EXTREME NETWORKS

Onboard Mgmt CLIP XIQ-SE workflow

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ADVANCE WITH US

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 send a custom set of CLI commands at the same time, with logical operators
- Ability to launch a follow up workflow once this workflow has finished
- Requires minimum VOSS 8.5 (for segmented mgmt support)

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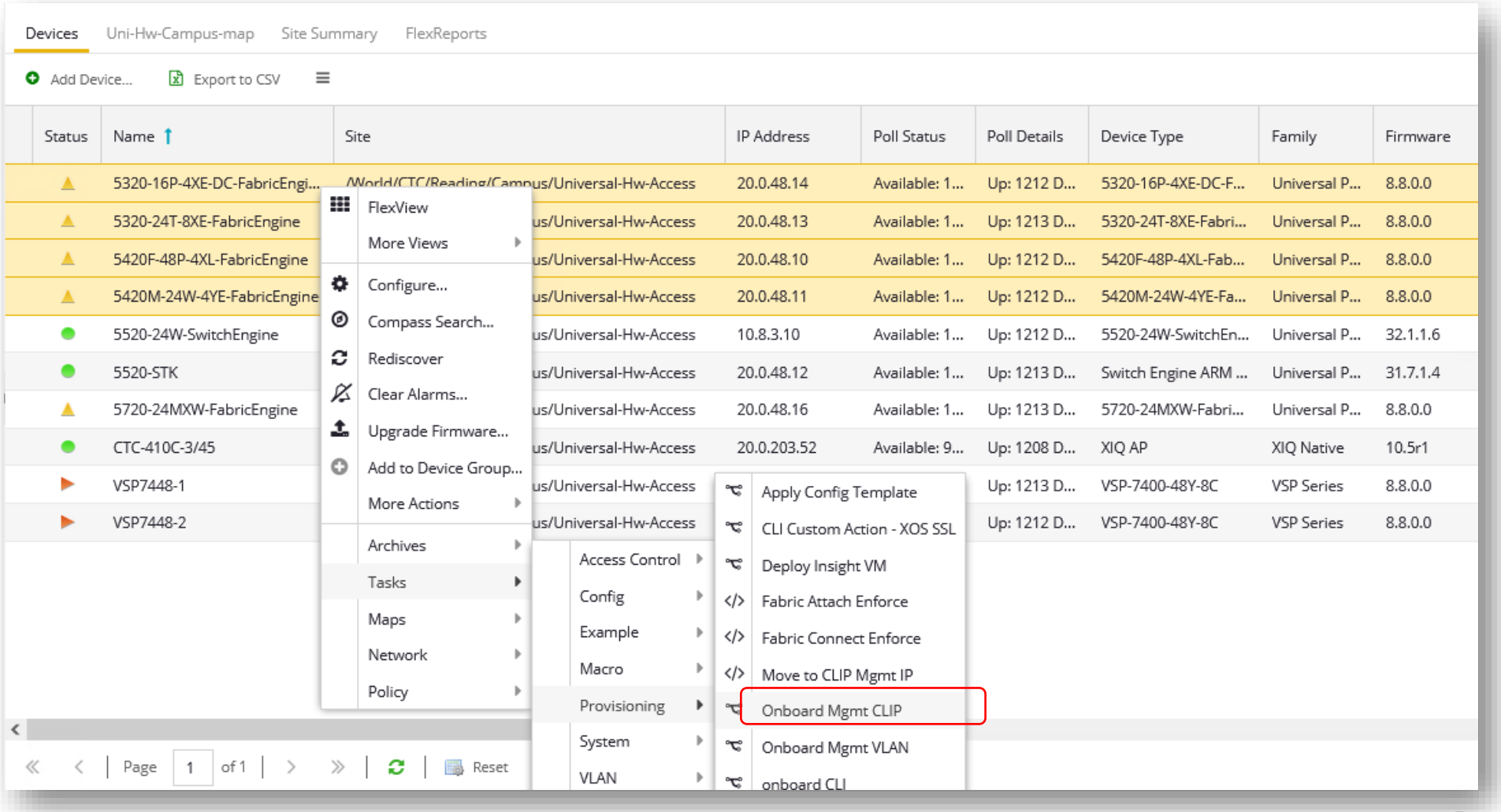
Workflow manual execution

