
Hacking on NSM Dataplane for a true multi-cloud experience

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Agenda

- What is NSM?
- NSM architecture
- Connectivity: pod <-> external world
- What is TF?
- Implementation of TF forwarder for NSM
- Demo
- Q&A

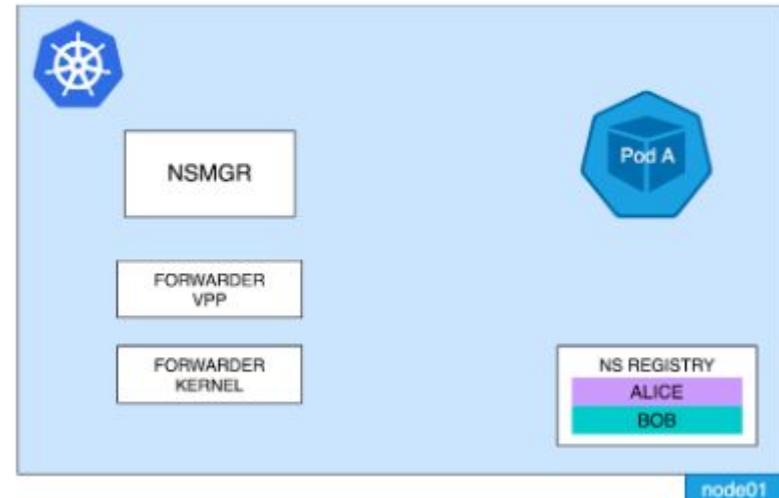


What is NSM?

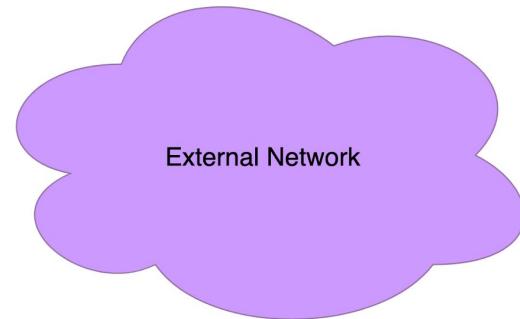
- NSM = Network Service Mesh
- CNCF standalone project
- Cloud-native network solution
- Provides networking (L2/L3) for applications running on Kubernetes

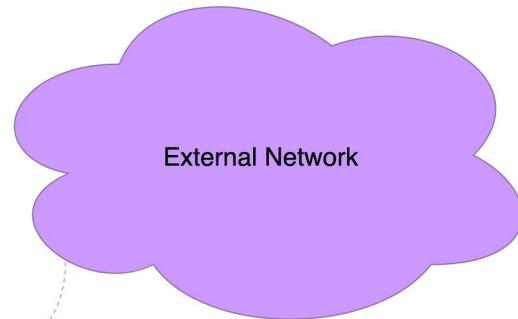
NSM architecture

- Network Service Registry
- Network Service Manager (NSMgr) - control plane
- Network Service Forwarders - data plane

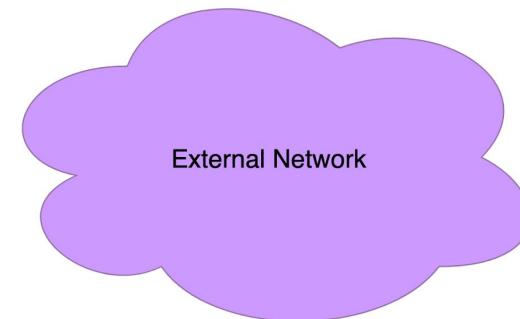
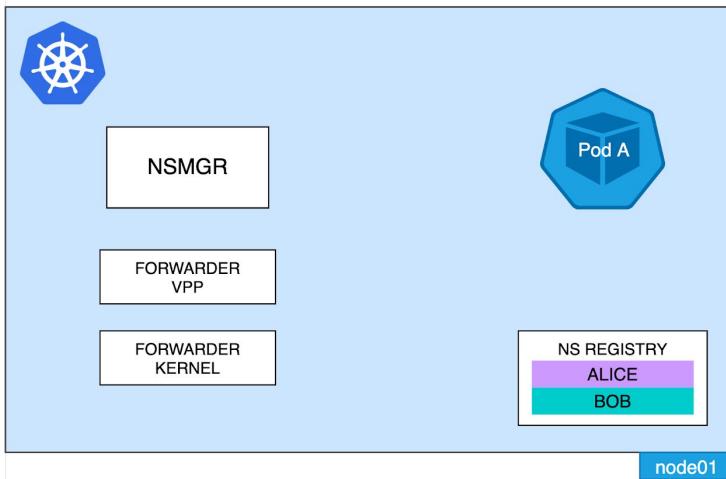


