



XMC 8.5 Workshop

Workflow Manager & Python Scripting

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Agenda

first day

1. Python basics
2. XMC Python implementation
3. XMC Workflow Manager
4. using GitHUB

LAB - 1

create a SPB Fabric & SMLT

LAB - 2

EXOS switch onboarding

LAB - 3

create L2VSN across the Fabric

second day

5. XMC Northbound Interface
6. XMC Advanced coding
7. using Python IDEs

LAB - 4

learning unknown MAC

LAB - 5

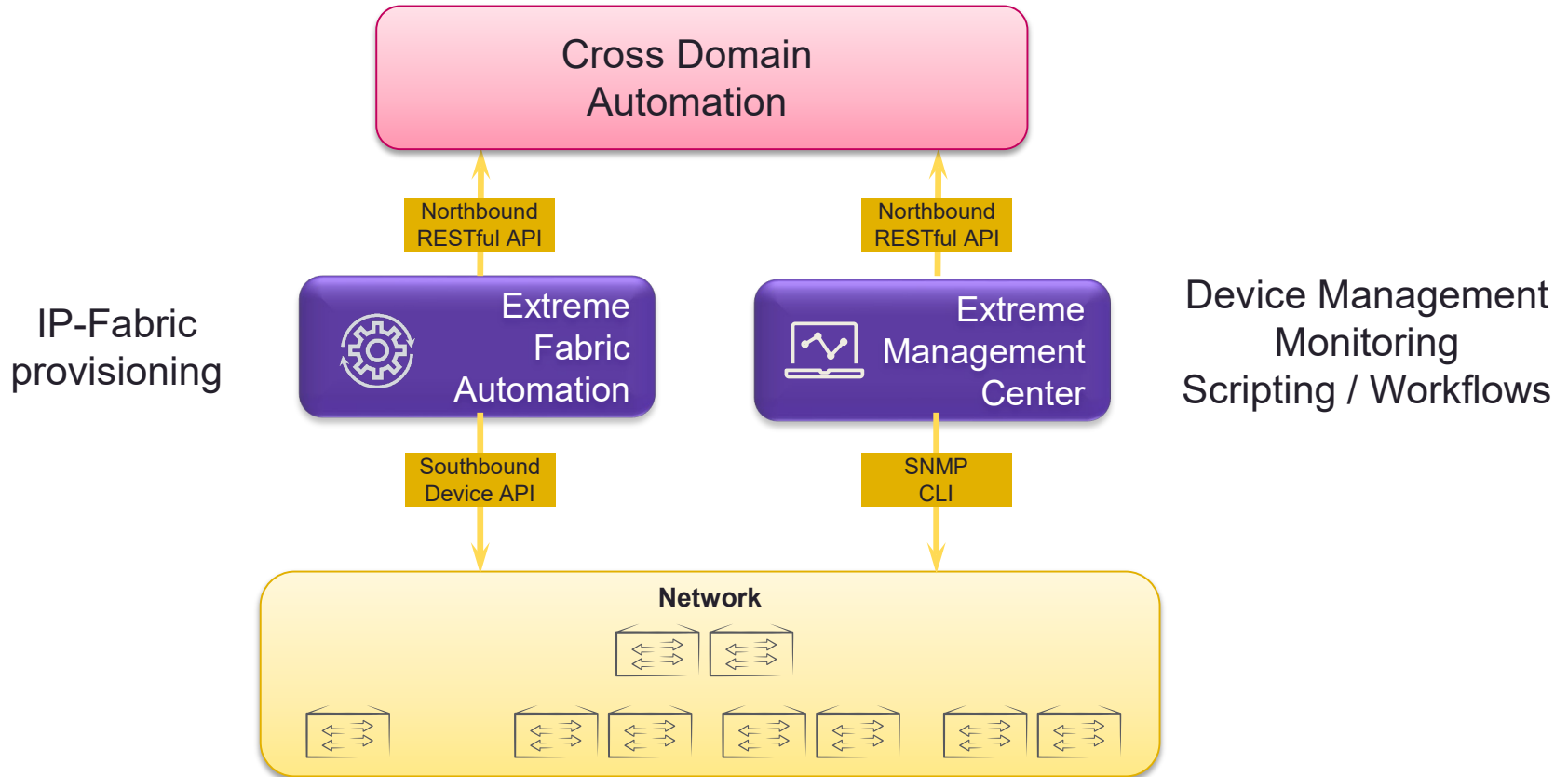
Alarm trigger collect tech support

LAB - 6

using NBI from external



Extreme Networks Automation offer



Automation considerations

Address tasks which have a high repetition rate.