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



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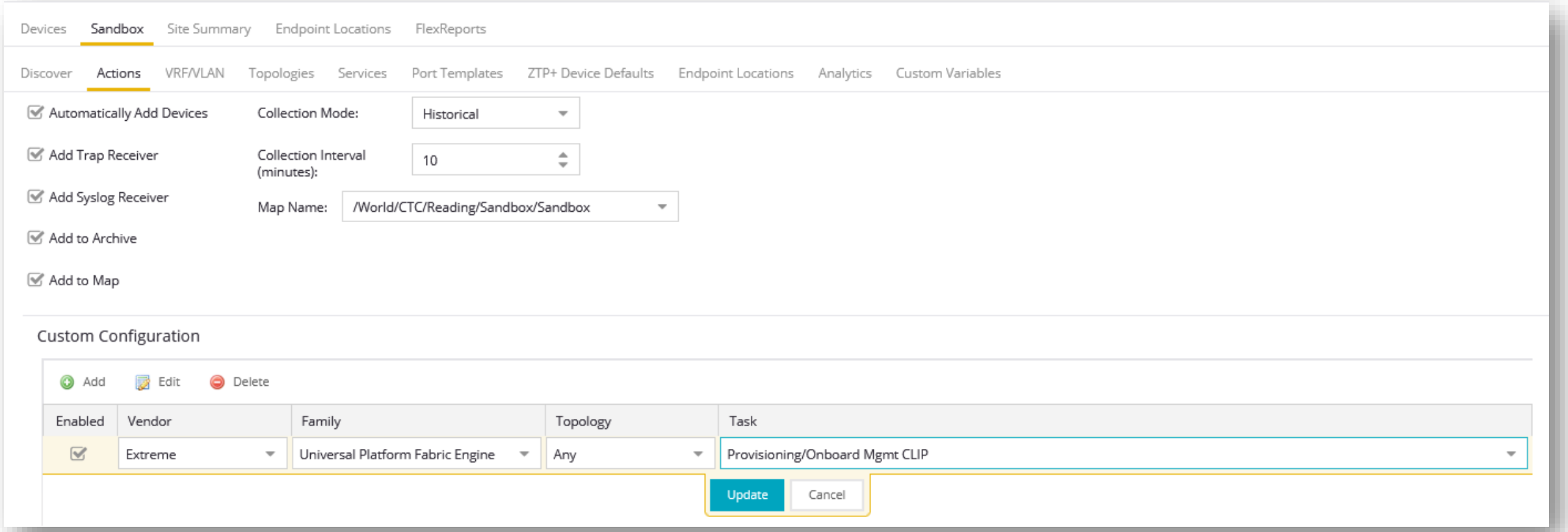
Workflow automatic execution during onboarding