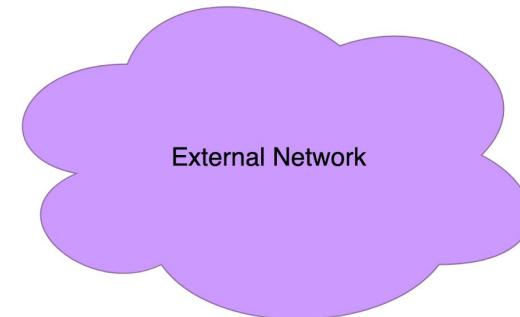
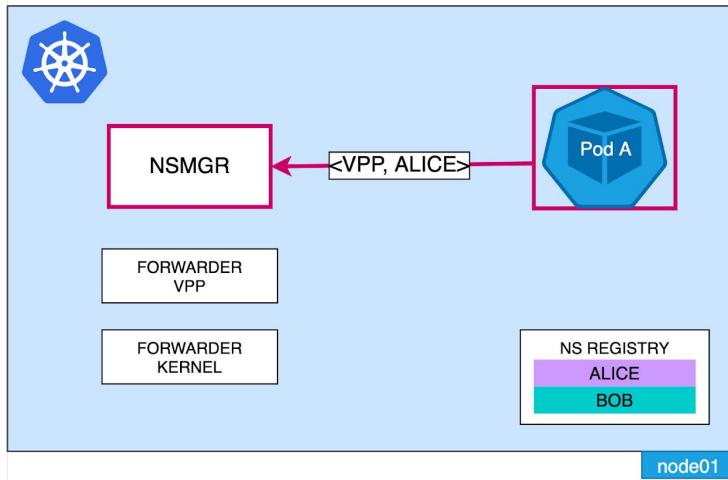
Connectivity: pod <-> external world

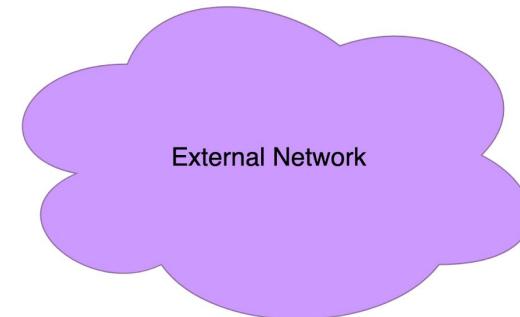
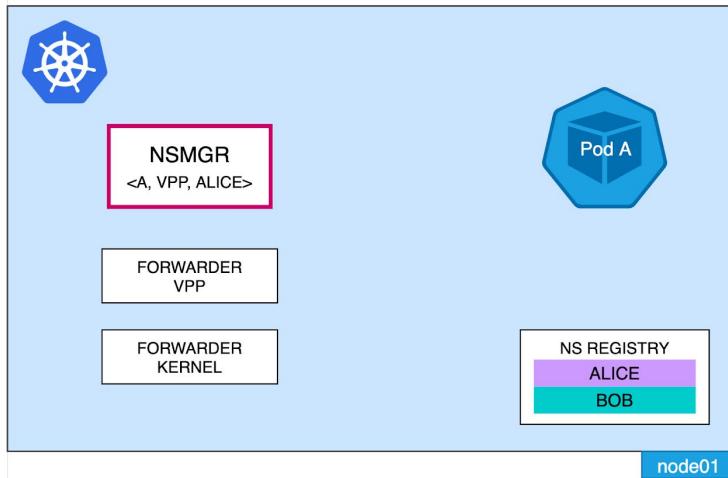


