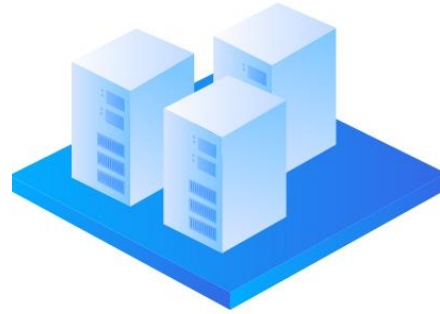


EVE-NG Cluster



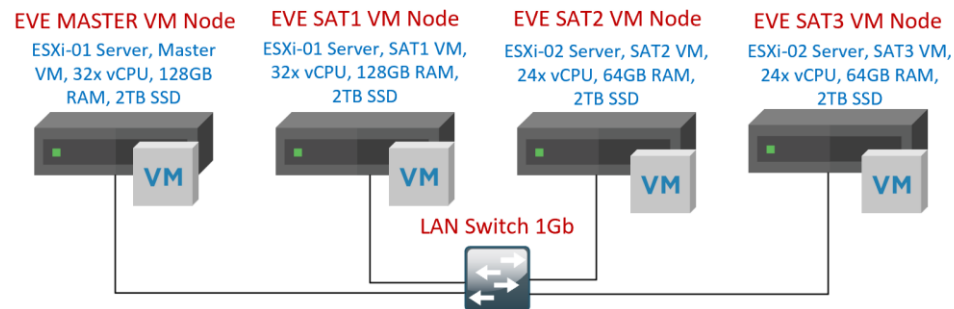
What is EVE Cluster?

- Scalability
- Multi servers system as one EVE
- Simple to complex labs across multi servers
- Training center users classrooms
- Various cluster designs and options

EVE-NG Cluster is for everyone working in the Information Technology Sector. It is for very large enterprise companies, training facilities, service providers, consultants, people who want to train themselves; it is for everyone, it is for YOU!

EVE-NG Cluster design VM Ware ESXi Virtual Machines

EVE Virtual ESXi Cluster 112 vCPU, 384GB RAM, 8TB SSD. Cluster members can be different VM configuration and located on same or different ESXi servers



EVE Cluster Lab across multi servers

EVE-NG Cluster System for single lab across multi EVE servers. It is solution for huge and scale proof of concept labs with many and heavy devices on the lab.

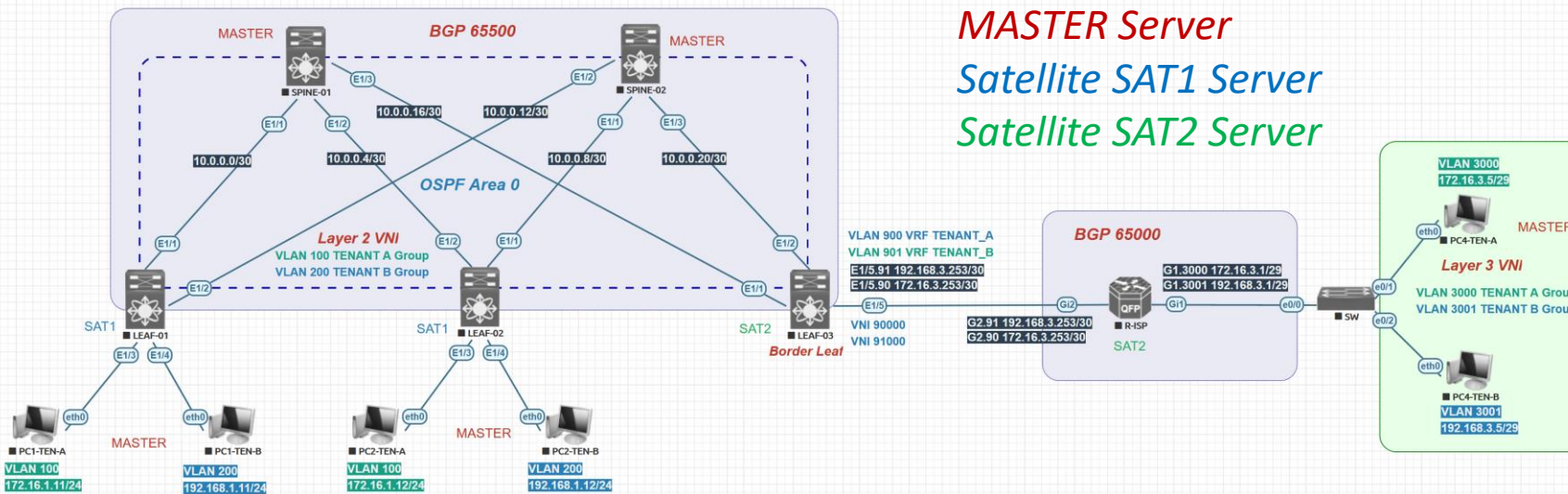


Cisco Nexus 9000v VXLAN BGP EVPN Concept Lab
Created by Uldis, EVE Pro, 2020

Used nodes in the POC:

- R-ISP csr1000vng-universalk9.17.03.02.Amsterdam
- Nexus 9000v, nxosv9k-9300v-9.3.6
- i86bi_linux_12-adventerprisek9-ms.SSA.high_iron_20190423.bin
- PC Hosts: Docker Server-GUI

MASTER Server
Satellite SAT1 Server
Satellite SAT2 Server





EVE Cluster for Users

EVE-NG Cluster System for training facilities or enterprises allows assign Users per Cluster server.

This Feature allows you manage your EVE users from single point of management and assign them to dedicated cluster server

Users can be assigned and forced to use only one of cluster servers. It allows you to balance your EVE cluster resources

User will use only dedicated and assigned EVE Cluster server

Edit User

User Name*
editor

External Auth (Radius)

Password
.....


Password Confirmation
.....

Email
admin@eve-ng.net
Please enter an valid email

Name
Editor uldis
Use only [A-Za-z0-9_]chars

Role Lab Editor

Console any

Satellite sat1 

Account master

From sat1 0 to -1 0

POD* sat2

2

Quotas
CPU 16 **RAM (GB)** 32

* - Required Fields

EVE Cluster pre-requisites

Limitation of Cluster members: 8

The recommended cluster setup is 4-6 Members per cluster.

Hardware requirements: free

You can join in cluster any hw or virtual configuration.

CPU must be Intel-VT-X option ready. AMD Ryzen new series and Epyc CPUs are supported.

It is recommended to use SSD or SHDD hard drives for cluster nodes.

NAS and DAS storages are NOT recommended due huge performance loss



LAN Connectivity between Cluster members: Recommended at least 1Gbps

WAN Connectivity between Cluster members: fast internet is required (50Mbps or better) WAN Satellite (Google Cloud)



