

EXTREME NETWORKS

# Onboard Mgmt OOB XIQ-SE workflow

Ludovico Stevens

Technical Marketing Engineering

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# Onboard Mgmt OOB XIQ-SE workflow



- Workflow to onboard a VOSS/Fabric Engine switch onto a dedicated switch mgmt OOB IP
- Mgmt OOB IP 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 segmented mgmt support)

# Workflow manual execution



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

The screenshot displays a network management interface with a table of devices and a context menu for manual workflow execution.

**Devices Table:**

Status	Name	Site	Adm
▶	X670G2-1	/World/CTC-Readin...	PoC
▶	X670G2-2	rd/CTC-Readin...	PoC
▶	X460G2-1	rd/CTC-Readin...	PoC
▶	X460G2-2	rd/CTC-Readin...	PoC
▼	5520-48S	rd/CTC-Readin...	PoC
●	Switch 55	rd/CTC-Readin...	PoC
●	Sbox-VSP	rd/CTC-Readin...	PoC
●	Sbox-VSP	rd/CTC-Readin...	PoC
●	Sbox-VSP	rd/CTC-Readin...	PoC
●	Sbox-VSP	rd/CTC-Readin...	PoC
●	Sbox-VSP	rd/CTC-Readin...	PoC
●	Sbox-VSP	rd/CTC-Readin...	PoC
●	Sbox-VSP	rd/CTC-Readin...	PoC
●	Sbox-VSP	rd/CTC-Readin...	PoC
●	VSP-4900	rd/CTC-Readin...	PoC

**Context Menu (Left):**

- Device View
- Terminal
- WebView
- FlexView
- More Views
- Configure...
- Compass Search...
- Rediscover
- Clear Alarms...
- Upgrade Firmware...
- Add to Device Group...
- More Actions
- Archives
- Tasks
- Maps
- Network
- Policy

**Context Menu (Right):**

- Configure MACsec Link
- Configure SSH
- Delete Insight VMs
- Deploy Insight VM
- Disable Beta NVO IQagent
- Enable Beta NVO IQagent
- Enable Beta NVO IQagent v2
- Enforce Config after Onboard
- Fabric Extend Onboard
- Fabric MultiArea Migrate
- Novant Clinic IPsec Backup
- Novant Onboard Clinic
- Onboard Mgmt CLIP
- Onboard Mgmt CLIP ctc
- Onboard Mgmt OOB**
- Onboard Mgmt VLAN
- Onboard Mgmt VLAN ctc
- Onboard VSP
- Onboard VSP ctc
- SMLT Pair Enforce
- Sync Syslog SNMP server ctc
- Update DHCP relay forwarder

**Table on the right:**

Poll Status	Poll Details	Device Type	Family ↑
Available: 1...	Up: 4069 D...	X670-G2-48x-4q	Summit Series
Available: 1...	Up: 4069 D...	X670-G2-48x-4q	Summit Series
Available: 1...	Up: 4069 D...	X460-G2-24t-10G4	Summit Series
Available: 1...	Up: 4069 D...	X460-G2-24t-10G4	Summit Series
Available: 0...	Up: 0 Dow...	5520-48SE-FabricEn...	Universal Platform Fabric...
Available: 1...	Up: 4069 D...		
Available: 9...	Up: 4069 D...	VSP-7254XSQ	VSP Series
Available: 9...	Up: 4068 D...	VSP-7254XSQ	VSP Series
Available: 9...	Up: 4068 D...	VSP-7400-48Y-8C	VSP Series
Available: 0...	Up: 0 Dow...	VSP-7400-48Y-8C	VSP Series
Available: 1...	Up: 4069 D...	VSP-7254XSQ	VSP Series
Available: 9...	Up: 4068 D...	VSP-7400-48Y-8C	VSP Series
Available: 9...	Up: 4067 D...	VSP-7400-48Y-8C	VSP Series
Available: 1...	Up: 4069 D...	VSP-4900-24XE	VSP Series

# 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

VSP Sandbox

Site Summary

Endpoint Locations

FlexReports

Discover

Actions

VRF/VLAN

Fabric Connect

Services

Port Templates

ZTP+ Device Defaults

Endpoint Locations

Analytics

Custom Variables

XIQ Locations

☒ Automatically Add Devices

Collection Mode:

Historical

☒ Add Trap Receiver

Collection Interval (minutes):

10

☒ Add Syslog Receiver

Map Name:

/World/CTC-Reading/VSP Sandbox/Sandbox-map

☒ Add to Archive

☒ Add to Map

Custom Configuration

+

Add

Edit

Delete

Enabled	Vendor	Family	Topology	Task
<input checked="" type="checkbox"/>	Extreme	VSP Series	Any	Provisioning/Onboard Mgmt OOB

Update

Cancel

# Onboard Mgmt OOB 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> or \$(name) in workflow inputs
- Site variables can still also be referenced but as \${name}
- The CSV variable names are case sensitive

- 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 OOB' workflow. The main canvas shows a simple flow: Start -> 'Move to OOB 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 OOB and re-add Site Notes:** Provide new mgmt OOB IP, Mask and Default Gateway. If the switch initially has 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 Site.
- Mgmt OOB IP:** \$<mgmt ip>
- Mgmt OOB Mask:** \$<mgmt mask>
- Mgmt OOB Default Gateway:** \$<mgmt gateway>
- Existing mgmt VLAN IP:** Delete
- System Name to configure on device:** \$<sysname>
- Auto-sense ISIS Authentication key:** (empty field)
- Site to re-add device using mgmt OOB:** (empty field)

Red arrows point from the workflow inputs to the corresponding fields in the 'Details' panel. Below the workflow editor, a preview of the 'mgmtdata.csv' file is shown.