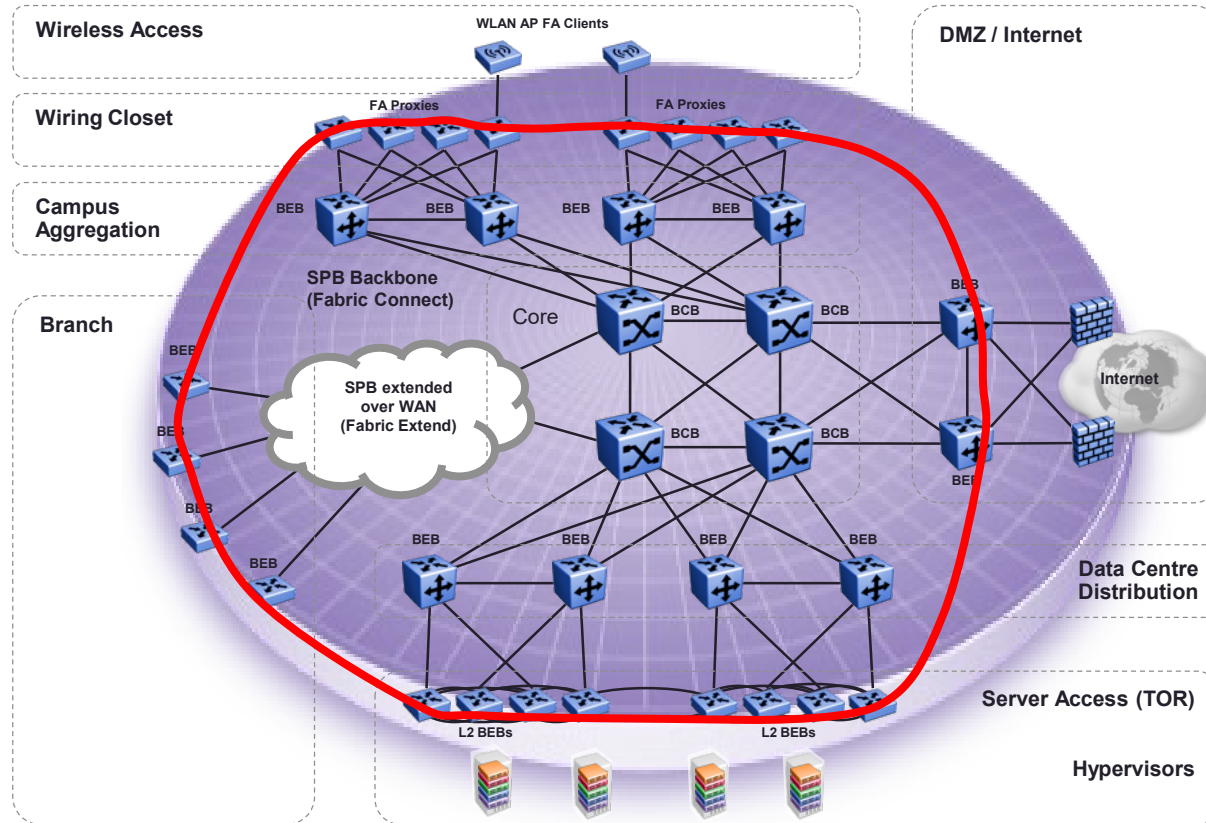
Address 80% of your issues with 20% automation effort.
Don't try to be perfect.

Don't invent the wheel again.
Use as much as possible what already available.