EVE Cluster Designs

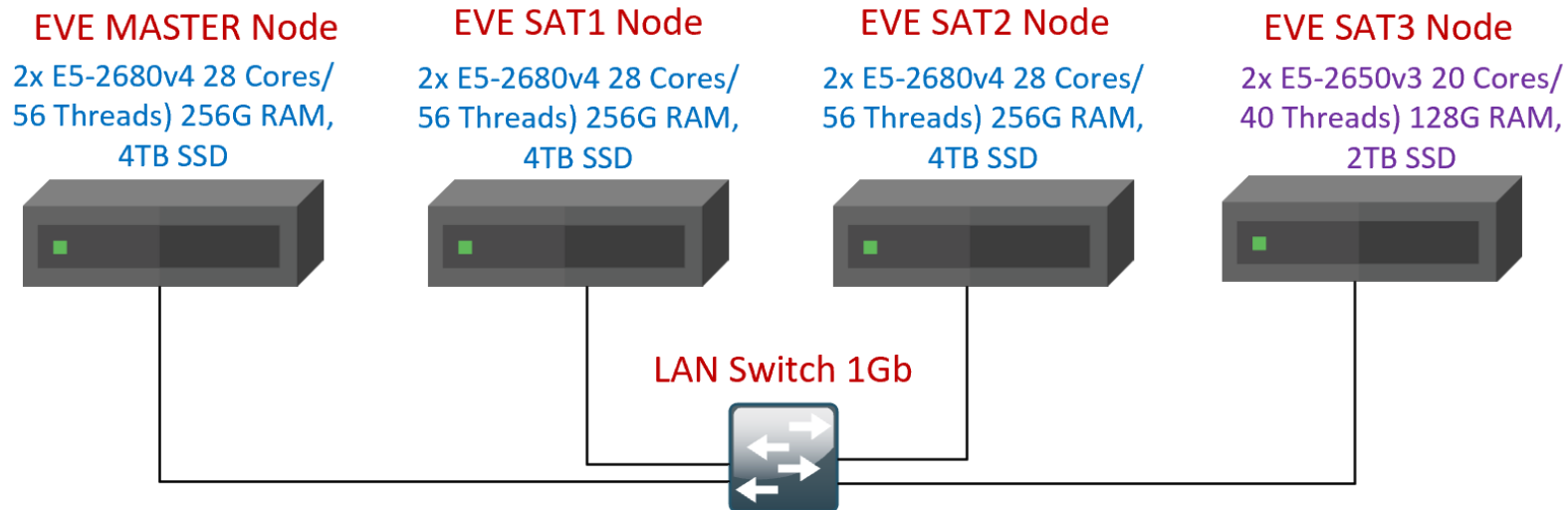
Option 1 Bare Metal Servers

It is NOT required if all cluster members should be in same HW configuration

The good interconnection between cluster nodes is required, 1 Gbps LAN or better

Example for bare metal servers cluster:

EVE Cluster 208 vCPU, 896GB RAM, 16TB SSD. Cluster members can be different HW configuration.
The 1GB LAN connection or better is required



EVE Cluster Designs

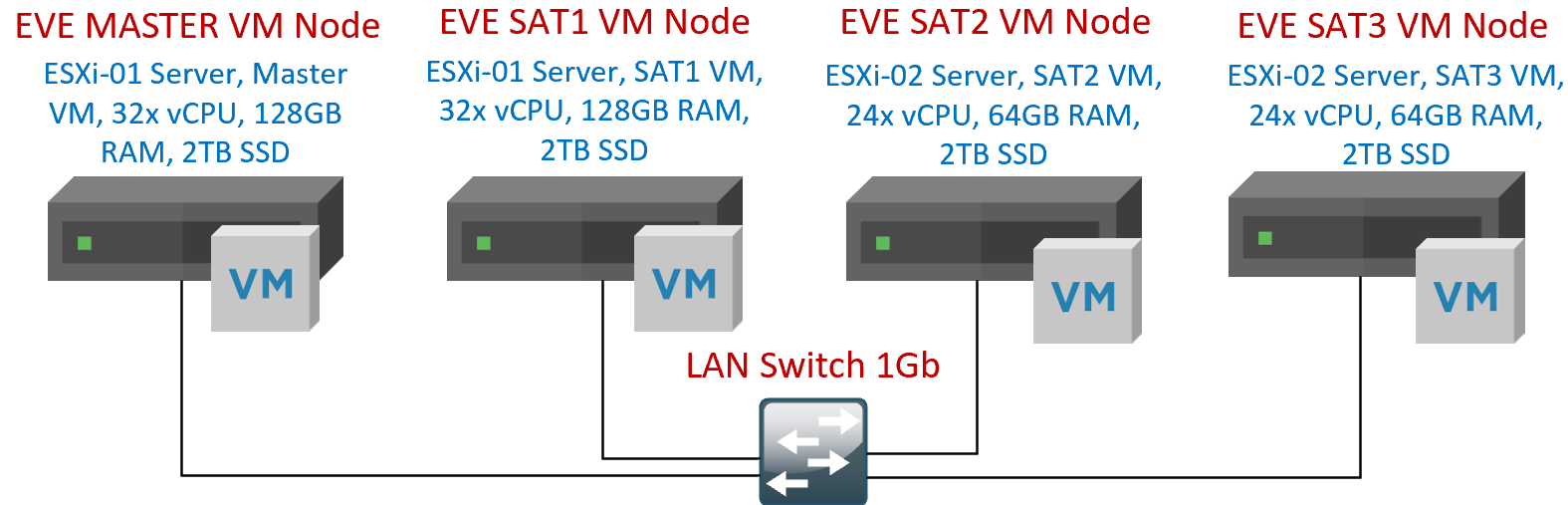
Option 2 VM Ware ESXi virtual farm EVE cluster

It is NOT required if all cluster members should be in same VM configuration

The good interconnection between cluster nodes is required, 1 Gbps LAN or better

Example for Virtual ESXi VMs machines Cluster

EVE Virtual ESXi Cluster 112 vCPU, 384GB RAM, 8TB SSD. Cluster members can be different VM configuration and located on same or different ESXi servers



