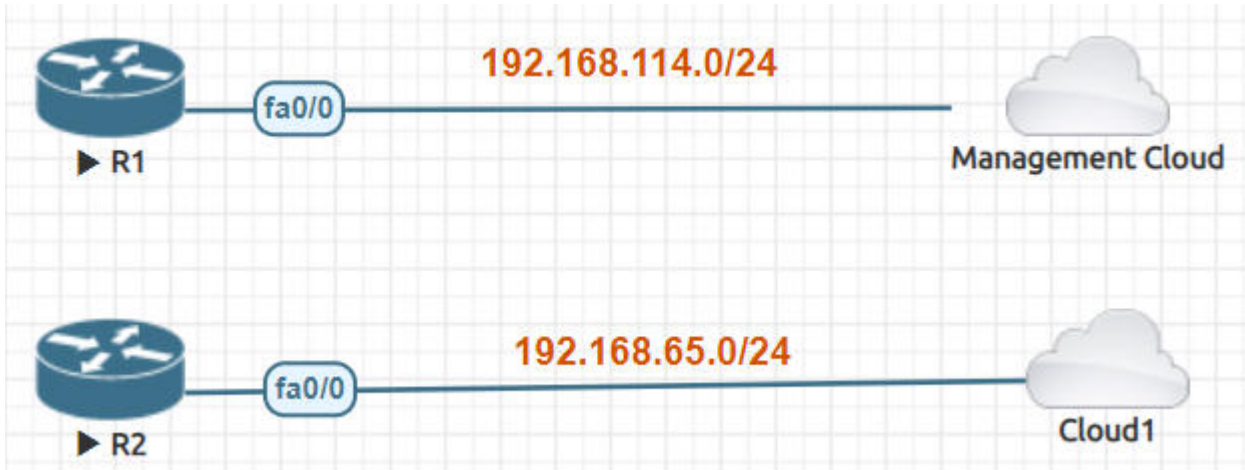


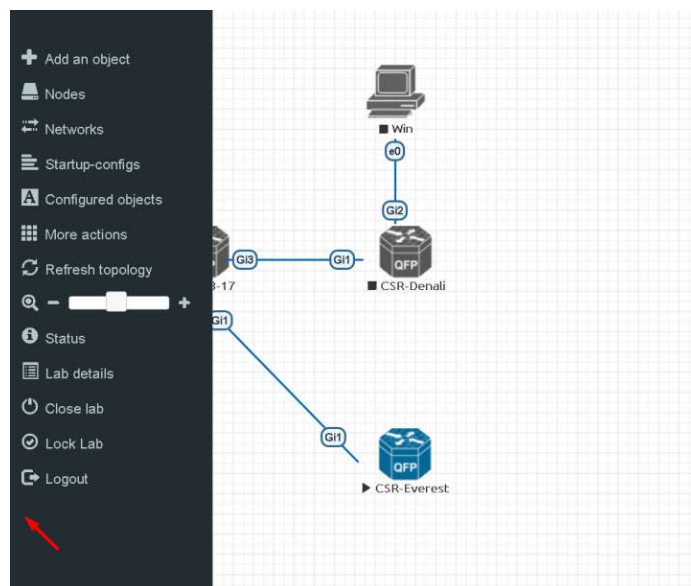
EVE WEB Topology page

Once you open a lab, the topology page for that lab will open.



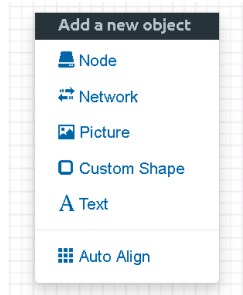
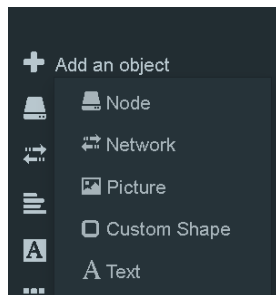
Side bar functions

Move your mouse pointer over to the left on top of the minimized sidebar to expand the interactive sidebar as shown in below screenshot