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

# Workflow execution



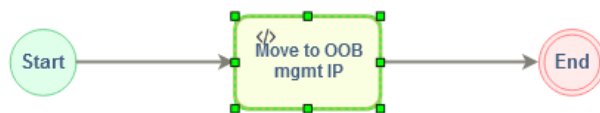
Workflow Dashboard Scheduled Tasks Saved Tasks Scripts Workflows **Onboard Mgmt OOB (336)** ✕

## Summary

Status	Start Date/Time	Name	Version	Source	# Devices	Started By	End Date/Time	Message	Path
✓	10/11/2024 9:48:03...	Onboard Mgmt OOB	4	Site Discover Action...	1	NetSight Server	10/11/2024 9:49:07...	2128Q-40009: Re-added device using mgmt ...	/Workflows/Ludovico/Onboard Mgmt OOB

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	10.8.4.8		10/11/2024 9:48:...	10/11/2024 9:...	2128Q-40009: Re-added device using mgmt OOB 10.8.15.73 to XIQ-SE Site '/World/CTC-Reading/VSP Sandbox'

```
The following configuration was successfully performed on switch:
-> config term
-> snmp-server name Sbox-VSP7400-3
-> router isis
->   sys-name Sbox-VSP7400-3
-> exit
-> mgmt oob
->   convert ip 10.8.15.73 255.255.224.0 gateway 10.8.0.1 rollback 240
-> config term
-> mgmt convert-commit
-> end
-> save config
Deleted IP '10.8.4.8' from XIQ-SE's database
Added new device IP '10.8.15.73' to XIQ-SE Site '/World/CTC-Reading/VSP Sandbox' with admin
profile 'PoC SNMPv2 Profile'
Initiated XIQ-SE rediscovery of newly added device 10.8.15.73
Initiated XIQ-SE config reload of newly added device 10.8.15.73
Exit code SUCCESS
```

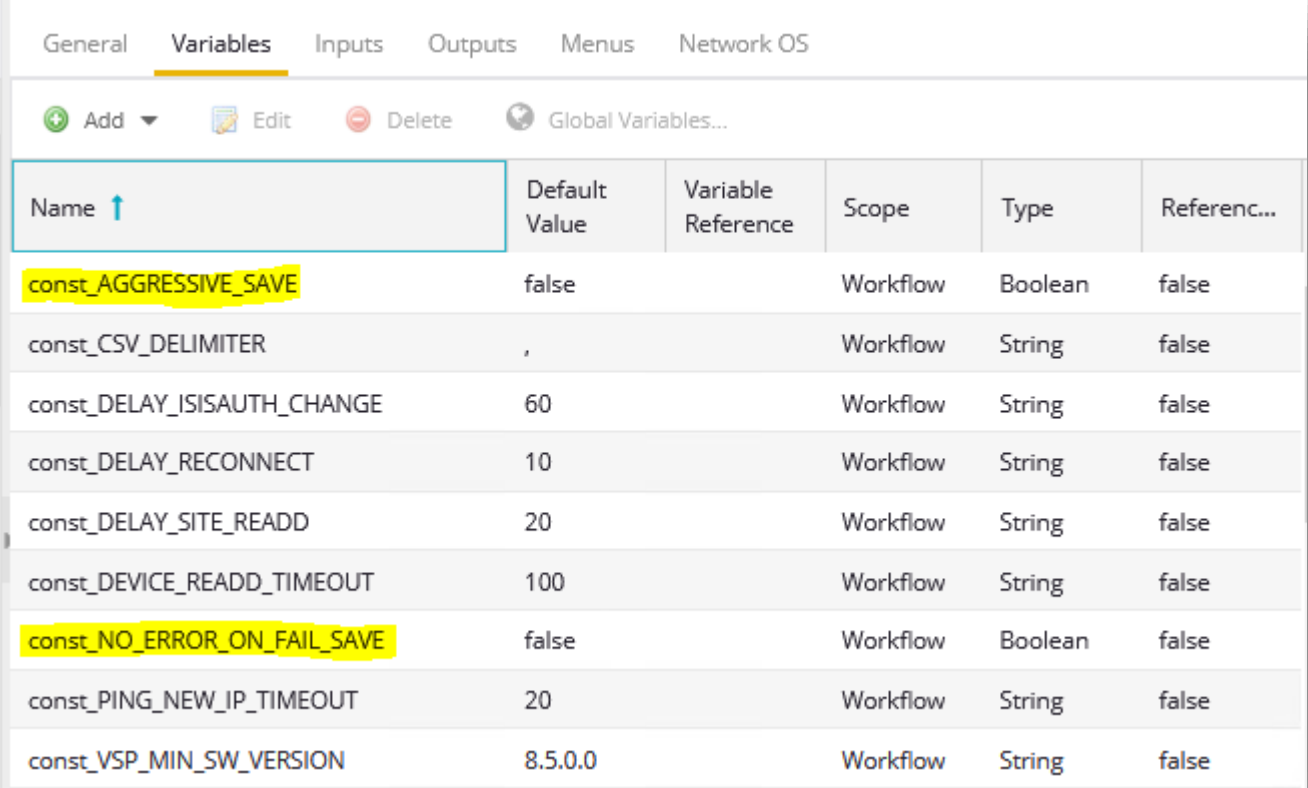
Close

ALL RIGHTS RESERVED.

# 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



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