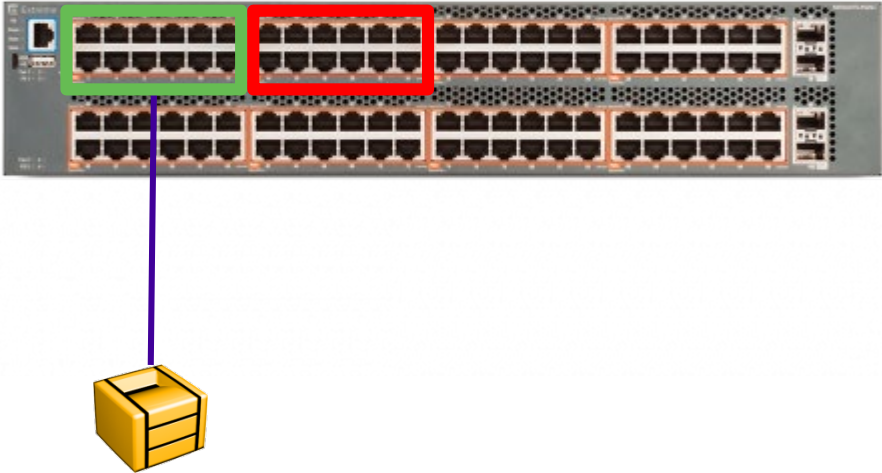


Use cases

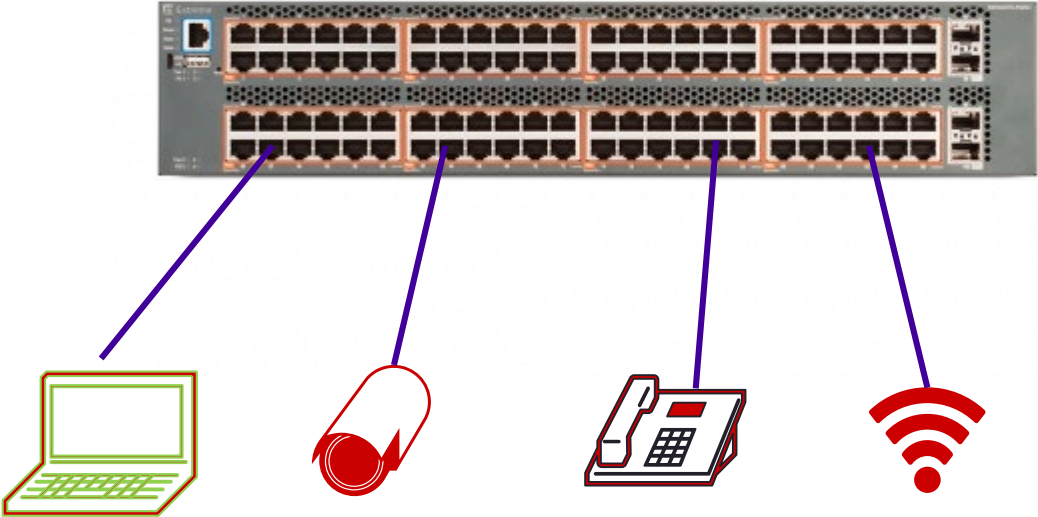
Fabric Connect → create L2VSN



NAC MAC learning



ERS NAC enforce



ERS NAC enforce

The screenshot shows the 'Devices' page in the management console. A table lists various devices with columns for Status, Name, Site, and IP Address. A context menu is open over the device 'ERS4800-2', showing options like 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, and Policy. The 'Tasks' menu is expanded, showing 'Config' > 'ERS NAC Enforce' selected.

Status	Name	Site	IP Address
▶	20.0.209.21	/World/CTC/Reading/Campus	20.0.209.21
●	ERS3510	/World/CTC/Reading/Campus	20.0.209.22
●	ERS4800-2	Reading/Campus	20.0.204.11
●	ERS4800-3	Reading/Campus	20.0.205.11
●	ERS4800-4	Reading/Campus	20.0.206.11
●	ERS4800-S	Reading/Campus	20.0.209.11
●	ERS4900-F	Reading/Campus	20.0.209.4
●	ERS4900-S	Reading/Campus	20.0.209.11
●	ERS5900-F	Reading/Campus	20.0.209.5
●	ERS5900-S	Reading/Campus	20.0.209.11
▼	Test X440-G	Reading/Campus	20.0.209.20
●	VSP4k-WA	Reading/Campus	10.8.4.35
●	VSP4k-WA	Reading/Campus	10.8.4.33
●	X440G2-12g	Reading/Campus	10.8.14.26
●	X460G2-2	Reading/Campus	20.0.204.11
●	X460G2-ST	Reading/Campus	20.0.209.11
●	X465-STK	Reading/Campus	20.0.209.83
●	X670G2-3	Reading/Campus	20.0.209.11
●	X670G2-4	Reading/Campus	20.0.209.11
●	XCA1	Reading/Campus	20.0.209.11