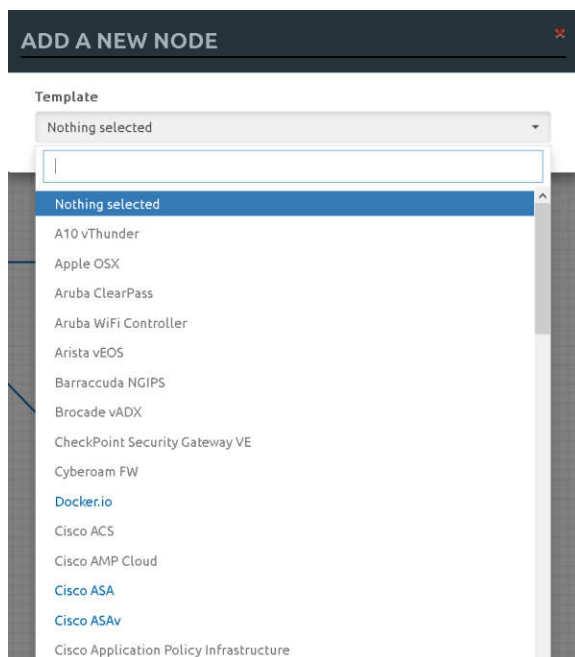
Add an object

The “Add an object” menu can be accessed in two different ways, from the sidebar and by right-clicking on the Topology Page



Node object

The Node object opens the “Add a new node” window. Only nodes that appear blue in the dropdown menu can be added. A grey image name signifies that you have not yet properly uploaded an image to the proper folder. A blue image name means that at least one image exists in the proper folder for this template.



Network object

The Network object opens the “Add a new network” window. This function is used to add any kind of network (Cloud, Bridge or NAT).

ADD A NEW NETWORK

Number of networks to add

Name/Prefix

Type

bridge

Left

Top

Save

Cancel

Picture object

The picture object opens the “Add Picture” window and allows you to upload custom topologies in jpg or png format. After uploading, you can edit these pictures and map selected areas to nodes from the topology to use your own designs as a lab topology from which you can directly connect to the nodes.

ADD PICTURE

Name

Picture

Browse...

anycon_lab.PNG

Add

Cancel

Custom shape object

The Custom shape object allows you to add shape elements onto the topology; these currently include squares and circles.

ADD CUSTOM SHAPE

Type

square

Name

Border-type

solid

Border-width

Border-color

Background-color

Save

Cancel

Text object

The Text object allows you to add text elements onto the topology.

ADD TEXT

Text

Font Size

12

Font Style

normal


Font Color

Background Color

Save

Cancel

Nodes

 Nodes The Nodes object in the sidebar opens the “Configured Nodes” window.

CONFIGURED NODES

| ID | NAME | TEMPLATE | BOOT IMAGE | CPU | CPU LIMIT | IDLE PC | NVRAM (KB) | RAM (MB) | ETH | SER | CONSOLE | ICON | STARTUP-CONFIG | ACTIONS |
|----|-----------|-----------|-------------------------|-----|-------------------------------------|---------|------------|----------|-----|-----|---------|---------------|----------------|---|
| 1 | ASA | asa | asa-915-16-k8-CL-L | 1 | <input checked="" type="checkbox"/> | n/a | n/a | 4096 | 6 | n/a | telnet | ASA.png | None | ▶ ⚙ ⬇ ⬇ ⬇ ⬆ 🗑 |
| 2 | vEOS2 | veos | | 1 | <input checked="" type="checkbox"/> | n/a | n/a | 2048 | 13 | n/a | telnet | Switch L3.png | None | ▶ ⚙ ⬇ ⬇ ⬇ ⬆ 🗑 |
| 3 | vEOS1 | veos | | 1 | <input checked="" type="checkbox"/> | n/a | n/a | 2048 | 13 | n/a | telnet | Switch L3.png | None | ▶ ⚙ ⬇ ⬇ ⬇ ⬆ 🗑 |
| 6 | Winserver | winserver | | 2 | <input checked="" type="checkbox"/> | n/a | n/a | 8192 | 1 | n/a | rdp | Server.png | None | ▶ ⚙ ⬇ ⬇ ⬇ ⬆ 🗑 |
| 7 | Corporate | win | win-7-x86 | 1 | <input checked="" type="checkbox"/> | n/a | n/a | 4096 | 1 | n/a | rdp | Desktop.png | None | ▶ ⚙ ⬇ ⬇ ⬇ ⬆ 🗑 |
| 8 | WinMGMT | win | win-7-x86 | 2 | <input checked="" type="checkbox"/> | n/a | n/a | 8192 | 1 | n/a | rdp | Desktop.png | None | ▶ ⚙ ⬇ ⬇ ⬇ ⬆ 🗑 |
| 9 | vIOS-SW1 | vios2 | vios2-adventerprisek9-a | 1 | <input checked="" type="checkbox"/> | n/a | n/a | 768 | 8 | n/a | telnet | Switch.png | Default | ▶ ⚙ ⬇ ⬇ ⬇ ⬆ 🗑 |
| 10 | vIOS-SW2 | vios2 | vios2-adventerprisek9-a | 1 | <input checked="" type="checkbox"/> | n/a | n/a | 768 | 8 | n/a | telnet | Switch.png | Default | ▶ ⚙ ⬇ ⬇ ⬇ ⬆ 🗑 |