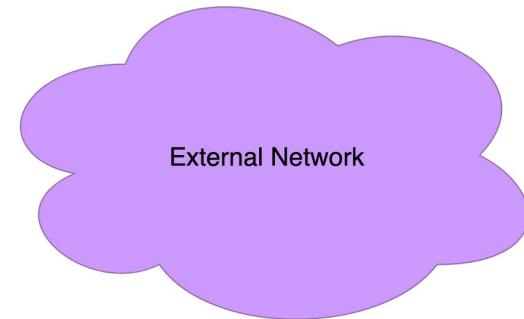
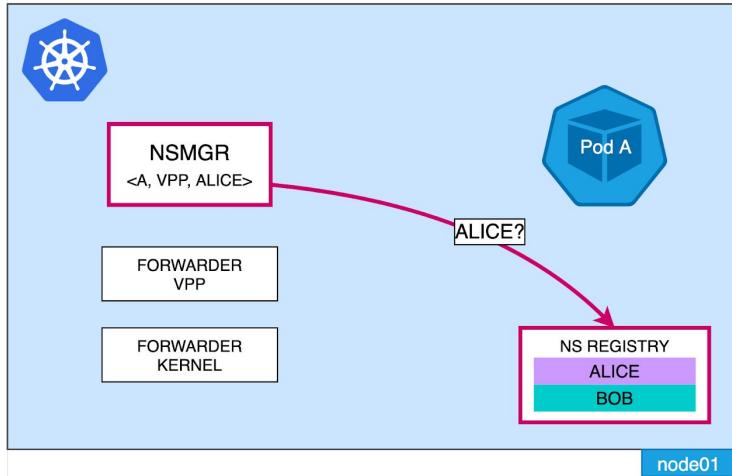


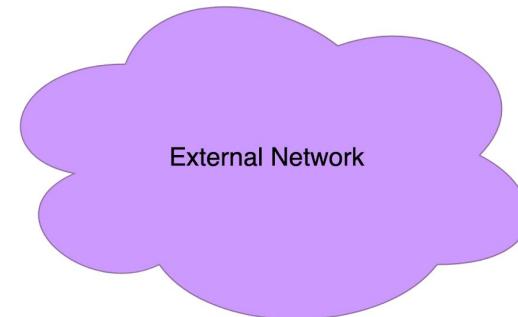
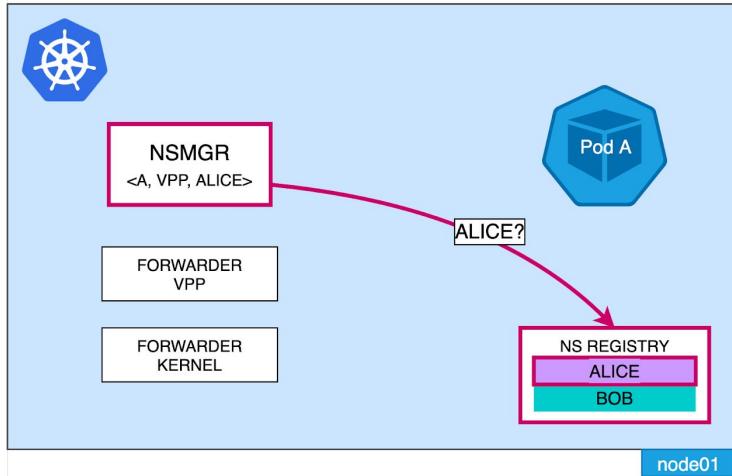
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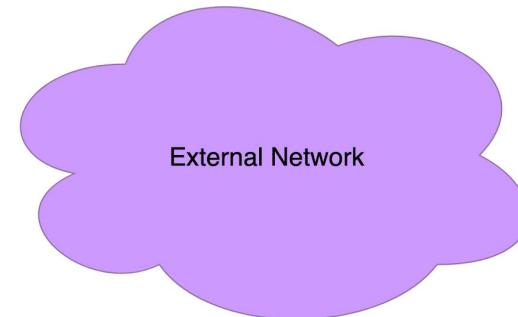
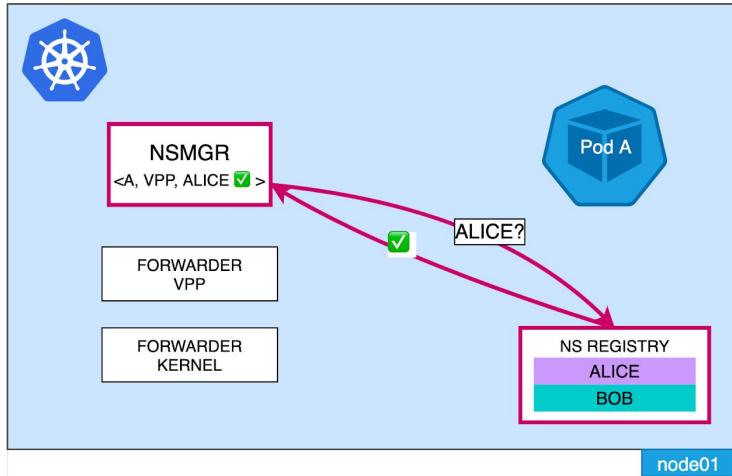