The 'Run Script: ERS NAC Enforce' dialog box shows the '3. Device Settings' step. The 'Switch EAP port configuration' section is visible, with the following settings:

- EAP port config mode: MHMA: Multiple Host Multiple Authentication
- EAP port authentication: Both: EAPoL 802.1X and/or MAC/NEAP
- If enabling NAC, automatically filter out from port selection these ports: A: Uplink and MLT ports
- Re-authentication timer: 3600

The 'Switch Global EAP options' section is also visible, with the following settings:

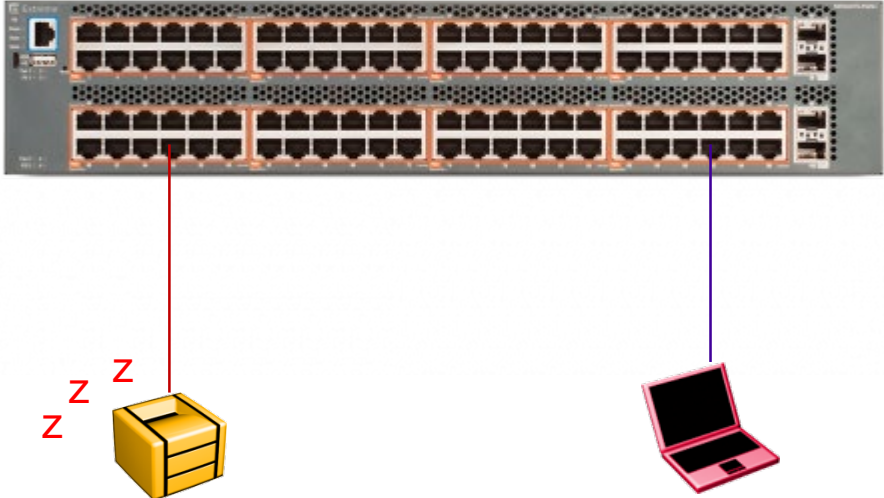
- RADIUS encapsulation for MAC based authentication: (empty)
- RADIUS reachability: (empty)
- RADIUS reachability dummy username: (empty)
- RADIUS reachability dummy password: (empty)