In this window, you can make changes for nodes that are on the lab topology. More options can be found in the detailed node specific menu,

You can change the following values:

- Node Name
- Boot image
- Number of CPUs for the node
- Enable or disable CPU Limit (
- IDLE PC for Dynamips node
- NVRAM in Kbyte
- RAM in Mbyte

- Ethernet quantity. **NOTE:** The Node must be disconnected from any other nodes to make this change. You cannot change the interface quantity if the node is connected to any other node.
- Serial interface quantity, IOL nodes only. You cannot change Serial interface quantity if the node is connected to any other node.
- Type of Console
- Node Icon that appears on the Topology
- Startup configuration to boot from

Actions Buttons:

ACTIONS



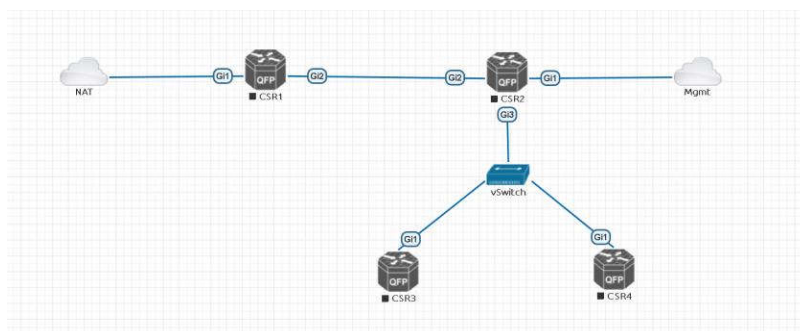
- Start node
- Stop node
- Wipe node
- Export the nodes config
- Networks
- Edit node
- Delete Node

Networks



The Networks object in the sidebar will open the “Configured Networks” window.

The “Configured Networks” window will only show networks that were specifically added to the topology; it will not show node interconnections. The example below is showing information for networks on the Topology. For Cloud networks and how to connect EVE labs to a network external to EVE,



CONFIGURED NETWORKS

| ID | NAME | TYPE | ATTACHED NODES | ACTIONS |
|----|---------|--------|----------------|---|
| 1 | NAT | nat0 | 1 |   |
| 2 | Mgmt | poet0 | 1 |   |
| 3 | vswitch | bridge | 3 |   |

ACTIONS



- Edit Network
- Delete Network

Startup-configs



The Startup-configs object in the sidebar opens the “Startup-configs” window.

This window will show you startup-config for each node (for PRO it shows the startup configs of the current config set) and if the node is set to boot from it (ON) or not (OFF).

The “Startup-configs” window in the EVE Professional version contains additional features,

STARTUP-CONFIGS

Config Set: Default

ASA

vEOS2

vEOS1

vIOS-SW1

vIOS-SW2

Serial Number: 123456789AB

Hardware: ASAS520, 3584 MB RAM, CPU Pentium II 1000 MHz

Written by enable_15 at 17:47:17.629 UTC Wed Jul 26 2017

ASA Version 9.1(5)16

hostname ASA

enable password 8Ry2Yjyt7RR0U24 encrypted

xlate per-session deny tcp any4 any4

xlate per-session deny tcp any4 any6

xlate per-session deny tcp any6 any4

xlate per-session deny tcp any6 any6

xlate per-session deny udp any4 any4 eq domain

xlate per-session deny udp any4 any6 eq domain

xlate per-session deny udp any6 any4 eq domain

xlate per-session deny udp any6 any6 eq domain

names

interface Ethernet0

nameif outside

security-level 0

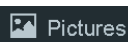
ip address dhcp setroute

interface Ethernet1

channel-group 1 mode active

Save Cancel

Pictures



NOTE: The Pictures object will only appear in the sidebar after you have uploaded a custom topology picture to the lab EVE lab (). The Pictures object in the sidebar opens the “Picture Management”

window.

For details on the Picture / custom topology feature,

Configured Objects



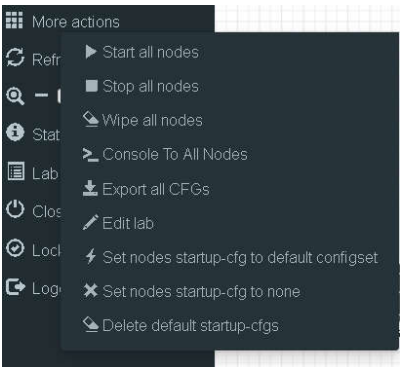
The “Configured Objects” window will display a list of all objects that are added onto the topology. For details on different objects,

NOTE: You will not see any objects in this window if none have been added to the lab yet.