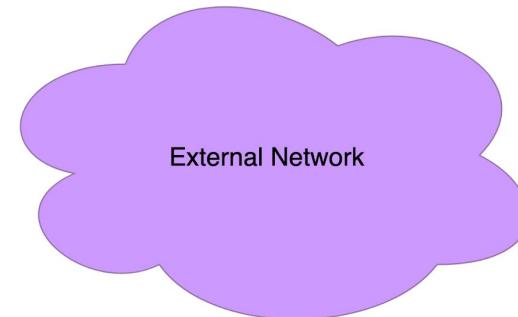
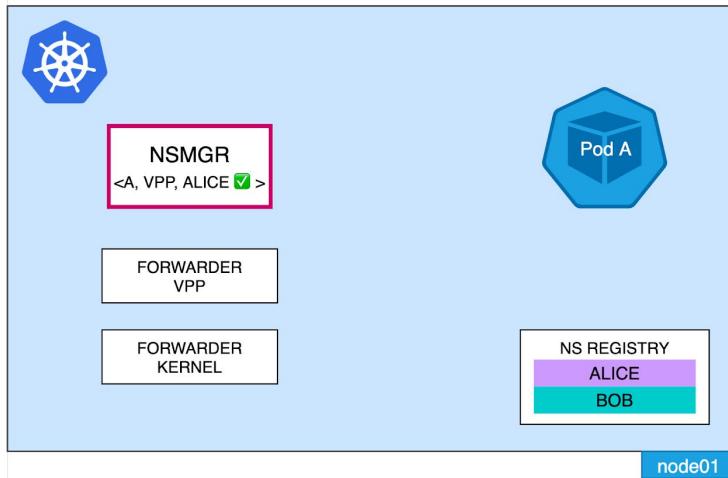


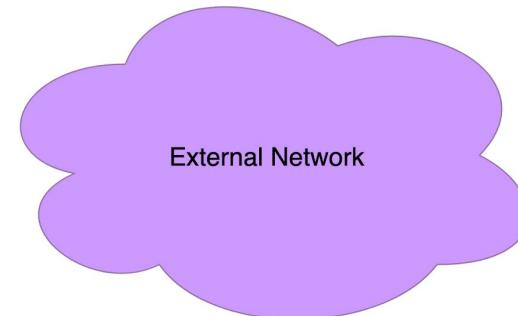
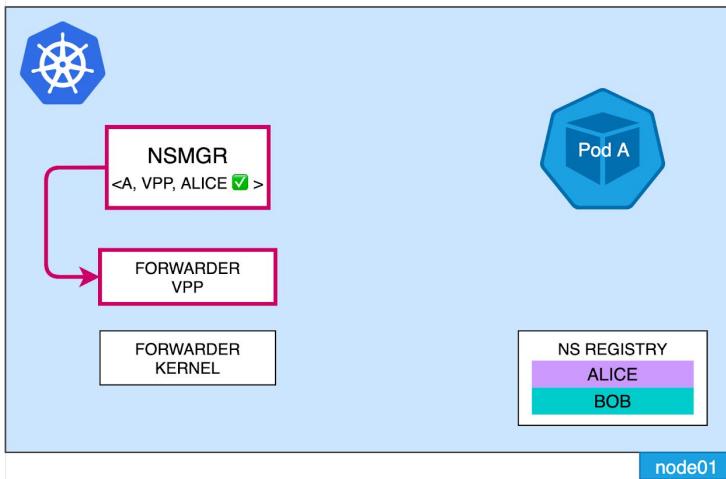


