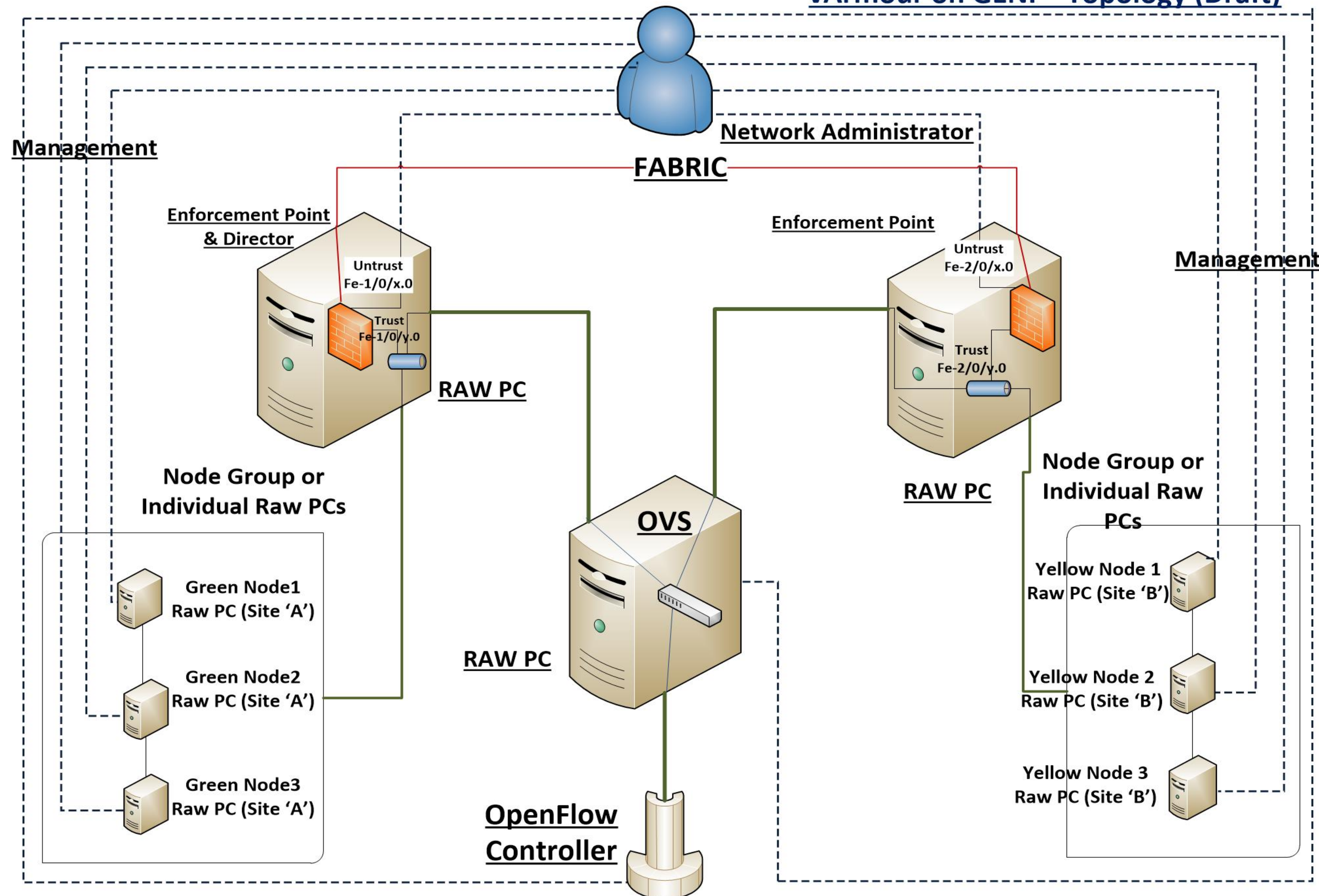


Distributed Software Defined Security [SDSec] for SDN

RajaRevanth Narisetty Levent Dane Deniz Gurkan Gregory Lebovitz (vArmour Networks Inc.)

