Getting Started With Tungsten Fabric

MISSION

Build the world's most ubiquitous, easy-to-use, scalable, secure, and cloud-grade SDN stack, providing a network fabric connecting all environments, all clouds, all people.

COMMUNITY

- Online:
  - Documentation and Getting Started Guides
  - Interact: Slack, Mailing lists
  - GitHub: Presentations, Tutorials
- Group discussion in weekly TSC

FEATURES

Routing & Switching

Network Services

Load Balancing

Security & Policies

Performance & Scale

Gateway Services

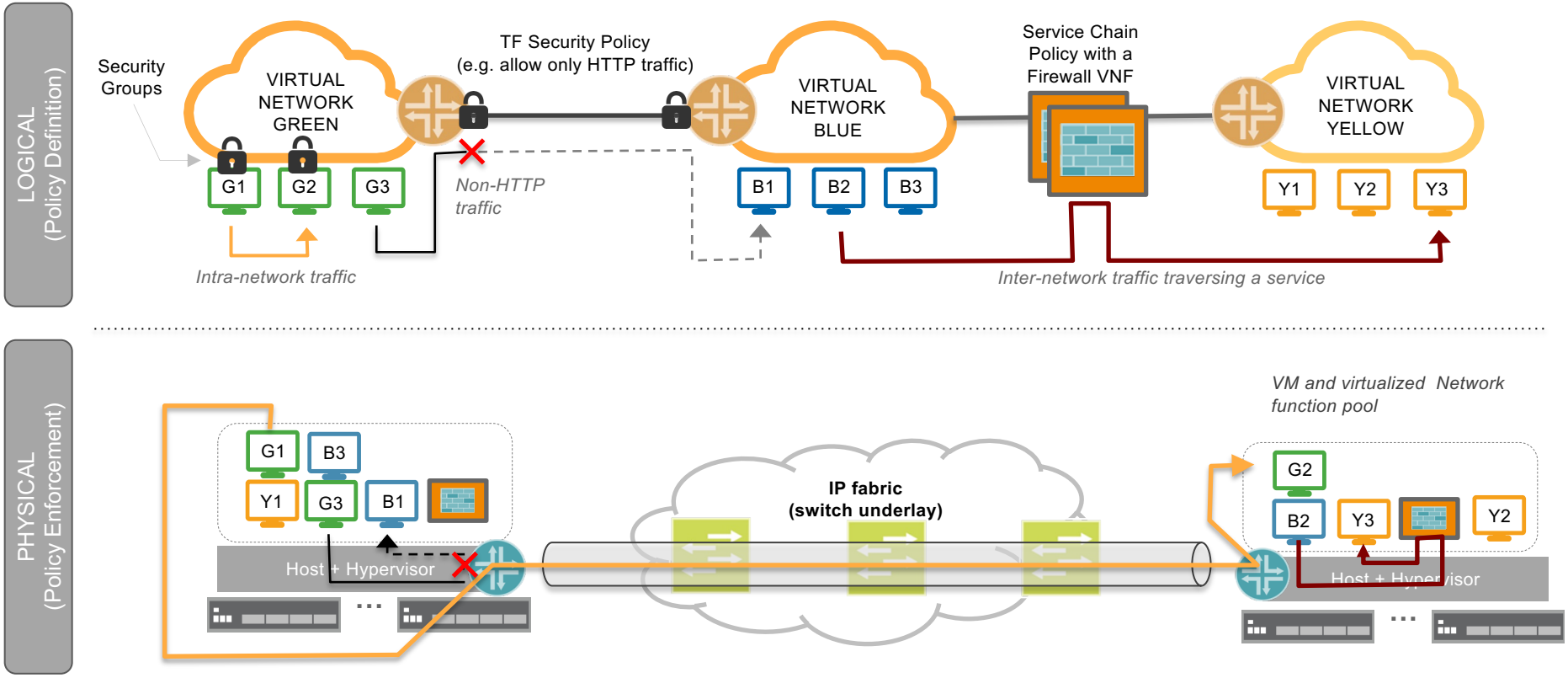
Rich Analytics

Service Chaining

HA & Upgrades

APIs/Orchestrations

Visualizing Tungsten Fabric

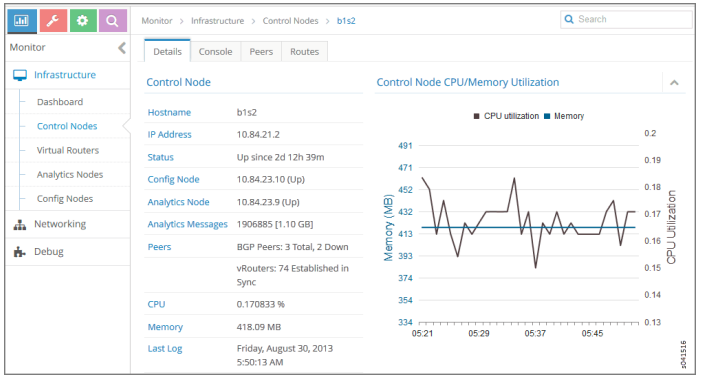


USER EXPERIENCE

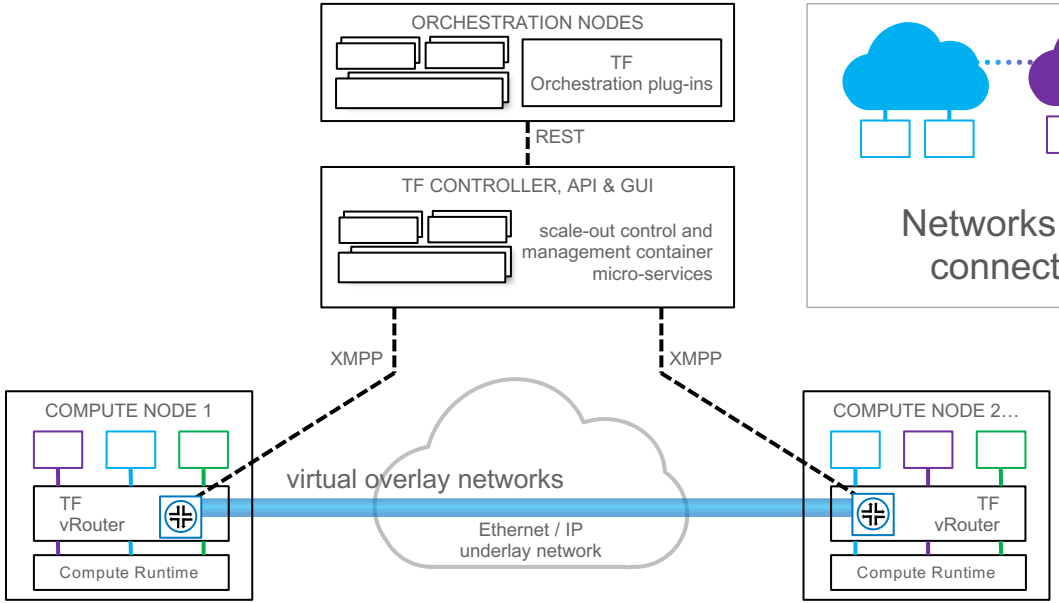
NORTH-BOUND API

- REST API
- HTTPS authentication and role-based authorization
- Used for GUI
- Used for declarative configurations as code
- Generated from data model

GUI

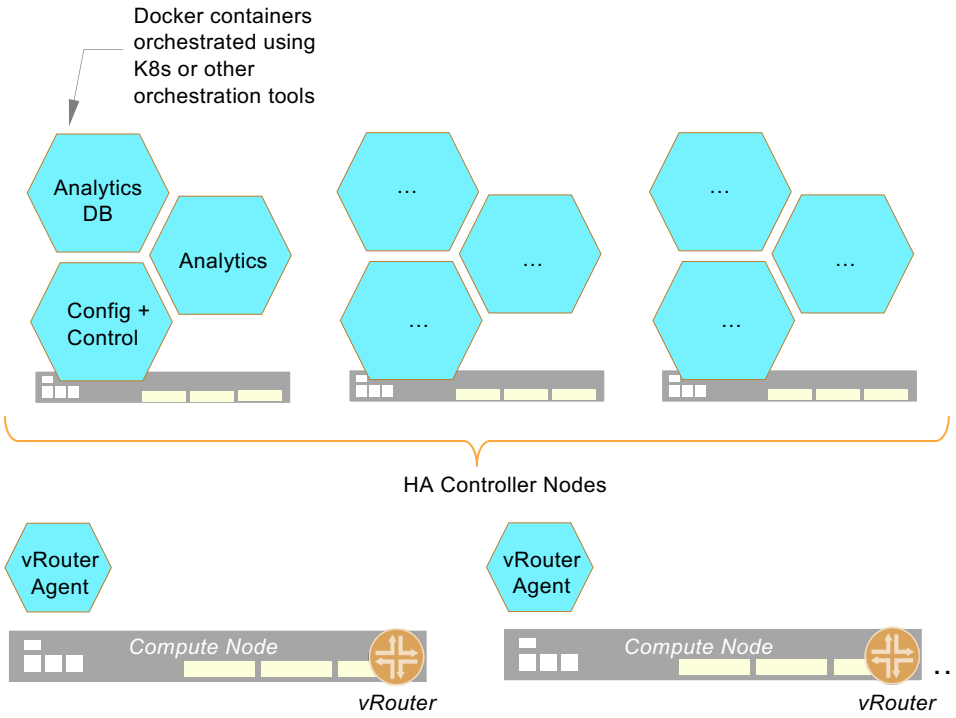


ARCHITECTURE OVERVIEW



CONTAINERIZED ARCHITECTURE

Containerizing TF Control Plane – for easier manageability



Architectural Highlights

- Multiple personalities of containers:
  - 3 controller container – (Controller, Analytics, Analytics DB) each representing a node
  - LB to enable HA (based on HAProxy) will be provided as container not a mandatory item
  - vRouter Agent on containers
- Containers are deployed using either Ansible / K8s Operator
- Each of the nodes can independently scale (3 x)
- Can be deployed on Bare Metal or VMs
- No change in the role / functionality of the Control / config / analytics nodes

Benefits

- LCM is simplified
- Modular architecture
- Accelerate provisioning

INSTALLATION

Ansible playbook to flexibly deploy Tungsten Fabric containers

Containerized deployer to minimize dependency management…

https://hub.docker.com/r/tungstenfabric/tf-kolla-ansible-deployer

Look at some YAML…

From the contrail-ansible-deployer directory run through the usual steps…

```
ansible-playbook -e orchestrator=openstack -i inventory/
playbooks/configure_instances.yml
ansible-playbook -i inventory/ playbooks/install_openstack.yml
ansible-playbook -e orchestrator=openstack -i inventory/ playbooks/install_contrail.yml
```