EVE Cluster Designs

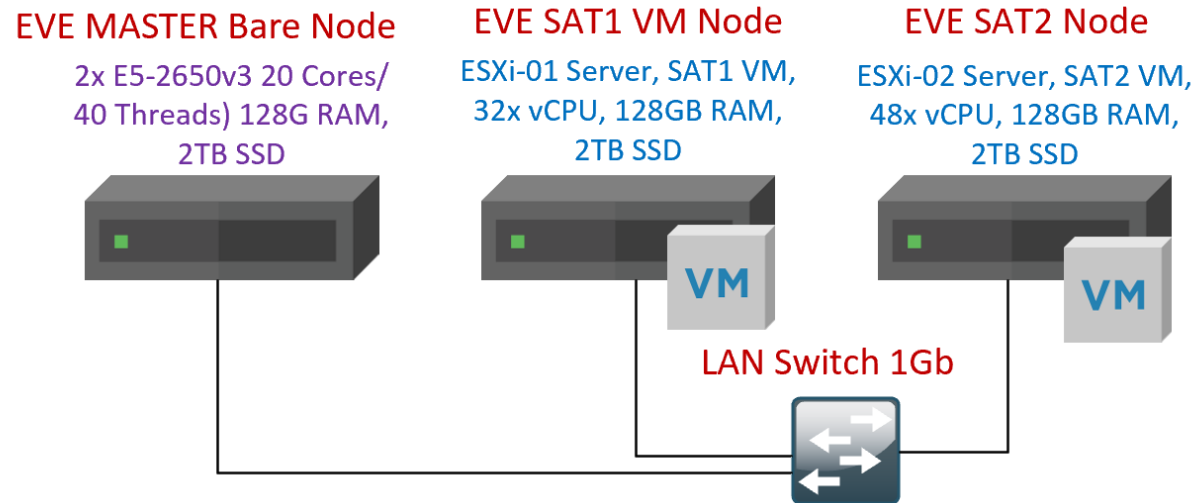
Option 3 Hybrid HW bare metal and VM Ware ESXi virtual machines Cluster

It is NOT required if all cluster members should be in same HW or VM configuration

The good interconnection between cluster nodes is required, 1 Gbps LAN or better

Example for Hybrid Cluster: Bare metal HW and ESXi Virtual machines

EVE Hybrid Bare HW and ESXi Cluster 120 vCPU, 384GB RAM, 6TB SSD. Cluster members can be different VM configuration and located on same or different ESXi servers



EVE Cluster Designs

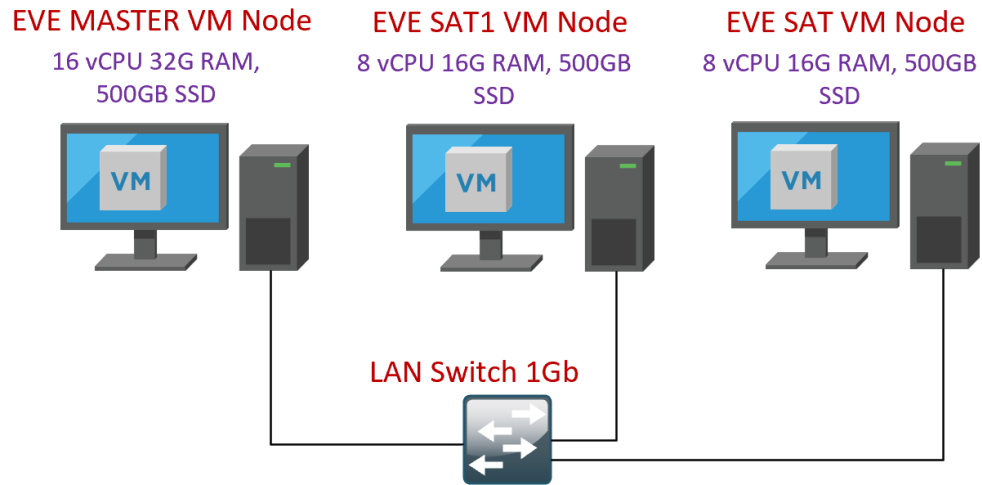
Option 4 VM Ware Workstation Office Desktop PC Light Cluster

It is not required if all cluster members should be in same VM configuration

The good interconnection between cluster nodes is required, 1 Gbps LAN or better

Example for Desktop PC WM Ware workstation Virtual machines cluster

Light EVE Cluster with Desktop PCs and VM ware Workstation VM. The 1GB LAN is required between Cluster members. vCPU 32, RAM 64, 1500GB SSD



EVE Cluster Designs

Option 5 VM Ware Workstation Desktop PC and Laptop home Cluster

It is not required if all cluster members should be in same VM configuration

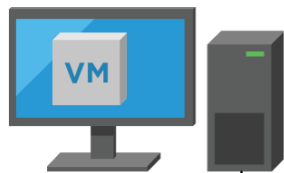
The good interconnection between cluster nodes is required, 100Mbps LAN/WLAN or better

Example for Home desktop Pc and Laptop WM Ware workstation Virtual machines cluster

Light EVE Cluster with Desktop PCs and Laptop Wifi.