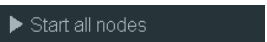
| CONFIGURED OBJECTS | | | | |
|--------------------|---------|--------|--------------|---------|
| ID | NAME | TYPE | TEXT | ACTIONS |
| 1 | test 1 | test | Topology vbs | |
| 2 | square2 | square | | |

More actions

The More actions menu in the sidebar has a submenu with the following functions.



Start all nodes



The “Start all nodes” action will start all nodes on your topology, taking the (configurable) startup delay of each node into consideration.

Stop all nodes



Stopping all nodes will power off all nodes on your topology.

NOTE: It is recommended to save your (running) configurations on the nodes in your lab before you stop the lab if you want to continue where you left off the next time. Stopping the nodes will leave the images in a temporary folder and will take up space on your drive until they have been wiped.

Wipe all nodes



Wipe all nodes

The “Wipe all nodes” action will wipe the NVRAM or currently saved image of all your nodes in the current lab.

Example: You have saved the nodes configuration by saving the running configuration to the startup configuration. The Wipe command will delete the saved NVRAM startup configuration and on the next boot it will boot from factory defaults.

The same applies to images without configurations, e.g. a linux node. If you make modifications to the system and afterwards wipe this node, the next time it will boot from the original base image again as the modified image was deleted.

The “Wipe node” action is commonly used with initial startup configuration modifications. The Wipe node action does not delete configured startup configurations or sets.

Console to All Nodes



Console To All Nodes

“Console to all nodes” will open a console to all of your running nodes in the current lab. This includes all different kinds of configured console types for lab nodes like VNC, Telnet and RDP.

Export all CFGs



Export all CFGs

The “Export all configurations” action will export current configs to the EVE startup-configs.

Export configurations are supported for:

| | |
|--------------------------|-----------------|
| Cisco Dynamips all nodes | Juniper VRR |
| Cisco IOL (IOS on Linux) | Juniper VMX |
| Cisco ASA | Juniper vMX-NG |
| Cisco ASAv | Juniper vQFX |
| Cisco CSR1000v | Juniper vSRX |
| Cisco Nexus 9K | Juniper vSRX-NG |
| Cisco Nexus Titanium | Mikrotik |
| Cisco vIOS L3 | PFsense FW |
| Cisco vIOS L2 | Timos Alcatel |
| Cisco XRv | vEOS Arista |
| Cisco XRv9K | |

Edit lab



Edit lab

Opens the Edit lab window.

EDIT LAB

Path*

/JUN Labs/Arista MLAG Integration.url

Name*

Arista MLAG Integration

Use only [a-zA-Z0-9_ .] chars

Version*

1

Must be integer (0-99) chars

Author

UD

Config Script Timeout

100

Seconds

Lab Countdown Timer

0

Seconds

Description

Arista mLAG and ASA Lab

Tasks

LAB Scenario:

1. Configure ASA ports in etherchannels (mode active) and vlan interfaces per design, name it as DMZ and Corporate respectively
2. Configure ASA with DMZ IP, must receive IP from home LAN and name this port as outside
3. Configure ASA management on port s0/0, and use Mgmt host per design, ASA must be reachable from Mgmt PC over ASDM
4. Configure Arista vEOS in mlag and assign ports in etherchannels per design
5. Configure vEOS etherchannel ports facing to ASA in etherchannel mode active
6. Configure vEOS etherchannels facing to vEOS-Sw in etherchannel mode an

Set node's startup-cfg to default configset

Sets nodes to the default startup-config.

Set node's startup-cfg to none

- ✖ Set nodes startup-cfg to none

✖ Set nodes startup-cfg to none Setting all lab nodes to boot from factory default. Used commonly with the wipe nodes function. The example below shows the steps to set a lab to boot from factory default.

Step 1: Wipe all nodes

Step 2: Set all nodes to startup-cfg none

Delete default startup-cfgs

 Delete default startup-cfgs

Refresh Topology

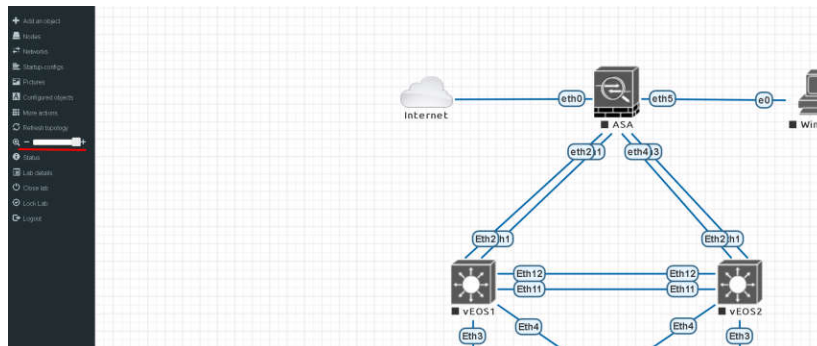
 Refresh topology

Sometimes it is necessary to refresh the topology if many objects are added on the topology.

