

EXTREME NETWORKS

Onboard Mgmt VLAN XIQ-SE workflow

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Onboard Mgmt VLAN XIQ-SE workflow



- Workflow to onboard a VOSS/Fabric Engine switch onto a dedicated switch mgmt VLAN/L2VSN
- Mgmt VLAN / I-SID and IP data 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 8.5 (for mgmt convert support)

Workflow manual execution



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

The screenshot displays the 'Devices' tab in the Extreme Networks management interface. A table lists various network devices, including FabricEngines, SwitchEngines, and VSPs, with columns for Status, Name, Site, IP Address, Poll Status, Poll Details, Device Type, Family, and Firmware. A context menu is open over the table, showing options like 'FlexView', 'Configure...', 'Rediscover', and 'Add to Device Group...'. The 'Add to Device Group...' option is expanded, showing a list of workflow categories: Access Control, Config, Example, Macro, Provisioning, System, and VLAN. The 'VLAN' category is selected, and a sub-menu is shown with options like 'Apply Config Template', 'CLI Custom Action - XOS SSL', 'Deploy Insight VM', 'Fabric Attach Enforce', 'Fabric Connect Enforce', 'Onboard Mgmt VLAN' (highlighted with a red box), and 'onboard CLI'.

Status	Name ↑	Site	IP Address	Poll Status	Poll Details	Device Type	Family	Firmware
▲	5320-16P-4XE-DC-FabricEngi...	/World/CTC/Reading/Campus/Universal-Hw-Access	20.0.48.14	Available: 1...	Up: 949 Do...	5320-16P-4XE-DC-F...	Universal P...	8.8.0.0
▲	5320-24T-8XE-FabricEngine	/World/CTC/Reading/Campus/Universal-Hw-Access	20.0.48.13	Available: 1...	Up: 949 Do...	5320-24T-8XE-Fabri...	Universal P...	8.8.0.0
▲	5420F-48P-4XL-FabricEngine	/World/CTC/Reading/Campus/Universal-Hw-Access	20.0.48.10	Available: 1...	Up: 949 Do...	5420F-48P-4XL-Fab...	Universal P...	8.8.0.0
▲	5420M-24W-4YE-FabricEngine	/World/CTC/Reading/Campus/Universal-Hw-Access	20.0.48.11	Available: 1...	Up: 949 Do...	5420M-24W-4YE-Fa...	Universal P...	8.8.0.0
●	5520-24W-SwitchEngine	/World/CTC/Reading/Campus/Universal-Hw-Access	10.8.3.10	Available: 1...	Up: 949 Do...	5520-24W-SwitchEn...	Universal P...	32.1.1.6
●	5520-STK	/World/CTC/Reading/Campus/Universal-Hw-Access	20.0.48.12	Available: 1...	Up: 949 Do...	Switch Engine ARM ...	Universal P...	31.7.1.4
▲	5720-24MXW-FabricEngine	/World/CTC/Reading/Campus/Universal-Hw-Access	20.0.48.16	Available: 1...	Up: 949 Do...	5720-24MXW-Fabri...	Universal P...	8.8.0.0
●	CTC-410C-3/45	/World/CTC/Reading/Campus/Universal-Hw-Access	20.0.203.52	Available: 9...	Up: 948 Do...	XIQ AP	XIQ Native	10.5r1
▶	VSP7448-1	/World/CTC/Reading/Campus/Universal-Hw-Access	20.0.20.76	Available: 1...	Up: 949 Do...	VSP-7400-48Y-8C	VSP Series	8.8.0.0
▶	VSP7448-2	/World/CTC/Reading/Campus/Universal-Hw-Access	20.0.20.77	Available: 9...	Up: 948 Do...	VSP-7400-48Y-8C	VSP Series	8.8.0.0

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

Devices **Sandbox** Site Summary Endpoint Locations FlexReports

Discover **Actions** VRF/VLAN Topologies Services Port Templates ZTP+ Device Defaults Endpoint Locations Analytics Custom Variables

☒ Automatically Add Devices Collection Mode: Historical

☒ Add Trap Receiver Collection Interval (minutes): 10

☒ Add Syslog Receiver Map Name: /World/CTC/Reading/Sandbox/Sandbox

☒ Add to Archive

☒ Add to Map

Custom Configuration

+ Add Edit - Delete

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

Update Cancel

Onboard Mgmt VLAN 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

The screenshot displays the XIQ-SE workflow editor for the 'Onboard Mgmt VLAN' workflow. The main canvas shows a simple flow: Start -> 'Move to VLAN mgmt IP' -> End. The 'Details' panel on the right is configured with the following inputs:

- CSV data file:** /root/mgmtdata.csv
- Index into CSV file:** Serial Number
- Mgmt VLAN and re-add Site Notes:** Provide new mgmt I-SID, IP, Mask and Default Gateway. The VLAN id is optional and can be omitted. Is not used on DVR Leaf and can be auto-allocated otherwise. 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 Site.
- Mgmt VLAN ID:** \$<mgmt vlanid>
- Mgmt VLAN I-SID:** \$<mgmt isid>
- Mgmt VLAN IP:** \$<mgmt ip>
- Mgmt VLAN Mask:** \$<mgmt mask>
- Mgmt VLAN Default Gateway:** \$<mgmt gateway>
- System Name to configure on device:** \$<sysname>
- Auto-sense ISIS Authentication key:** *****
- Site to re-add device using mgmt VLAN IP:**

Below the workflow editor, a preview of the 'mgmtdata.csv' file is shown. The file contains the following data:

	serial number	mgmt vlanid	mgmt isid	mgmt ip	mgmt mask	mgmt gateway	sysname	site name
1	JA092041G-01023	209	2800209	20.0.209.54	255.255.255.0	20.0.209.1	5420-bld1	/World/building1
2	TB062139K-H0210	209	2800209	20.0.209.53	255.255.255.0	20.0.209.1	5320-bld1	/World/building1
3	TB022131K-H0059	209	2800209	20.0.209.52	255.255.255.0	20.0.209.1	5320-bld2	/World/building2
4	JA102040G-00003	209	2800209	20.0.209.55	255.255.255.0	20.0.209.1	5420-bld2	/World/building2

Workflow execution



Dashboard Devices Discovered Firmware Archives Configuration Templates Reports **Onboard Mgmt VLAN (26787)**

Summary

Status	Start Date/Time	Name	Version	Source	# Devices	Started By	End Date/Time	Message	Path
✓	9/7/2022 10:32:26 ...	Onboard Mgmt VLAN	25	Workflow Designer ...	1	Istevens	9/7/2022 10:32:42 ...	Re-added device using mgmt VLAN IP 20.0.2...	/Workflows/Ludovico/Onboard Mgmt VLAN

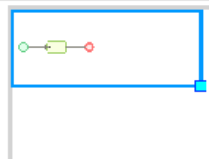
Graph View Table View



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		9/7/2022 10:3...	9/7/2022 10:3...	Re-added device using mgmt VLAN IP 20.0.209.54 on L2 I-SID 2800209 to XIQ-SE Site '/World/CTC/Reading/Campus/Univer

The following configuration was successfully performed on switch:

```
-> config term
-> mgmt vlan
->   convert i-sid 2800209 ip 20.0.209.54 255.255.255.0 gateway 20.0.209.1 rollback 130
-> config term
-> mgmt convert-commit
-> 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 '20.0.209.54' to XIQ-SE Site '/World/CTC/Reading/Campus/Universal-Hw-
Access' with admin profile 'PoC Profile'
Exit code SUCCESS
```

Close

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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