Navigation buttons: « Previous, Next », Cancel

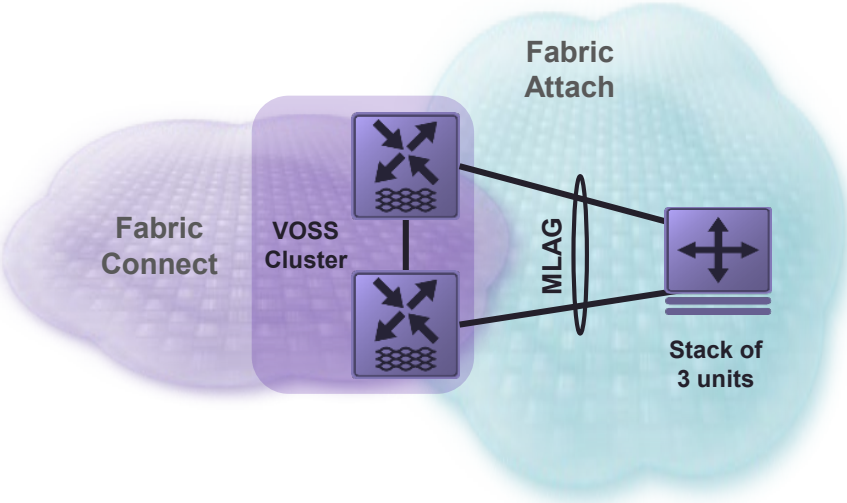


NAC Printer sleep mode issue

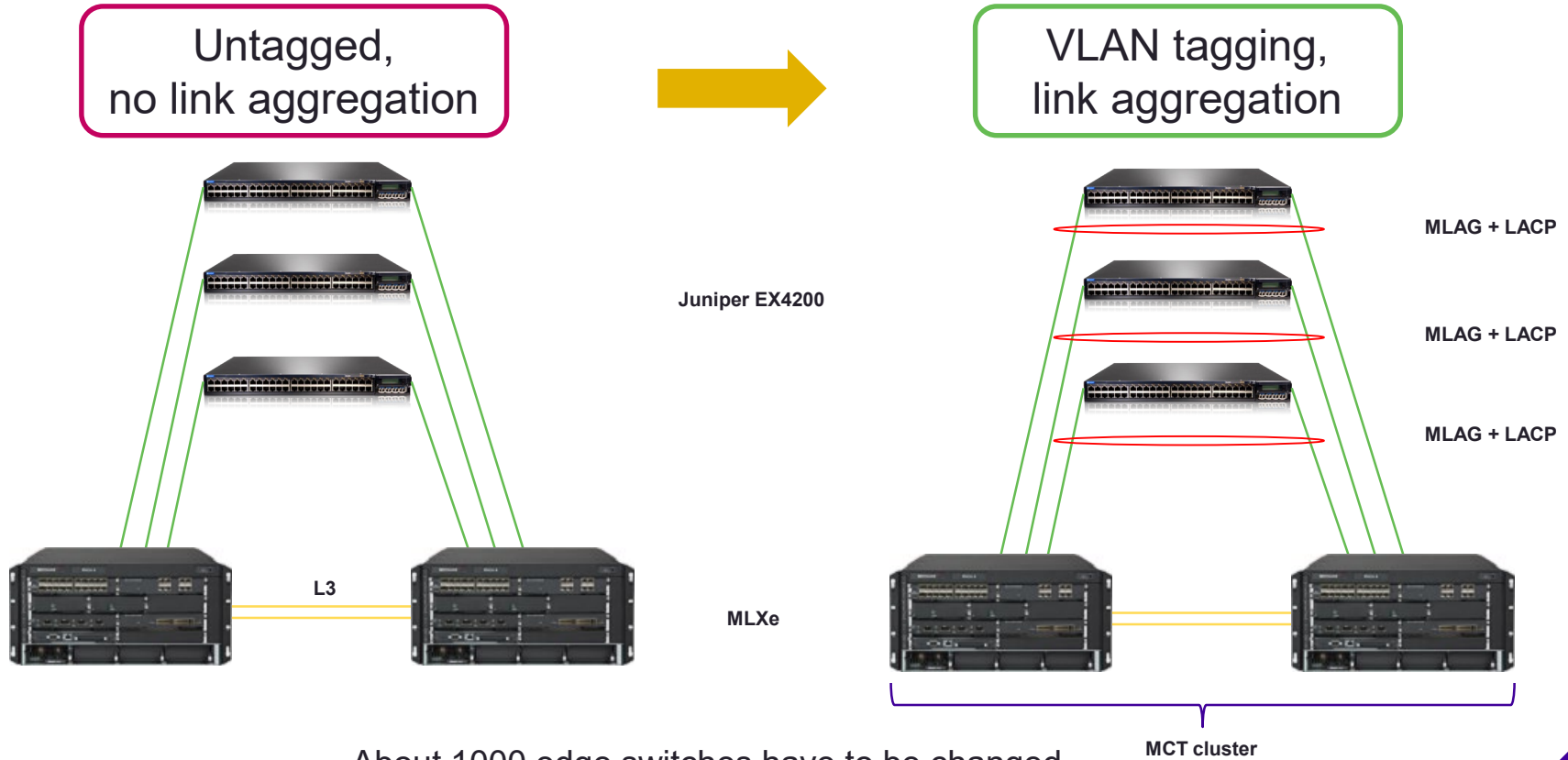
MAC FDB timeout
EAPoL timeout



EXOS Stack onboarding