GENI Deployment & Experimentation – Summary

vArmour on GENI – Topology (Draft)



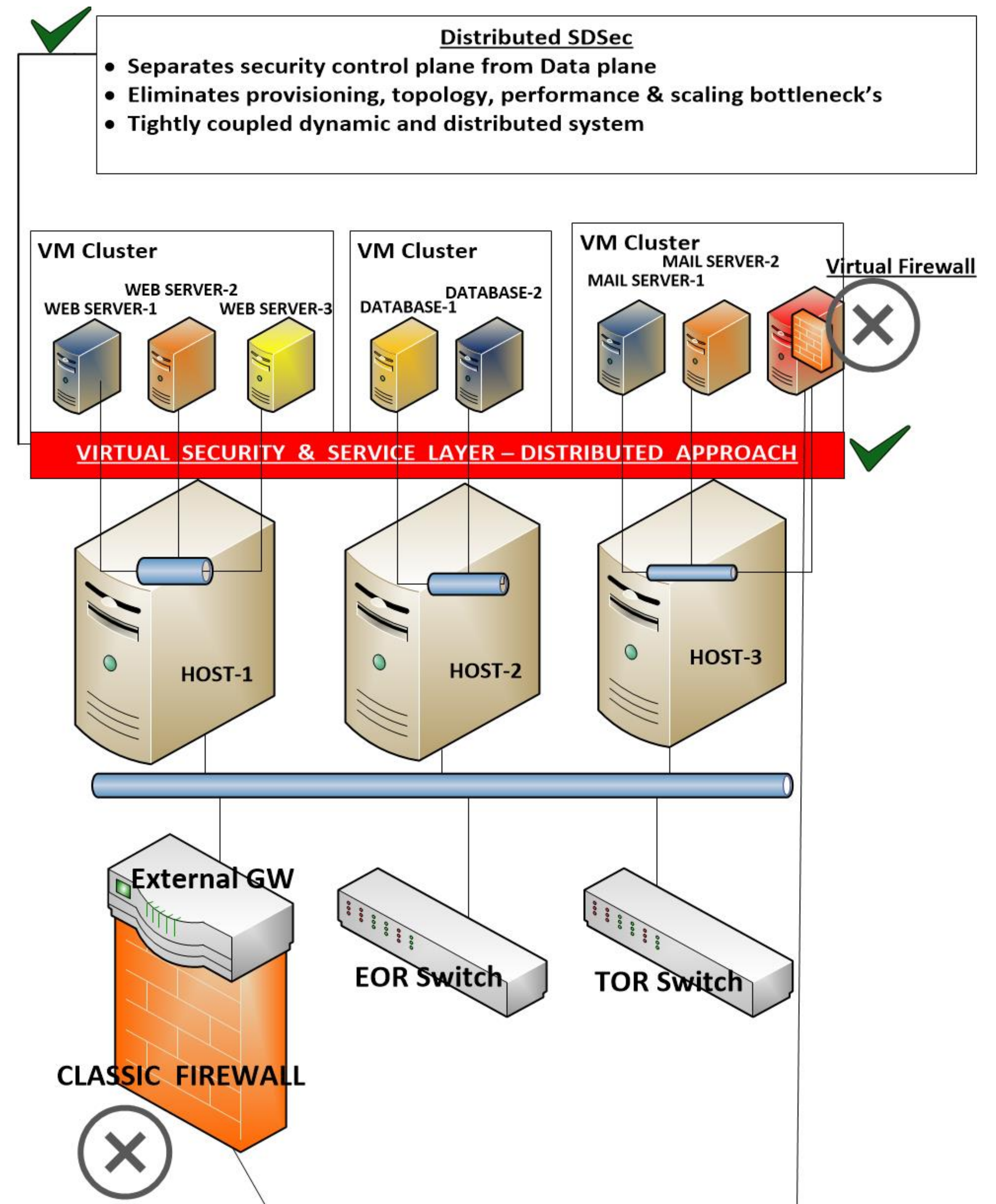
- No bare-metal hypervisor
- No custom image upload
- Issues with VBox & VMWare