- 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



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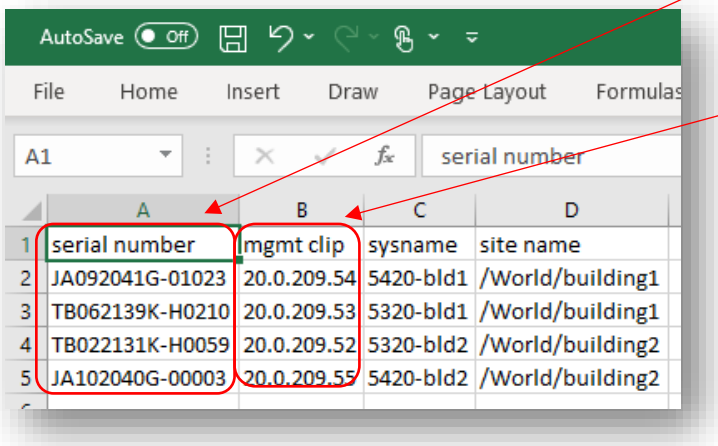
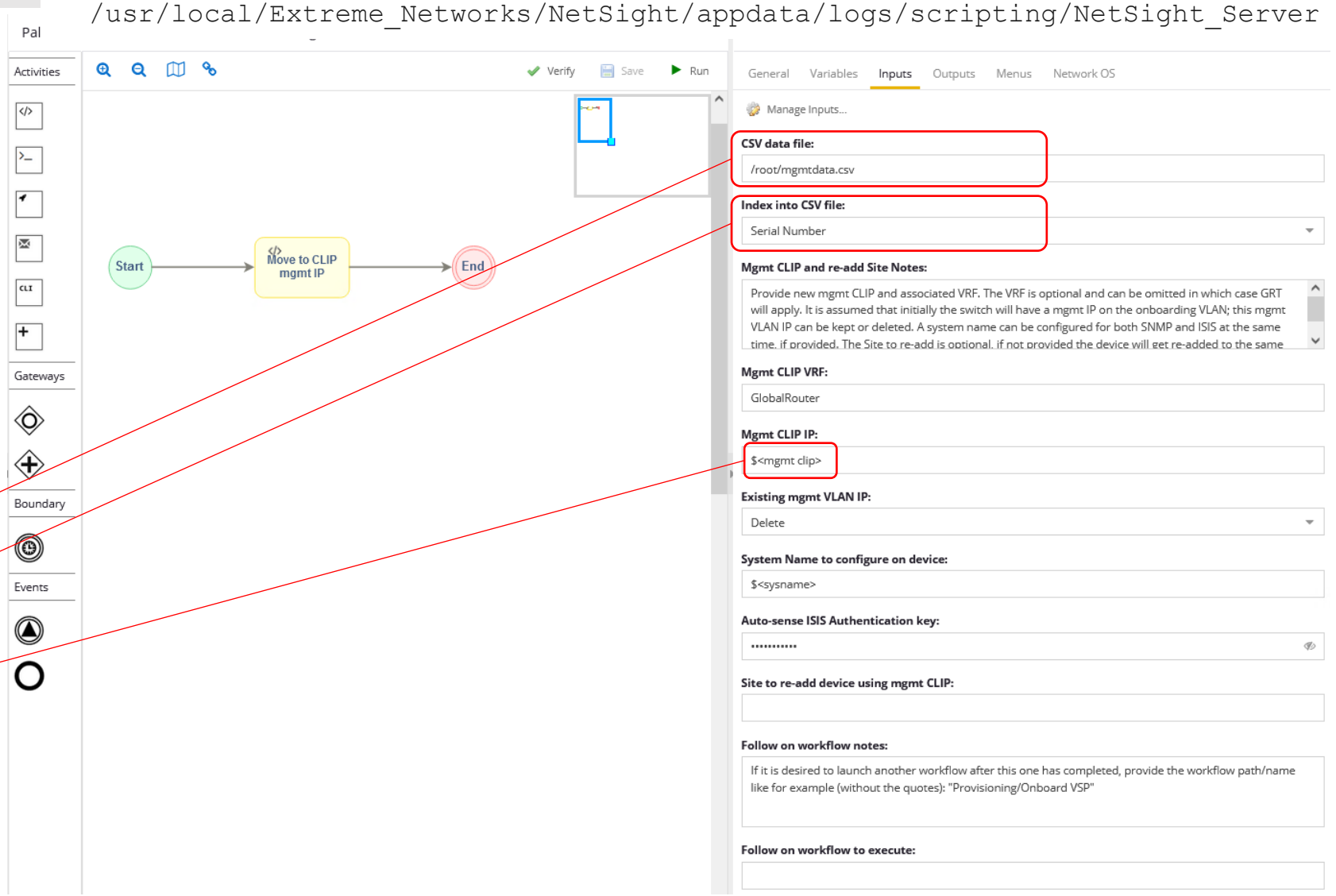
Onboard Mgmt CLIP XIQ-SE workflow inputs

- 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> 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`