Enable LACP on the edge uplinks

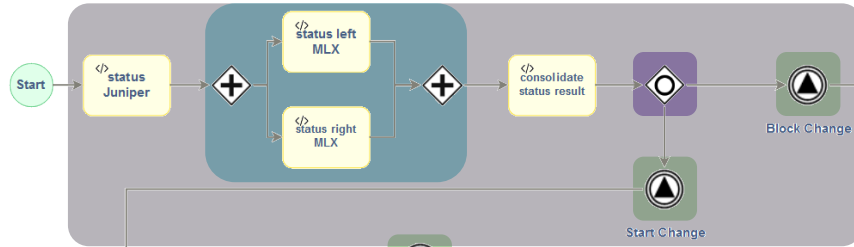


About 1000 edge switches have to be changed

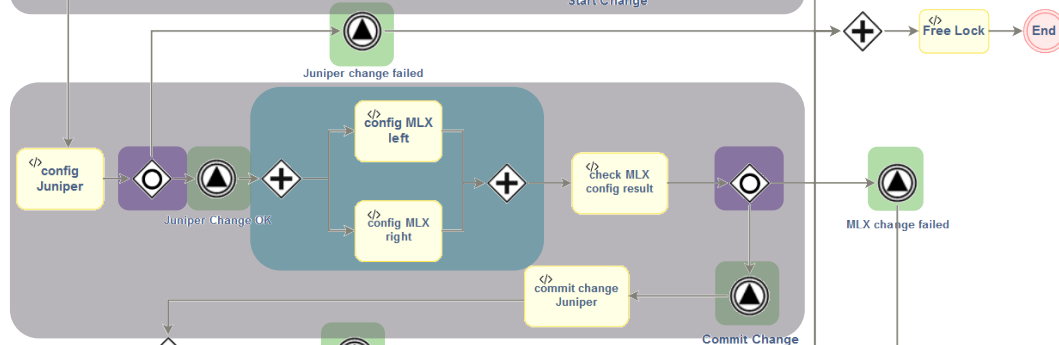


Enable LACP on the edge uplinks (Workflow)