Lab page zoom/unzoom



This action is used to zoom or unzoom a large topology in EVE.

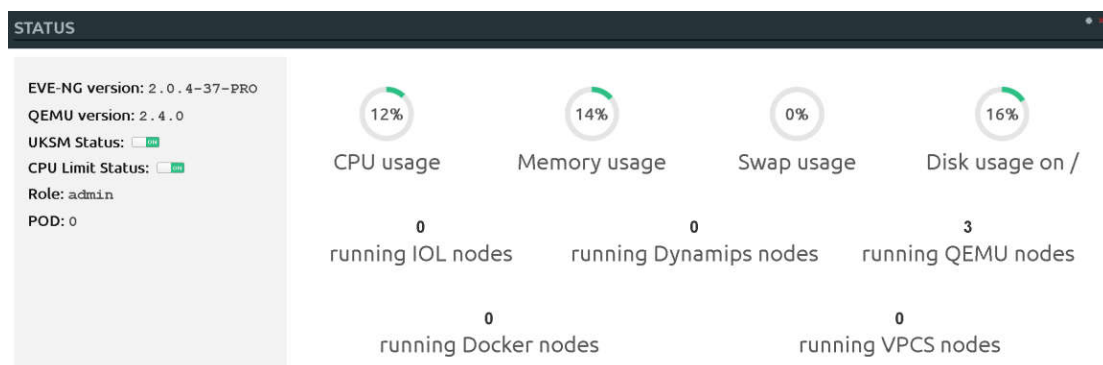


Status

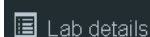


Opens the EVE Status window.

Especially useful while working with labs to monitor your EVE's resource utilization. It shows EVE's CPU, RAM and disk utilization in real time. You can also see the number of running nodes per node type. For details on UKSM and CPU Limit,



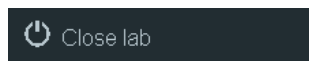
Lab details



Lab details display information about a lab, its UUID, description and lab tasks. To edit the lab description and lab tasks,



Close lab

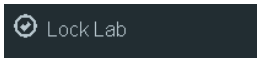



the Running folder.

Closes the lab topology. The lab can be closed while the nodes in the lab are still running as well. It will appear as running lab under

Lock Lab

“Lock Lab” disables some of the functions on the lab topology. If the lab is locked, you cannot move any node or object nor edit any node settings. Basically, the whole lab will be in read-only mode except for the lab settings itself, which you can still edit as Administrator or Editor from the main menu. The Lock Lab function is also used in conjunction with the countdown timer function,

| | |
|---|--|
|  Lab is unlocked and all operations are working |  Lab is locked, limited operations permitted. |
|---|--|

To unlock a Lab, simply press on the red “Unlock Lab” button with an Administrator or Editor account.

Logout

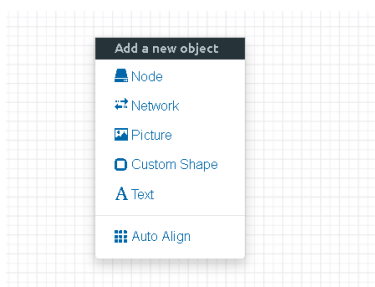


Log out from the EVE WEB GUI session.

EVE Lab topology menus

Right-clicking within the EVE topology can open new menus with various functions and options for managing nodes.

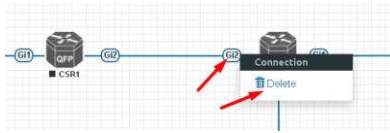
Lab topology menu



Right-clicking on the (free/unused) canvas of the EVE topology opens a new menu. (Add-) Node, Network, Picture, Custom Shape and Text are the same functions

Auto Align. This function will help align objects on the topology. The lab creator does not need to worry about small displacements of objects. AutoAlign will align all objects to a virtual grid with a single click and can make neatly arranged labs look even neater.

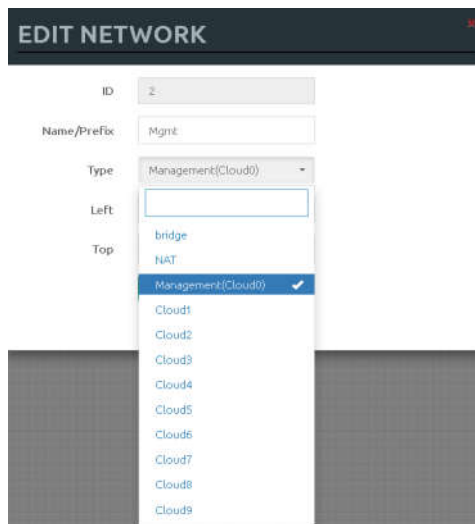
Connection menu



Right-clicking on the connection between nodes allows you to delete this connection.