EVE MASTER VM Node

16 vCPU 32G RAM,
500GB SSD



Home Desktop

EVE SAT1 VM Node

8 vCPU 16G RAM, 500GB
SSD



Laptop



EVE Cluster Designs

Option 6 WAN Satellite node Cluster

It is not required if all cluster members should be in same configuration

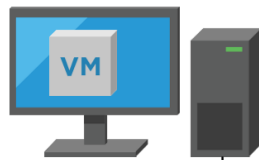
The good Internet between cluster nodes is required, 50Mbps Internet or better

Example for Home desktop PC VM Ware workstation Virtual machine and Google cloud Satellite Cluster

High speed internet is required

EVE MASTER VM Node

16 vCPU 32G RAM,
500GB SSD



Home Desktop



LAN 1Gb



Home Wifi router

EVE SAT1 VM Node on GCP

16 vCPU 32G RAM,
500GB SSD



Internet

EVE-NG Cluster Licensing

EVE Cluster does NOT require additional licenses.

Just upgrade your current EVE Pro installations to the EVE Pro version 4.0.

Your EVE pro license will be ready for cluster

Enjoy the power of cluster

The Cluster Master node must hold valid license only. If your EVE license has additional Editor or User roles, it can be assigned to use dedicated cluster server node.

EVE licensing model is based on concurrent sessions/connections to the EVE server.

EVE-NG Pro Base license includes 2 Administrator rights user licenses. 2 Administrator users can work on this EVE simultaneously running own labs. Add additional users to your license per your needs.





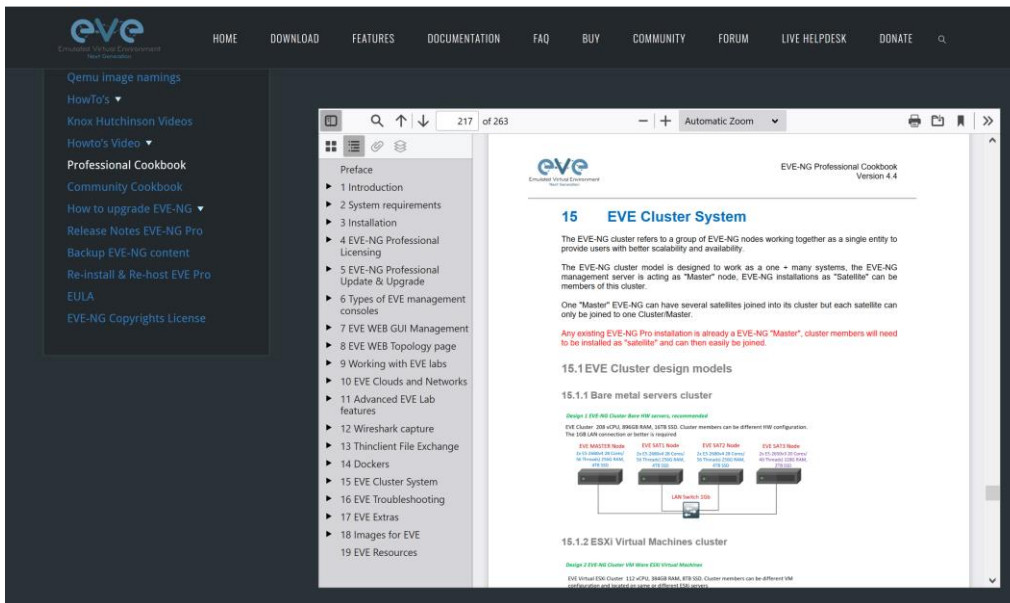
EVE Cluster information and resources

Current EVE Cluster Upgrade information:

<https://www.eve-ng.net/>

EVE Professional Cookbook **Chapter 15**

<https://www.eve-ng.net/index.php/documentation/professional-cookbook/>





Emulated Virtual Environment
Next Generation

Thank You!

Presentation created by Uldis Dzerkals
February, 2021