CSV data file input

CSV data file:

```
%rootDir%/%sitePath%/%siteName%.cvs
```

- Available path variables: **%rootDir%, %sitePath%, %siteName%**
  - %rootDir% by default is /root/; can be changed via workflow variable const_ROOT_PATH_VAR
  - %sitePath% and %siteName% are set based on site path of device; e.g. if device is in "/World/CTC-Reading/VSP Sandbox“ then %sitePath% = “World/CTC-Reading” and %siteName% = “VSP Sandbox”
- Can use these to have different CSV per site

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Workflow execution

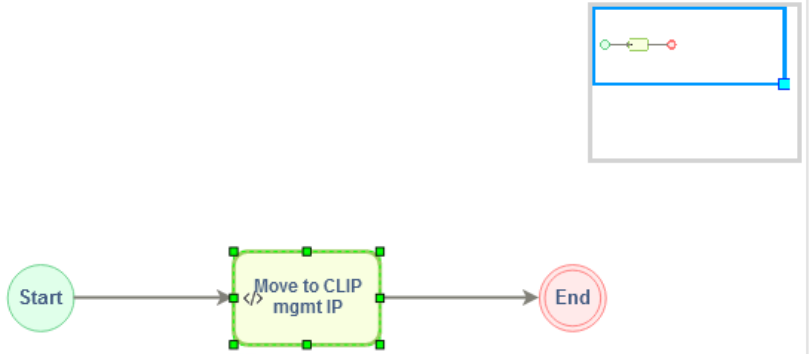
Dashboard | Devices | Discovered | Firmware | Archives | Configuration Templates | Reports | Onboard Mgmt CLIP (26863)

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	lstevens	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

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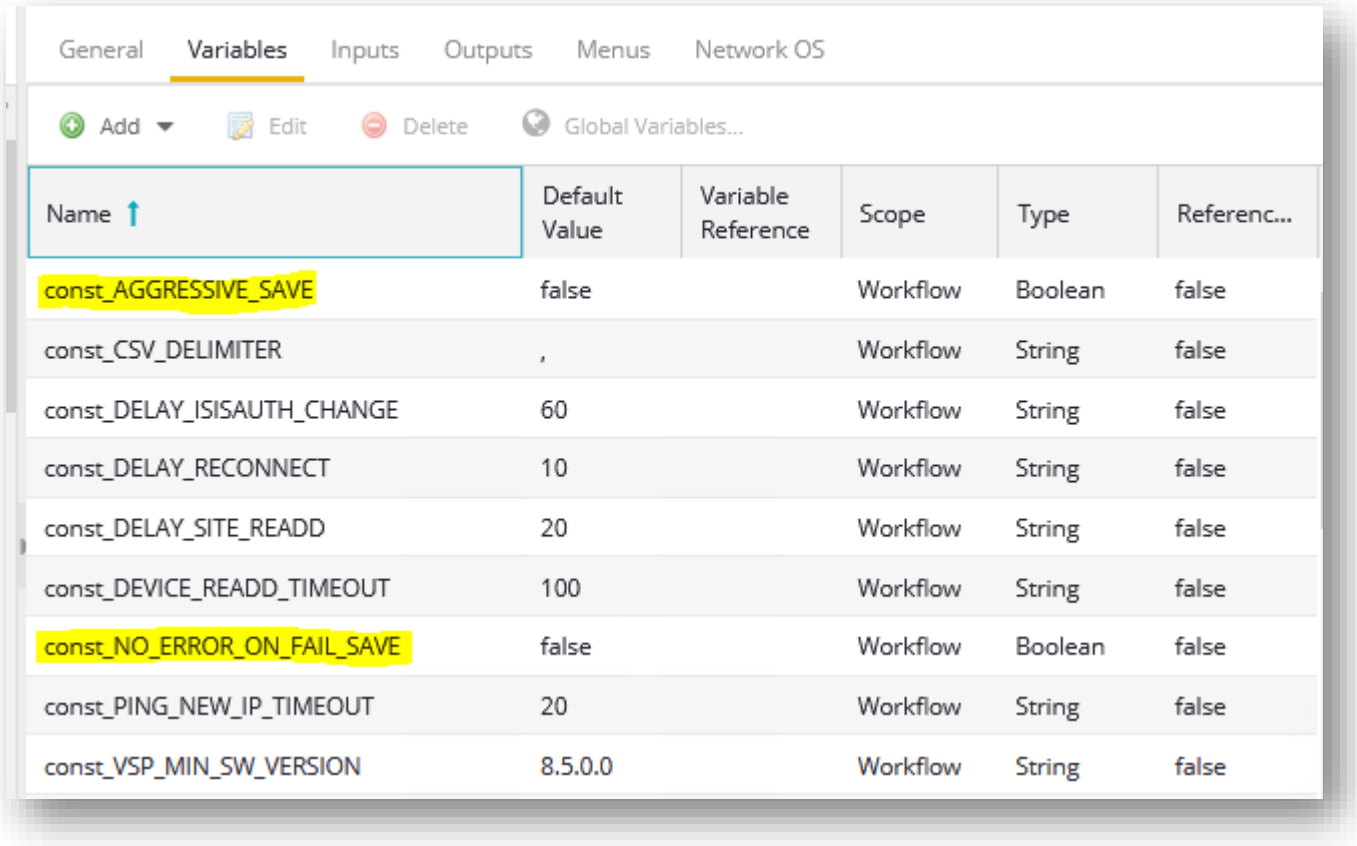
Workflow tuning