Cloud or Bridge network menu

Right-clicking on a Cloud or Bridge network allows you to edit or delete it.

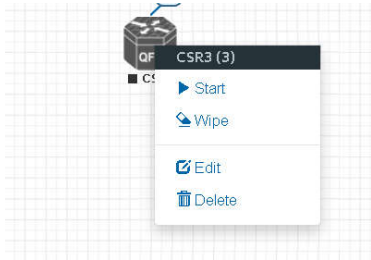


If you have chosen Edit, the Network edit window will open a window where you can change the placement, network type or name/prefix.

For details on how to operate EVE Cloud networks and external connections,

Stopped node menu

Right-clicking on a stopped node also opens a menu:



Start node: This will start the selected node in this lab

Wipe node: Wiping a node will erase the NVRAM (running config) or the temporary image snapshot depending on the type of node. This option is used to clean up a node in order to boot it from factory defaults or a custom set of configurations.

Edit node: Opens the Edit node window (picture on the right).

Delete node. Deletes the node from the lab. It is recommended to disconnect (delete connections to it) the node before you delete it.

EDIT NODE

Template

Cisco CSR 1000V

ID

3

Image

csl1000v-universalk-9.03.17.04.S.156-1.54

Name/prefix

CSR3

Icon

CSRv1000.png

UUID

67fea887-b30d-4ad0-b314-828808b38533

CPU Limit

☐

CPU

1

RAM (MB)

3072

Ethernets

4

QEMU Version

tpl(2.12.0)

QEMU Arch

tpl(x86_64)

QEMU Nic

tpl(e1000)

QEMU custom options

-machine type=pc-1.0,accel=kvm -serial mon:stdio -nographic -nodefconfig -nodef

Startup configuration

None

Delay (s)

0

Console

telnet

Left

472

Top

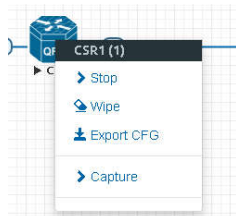
365

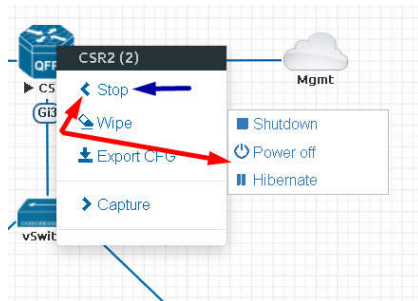
Save

Cancel

Running node menu

Right-clicking on a running node also opens a menu:





Stop. Blue arrow: clicking on Stop will stop the node depending on the method the node supports (power off / shutdown are auto-selected based on the template)

Stop menu. Red arrows: There are more options to stop a node, clicking on the chevron on the left side of “Stop” opens a submenu.

- **Shutdown:** Perform an orderly shutdown of the node if that node supports it (shutdown signal is sent down to the node)
- **Power off:** Kills the running nodes process within EVE (hard poweroff).
- **Hibernate.** Save Node state (Disk and Memory are saved in an internal snapshot). Used for fast boot of a node. The hibernation process can take some time. Once the hibernation process is completed, the node will turn grey (shutdown state).

Wipe node: Wiping a node will erase the NVRAM (running config) or the temporary image snapshot depending on the type of node. This option is used to clean up a node in order to boot it from factory defaults or a custom set of configurations.

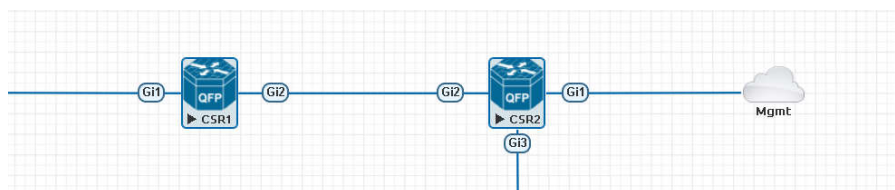
Export CFG: This function is used to export the saved running configuration to the EVE startup configuration sets.