Custom image has to be

- Image with blocks of single FS
- Not a raw disk with separate FS with EC2/AMI requirements
- vArmour package: virtual appliance(OVA)



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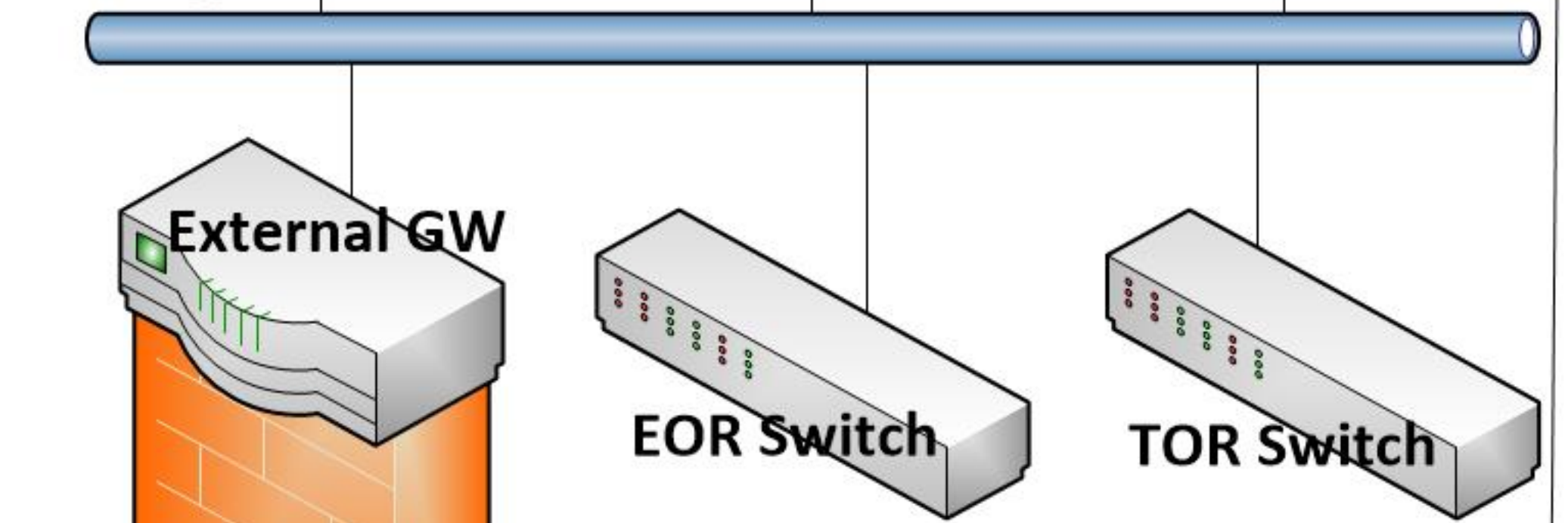


- Distributed SdSec**
- Separates security control plane from Data plane
 - Eliminates provisioning, topology, performance & scaling bottleneck's
 - Tightly coupled dynamic and distributed system

VM Cluster
WEB SERVER-1, WEB SERVER-2, WEB SERVER-3
DATABASE-1, DATABASE-2
MAIL SERVER-1, MAIL SERVER-2

Virtual Firewall (marked with a red X)

VIRTUAL SECURITY & SERVICE LAYER - DISTRIBUTED APPROACH (marked with a green check)



CLASSIC FIREWALL (marked with a red X)

- Typical Firewall Deployment**
- Issues with performance, topology & scaling bottlenecks for Huge Virtual Workloads
 - Not in-line with the changed/changing network architecture (cloud, virtualization etc)

- Virtual Firewall**
- Standalone SW instance
 - Performs security functions
 - Managed by static rules