- 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



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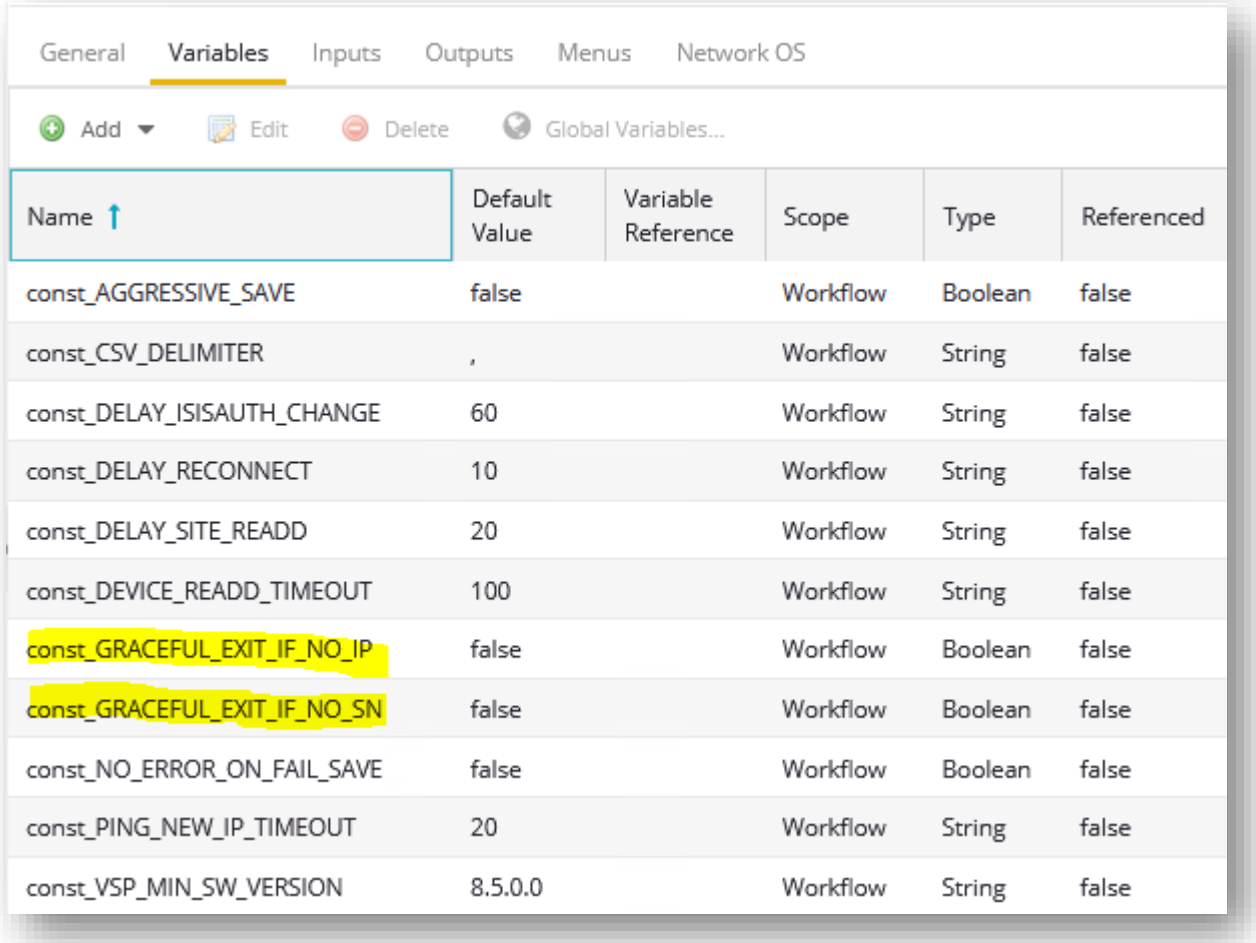
Workflow tuning 2