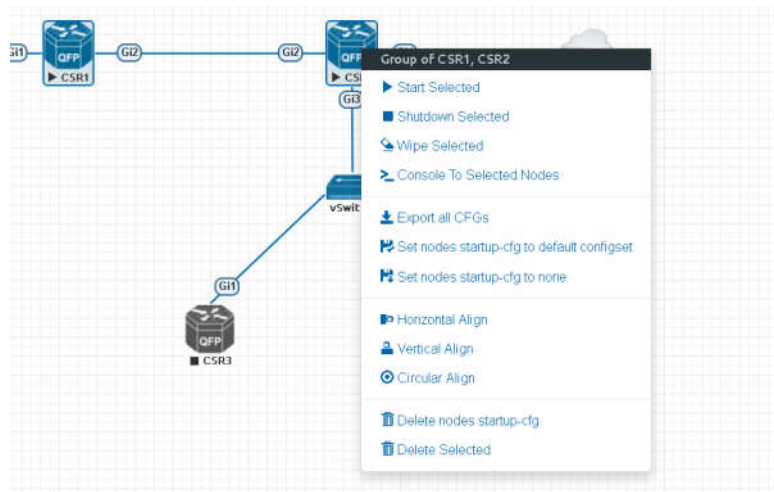
Capture. Integrated live Wireshark capture. Select the interface which you wish to capture.

Selected nodes menu and features

It is possible to select many objects or nodes at once in EVE. Using your mouse, you can select an area which will cover your nodes and/or you can click on nodes while holding the CTRL key on your keyboard.



A right-click on any of the selected nodes opens a group menu:



Start Selected: This will start the selected nodes in this lab.

Stop Selected: This will stop the selected nodes in this lab

Wipe Selected: The Wipe Selected nodes action will wipe the NVRAM or currently saved image of the selected nodes in the current lab.

Example: You have saved the nodes configuration by saving the running configuration to the startup configuration. The Wipe command will delete the saved NVRAM startup configuration and on the next boot it will boot from factory defaults.

The same applies to images without configurations, e.g. a linux node. If you make modifications to the system and afterwards wipe this node, the next time it will boot from the original base image again as the modified image was deleted.

The Wipe node action is commonly used with initial startup configuration modifications. The Wipe node action does not delete configured startup configurations or sets.

Console To Selected Nodes: Console To Selected Nodes will open a console to all selected running nodes in the current lab. This includes all different kinds of configured console types for lab nodes like VNC, Telnet and RDP

Export all CFGs: The Export all configurations action will export current configs of selected nodes to the EVE startup-configs.

For a full explanation of exporting configurations,

Set nodes startup-cfg to default configset: Sets nodes to Default startup config, used commonly with the wipe nodes function. NOTE: If you have nothing saved in the default config set for any node, that node will boot from factory default instead. This is commonly used with the wipe nodes function so the node will boot from the configured startup-config on next boot and not from the startup-config in its NVRAM in case the node was started before already.

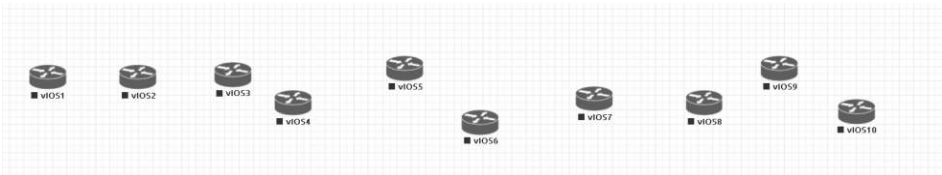
Set nodes startup-cfg to none. Setting selected lab nodes to boot from factory default. Used commonly with the wipe nodes function. The example below shows the steps to set selected nodes to boot from factory default.

- Step 1: Wipe selected nodes
- Step 2: Set nodes startup-cfg to none

Horizontal Align. Aligns the selected nodes in one horizontal line.

- Step 1: Select the nodes you wish to align.
- Step 2: Right click on one of the selected nodes and choose Horizontal align, this will align all nodes to the selected node.

Picture before:



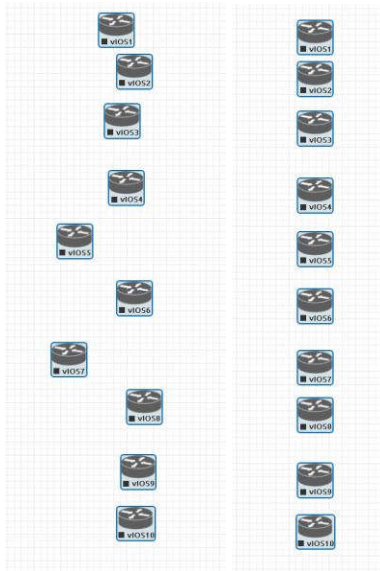
Picture after:



Vertical Align: Aligns the nodes in one vertical line.

- Step 1: Select the nodes you wish to align.
- Step 2: Right click on one of the selected nodes and choose Vertical align, this will align all nodes to the selected node.