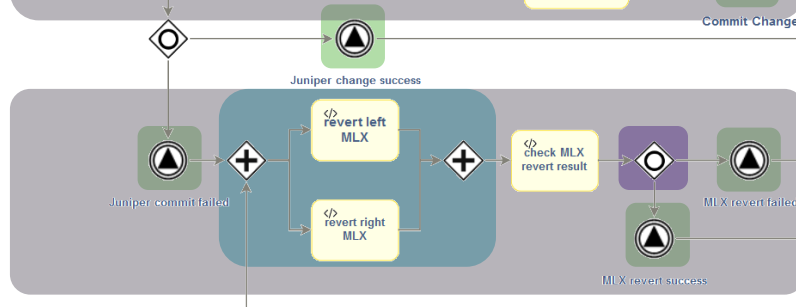
Discover



Change



Rollback



Parallel execution

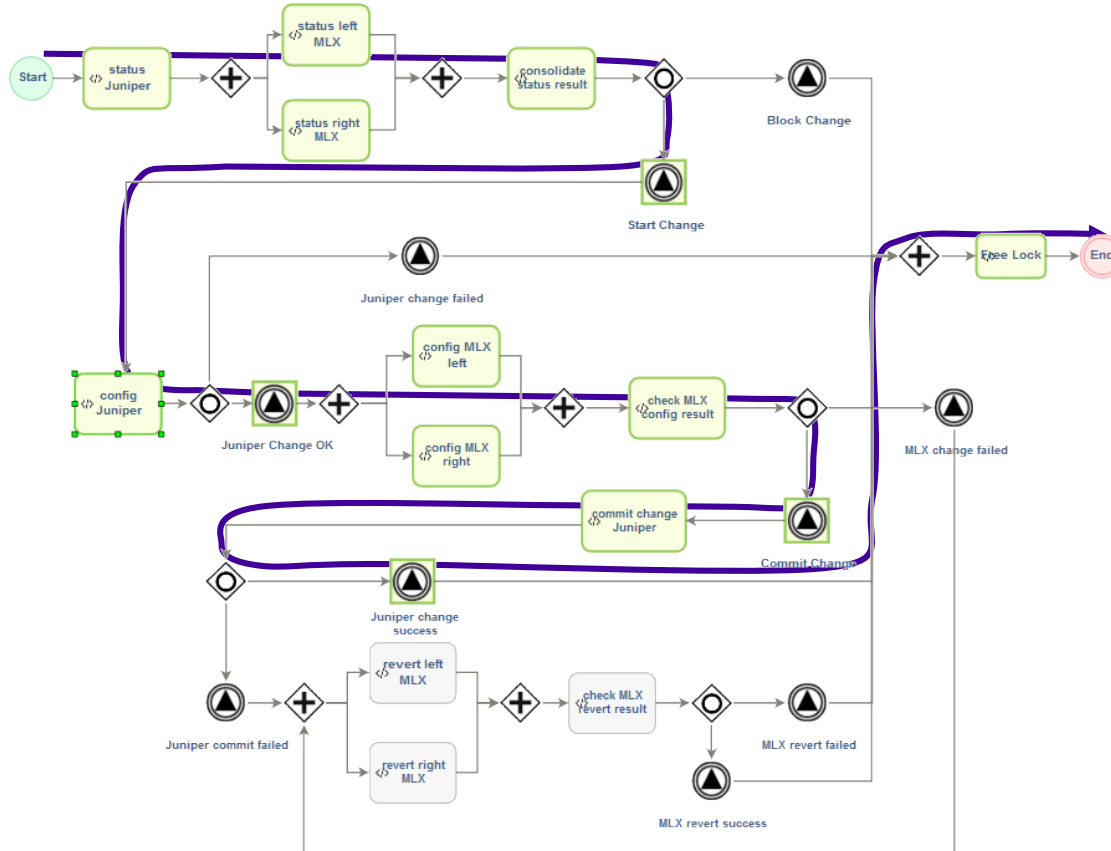
Gateway

Event notification



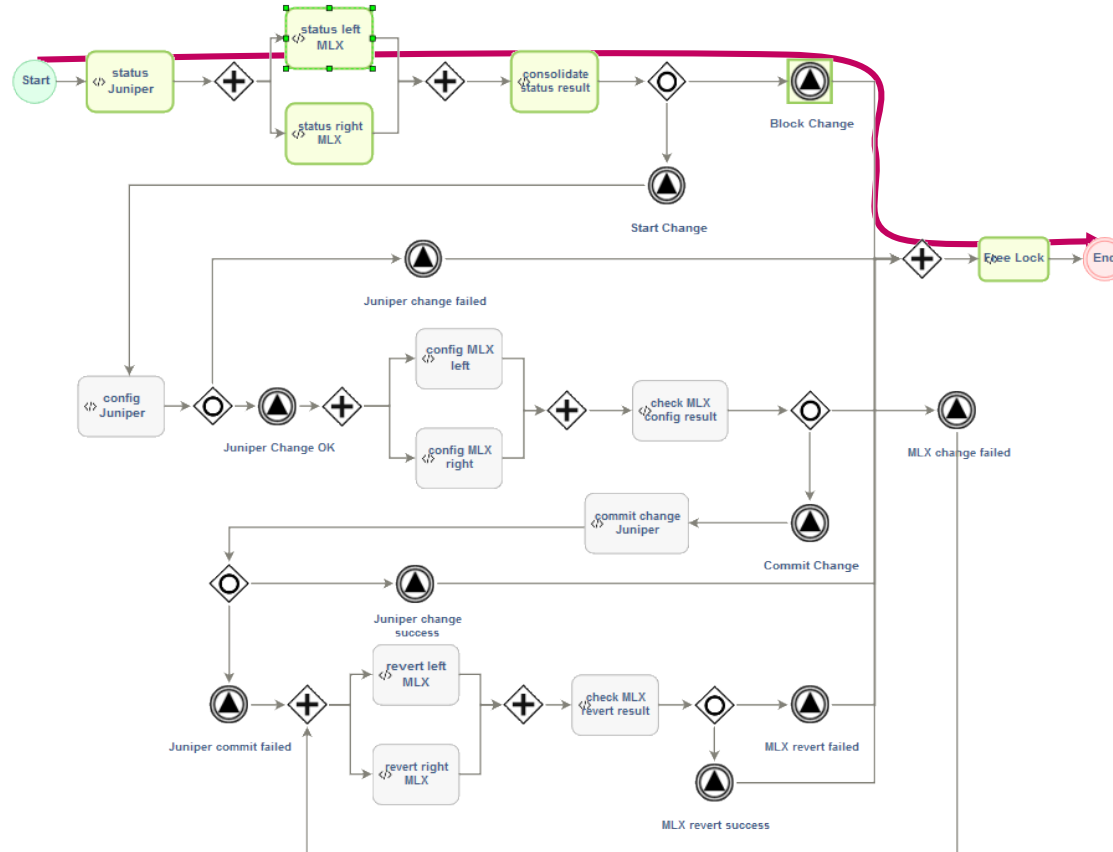
Successful change

Network interruption for end user, less than 30 sec.



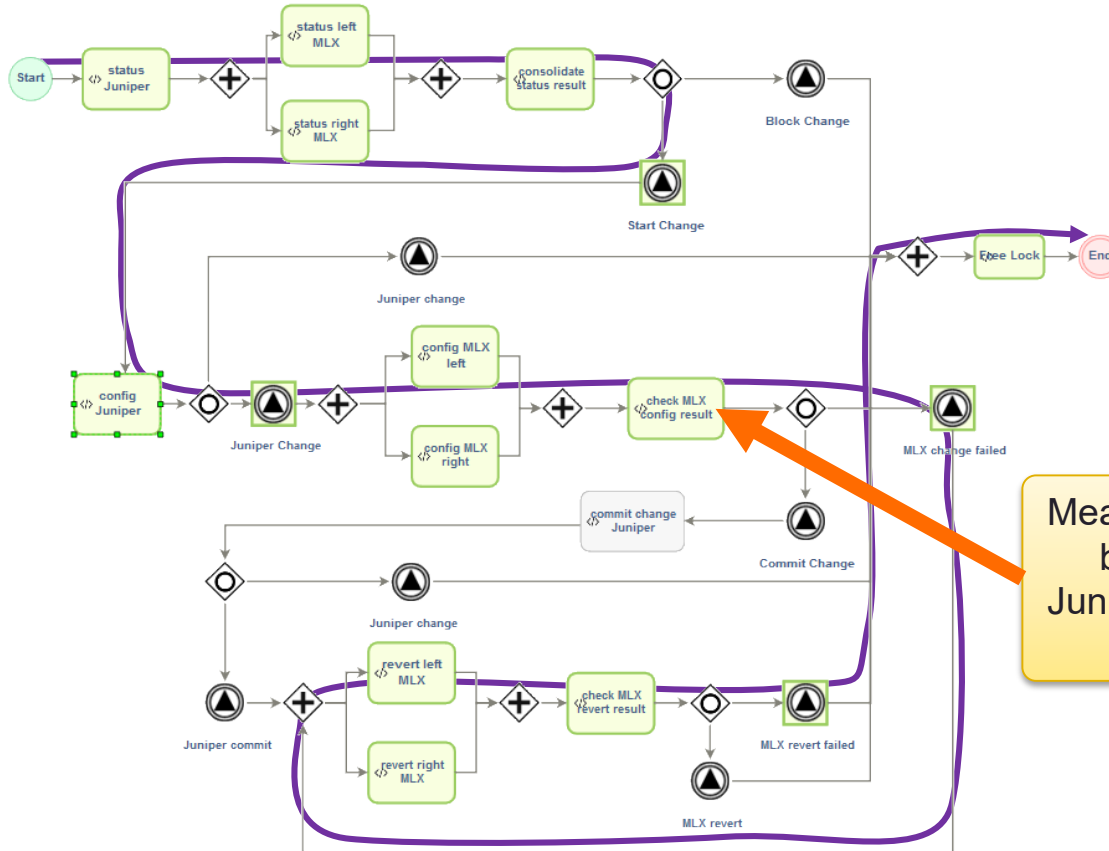
Change already applied

No network interruption for end user.



Change failed & rollback

Network interruption for end user, less than 60 sec.



Measure round trip delay between XMC and Juniper edge switch over 30 seconds



Next Presentation

Use the [following link](#) to advance to the next presentation in the Workflow education.





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