- If it is desired to allocate both mgmt VLAN IP and mgmt CLIP IP to devices onboarded into the same XIQ-SE site, both workflows “Onboard Mgmt VLAN” and “Onboard Mgmt CLIP” can be assigned to the same site for the same Fabric Engine/VOSS platforms.
- Then either configure each workflow to use a different CSV file, and ensure that a given switch is only found in one of the CSV files; and also set:
- const_GRACEFUL_EXIT_IF_NO_SN
  - If set, the workflow will gracefully exit if the device lookup key was not found in the provided CSV file
- Or configure both workflows to use the same CSV file and ensure that in the CSV file a given switch is only allocated either a mgmt CLIP or a mgmt VLAN IP (not both); and also set:
- const_GRACEFUL_EXIT_IF_NO_IP
  - If set, the workflow will gracefully exit if no Mgmt CLIP IP value was obtained from Site or CSV inputs



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Additional CLI commands input / sample ➔

Additional CLI commands:

```
#No need to start with enable, config term; commented lines are ignored
#clock time-zone US Eastern
#snmp-server location $<location>
#snmp-server contact "Master of Disaster!"
```

```
#No need to start with enable, config term; commented lines are ignored
clock time-zone US Eastern
snmp-server location $<location>
snmp-server contact "Master of Disaster!"
no snmp-server community-by-index first
no snmp-server community-by-index second
router isis; spbm 1 multicast enable; exit
auto-sense eapol voice lldp-auth
ip dhcp-snooping enable
web-server password ro user // password // password
web-server password rwa admin // password // password
#if    ("5520-24" in ${deviceType} or "5420-24" in ${deviceType})
                interface gigabitEthernet 1/1-1/24
                   no snmp trap link-status
                   slpp-guard enable timeout 0
                   spanning-tree bpduguard enable timeout 0
                   eapol re-authentication enable re-authentication-period 36000
                exit
#elseif("5520-48" in ${deviceType} or "5420-48" in ${deviceType})
                interface gigabitEthernet 1/1-1/48
                   no snmp trap link-status
                   slpp-guard enable timeout 0
                   spanning-tree bpduguard enable timeout 0
                   eapol re-authentication enable re-authentication-period 36000
                exit
#end
```

- The additional CLI commands input can make use of the following variables:
  - Site variables **${var}**: Useful to apply same values to all devices in same XIQ-SE Site. Or to apply same values to all devices in same sub-Sites
  - **Emc_vars** ${deviceIP}: Useful to feed some of these values into the same space as Site variables
  - CSV variables **$<var>**: Useful to provide device specific values
  - Eval variables **$[var]**: Useful to compute new values within the template file and be able to store and re-use these values via a variable
- The additional CLI commands input can make use of the following pragmas
  - **#if/#elseif/#else/#end, #error fail|stop|continue, #eval / #eval <varname>=(), #sleep, #last**
  - but not: #block start|execute
- Please refer to documentation of the Apply Config Template workflow here:
  - https://github.com/extremenetworks/ExtremeScripting/blob/master/XMC_XIQ-SE/oneview_workflows/xwf/Apply_Config_Template_Workflow.pdf

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