Picture before Picture after



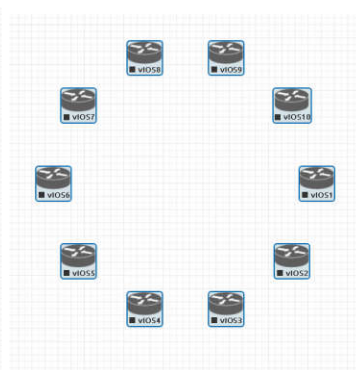
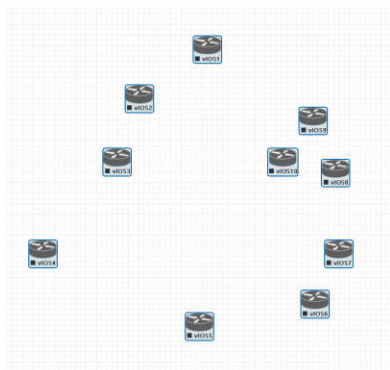
Circular Align: Aligns the nodes in a circle.

Step 1: Select the nodes you wish to align.


Step 2: Right click on one of the selected nodes and choose Circular Align, this will align all nodes in a circle, the midpoint of the circle will be at the coordinates the selected node was at before.

Picture Before

Picture After



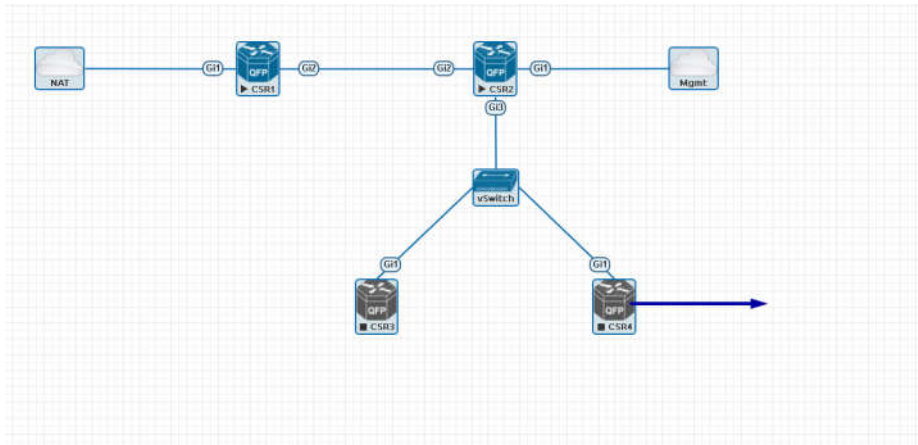
Delete nodes startup-config.

 **WARNING**, this action will delete the configurations of the selected nodes that are saved to your Default config set. Please make sure that is what you want to do before you execute this.

Delete selected: This will delete the selected nodes from your current lab.

Selected nodes can be moved as a group across the topology.

Example: You can select nodes and objects to better position them on the Topology.



EVE Lab node states and symbols

Stopped (non-running) nodes



Grey color and a square symbol below a node means that the node is stopped and not running. Once you will start it, the node will change to one of the running states below.



A grey node with an exclamation mark inside a triangle below the node means that there was a problem during the boot process, this could be a corrupted boot image, insufficient resources or problems with the initial configuration. A node in this state cannot be started again.

Running nodes



The blue color and black Play triangle symbol means that the node is started and running, the node is in a working/functional state.



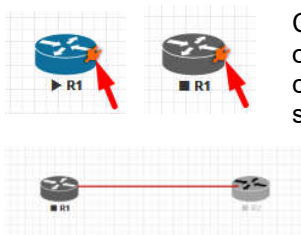
A running node with a clock symbol below the node means that the node is waiting to finish loading from the set exported/startup configuration. Once the configuration has been successfully applied, the node symbol will change to a Play triangle symbol. If the node has finished booting but the clock symbol does not change to the Play triangle symbol, the problem could be in the uploaded startup configuration. For how to use exported configurations and boot nodes from them,



A running node with a turning red gear symbol means that the node is either in the process of hibernating the node or it has sent the shutdown signal to the node and is waiting for it to turn off. Once this process has successfully finished, the symbol will turn into a grey node with a black square symbol below it (stopped state).

Example nodes where Stop/Shutdown is supported: Microsoft Windows and most Linux nodes as well as a lot of appliances based on linux.

Node connector symbol



Connector symbol: If you move your mouse pointer on top of a running or stopped node, an orange connector symbol appears. It is used to connect nodes on the topology in a drag and drop style. Drag the symbol from one node and release the mouse pointer on the second node. A new window will appear where you can select the interfaces the link should connect to.

Other

Notification area



The Notification area in the top right is displaying informational or error messages.