site Notes:
Provide new mgmt CLIP and associated VRF. The VRF is optional and can be omitted in which case GRT will apply. It is assumed that initially the switch will have a mgmt IP on the onboarding VLAN; this mgmt VLAN IP can be kept or deleted. A system name can be configured for both SNMP and ISIS at the same time, if provided. The Site to re-add is optional. If not provided the device will get re-added to the same

Mgmt CLIP VRF:
GlobalRouter

Mgmt CLIP IP:
\$<mgmt clip>

Existing mgmt VLAN IP:
Delete

System Name to configure on device:
\$<sysname>

Auto-sense ISIS Authentication key:

Site to re-add device using mgmt CLIP:

Follow on workflow notes:
If it is desired to launch another workflow after this one has completed, provide the workflow path/name like for example (without the quotes): "Provisioning/Onboard VSP"

Follow on workflow to execute:

Workflow execution



Dashboard Devices Discovered Firmware Archives Configuration Templates Reports **Onboard Mgmt CLIP (26863)**

Summary

Status	Start Date/Time	Name	Version	Source	# Devices	Started By	End Date/Time	Message	Path
✓	9/8/2022 9:22:54 AM	Onboard Mgmt CLIP	5	Workflow Designer ...	1	Istevens	9/8/2022 9:23:11 AM	Re-added device using mgmt CLIP 20.0.66.6...	/Workflows/Ludovico/Onboard Mgmt CLIP

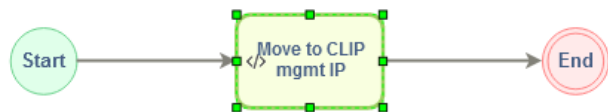
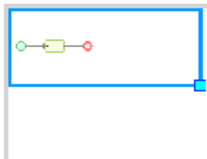
Graph View Table View



Stop Workflow

Show Output

Show Variables



Devices Grid

Show Output

Show Variables

Status	Device IP	Output Path	Start Date/Time	End Date/Time	Message
SUCCESS	20.0.48.10		9/8/2022 9:22:...	9/8/2022 9:23:...	Re-added device using mgmt CLIP 20.0.66.66 to XIQ-SE Site '/World/CTC/Reading/Campus/Universal-Hw-Access'

The following configuration was successfully performed on switch:

```
-> config term
-> mgmt clip vrf GlobalRouter
->   ip address 20.0.66.66/32
->   enable
-> exit
-> config term
-> mgmt vlan
->   no ip address 20.0.48.10
-> exit
-> snmp-server name 5420-bld1
-> router isis
->   sys-name 5420-bld1
-> exit
-> end
-> save config
Deleted IP '20.0.48.10' from XIQ-SE's database
Deleted IP '20.0.48.10' in NAC Engine Group
Added new device IP '20.0.66.66' to XIQ-SE Site '/World/CTC/Reading/Campus/Universal-Hw-Access' with admin profile 'PoC Profile'
Exit code SUCCESS
```

Close

Workflow tuning



- If the workflow is found to fail, because after all the changes it is unable to perform “save config” on the switch, this is because during onboarding XIQ-SE is also busy making changes and saving the config itself
 - On VOSS / Fabric Engine only 1 user at a time can perform “save config” or “show run”
- To avoid the workflow failures two variables can be set:
- `const_NO_ERROR_ON_FAIL_SAVE`
 - If set, the workflow will still try and save the config at the end, but if unable to, the workflow will complete without any errors
- `const_AGGRESSIVE_SAVE`
 - If set, the workflow will try and save the config as before, 3 tries at 10sec intervals, but if these tries fail, all other CLI sessions will be kicked, and a final save is performed again, which will now succeed

General Variables Inputs Outputs Menus Network OS					
Add Edit Delete Global Variables...					
Name ↑	Default Value	Variable Reference	Scope	Type	Referenc...
<code>const_AGGRESSIVE_SAVE</code>	false		Workflow	Boolean	false
<code>const_CSV_DELIMITER</code>	,		Workflow	String	false
<code>const_DELAY_ISISAUTH_CHANGE</code>	60		Workflow	String	false
<code>const_DELAY_RECONNECT</code>	10		Workflow	String	false
<code>const_DELAY_SITE_READD</code>	20		Workflow	String	false
<code>const_DEVICE_READD_TIMEOUT</code>	100		Workflow	String	false
<code>const_NO_ERROR_ON_FAIL_SAVE</code>	false		Workflow	Boolean	false
<code>const_PING_NEW_IP_TIMEOUT</code>	20		Workflow	String	false
<code>const_VSP_MIN_SW_VERSION</code>	8.5.0.0		Workflow	String	false