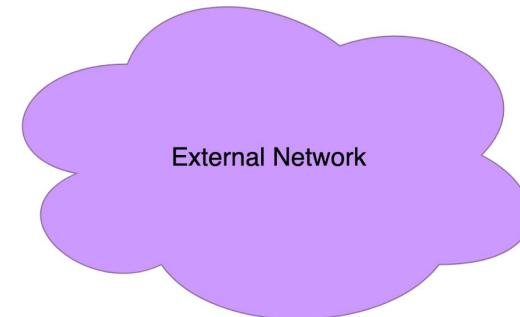
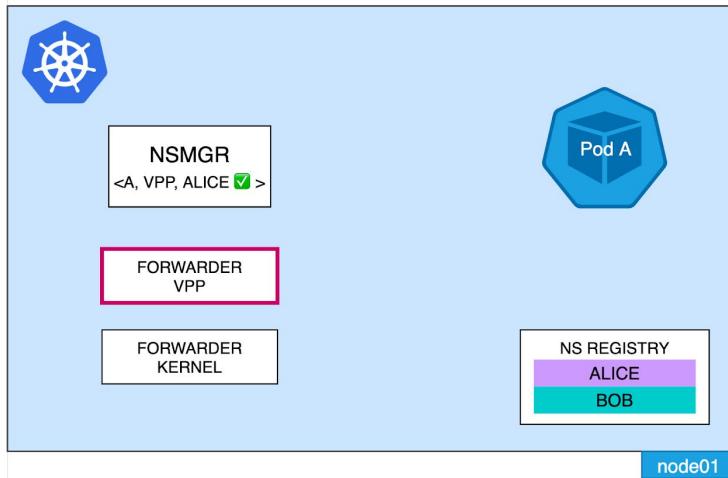


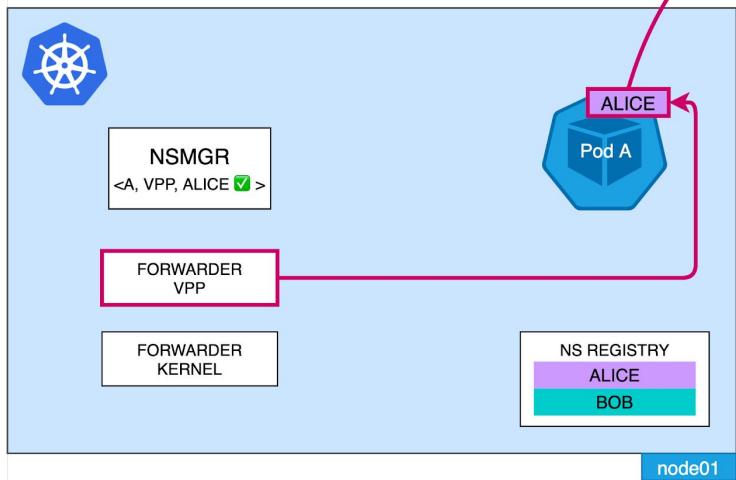




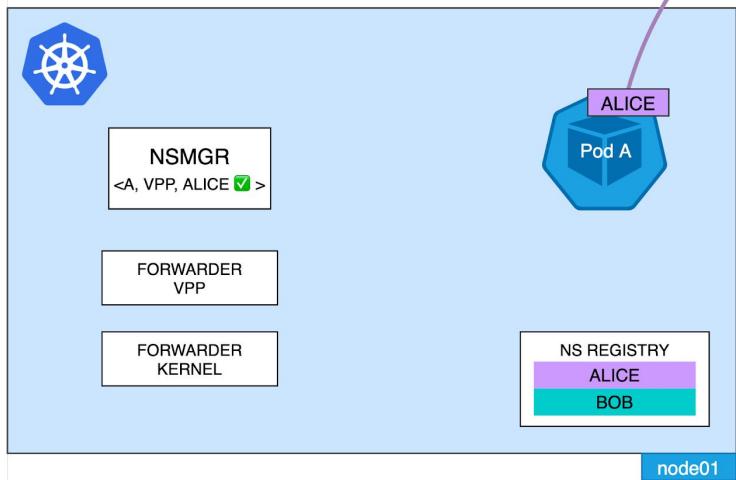








External Network

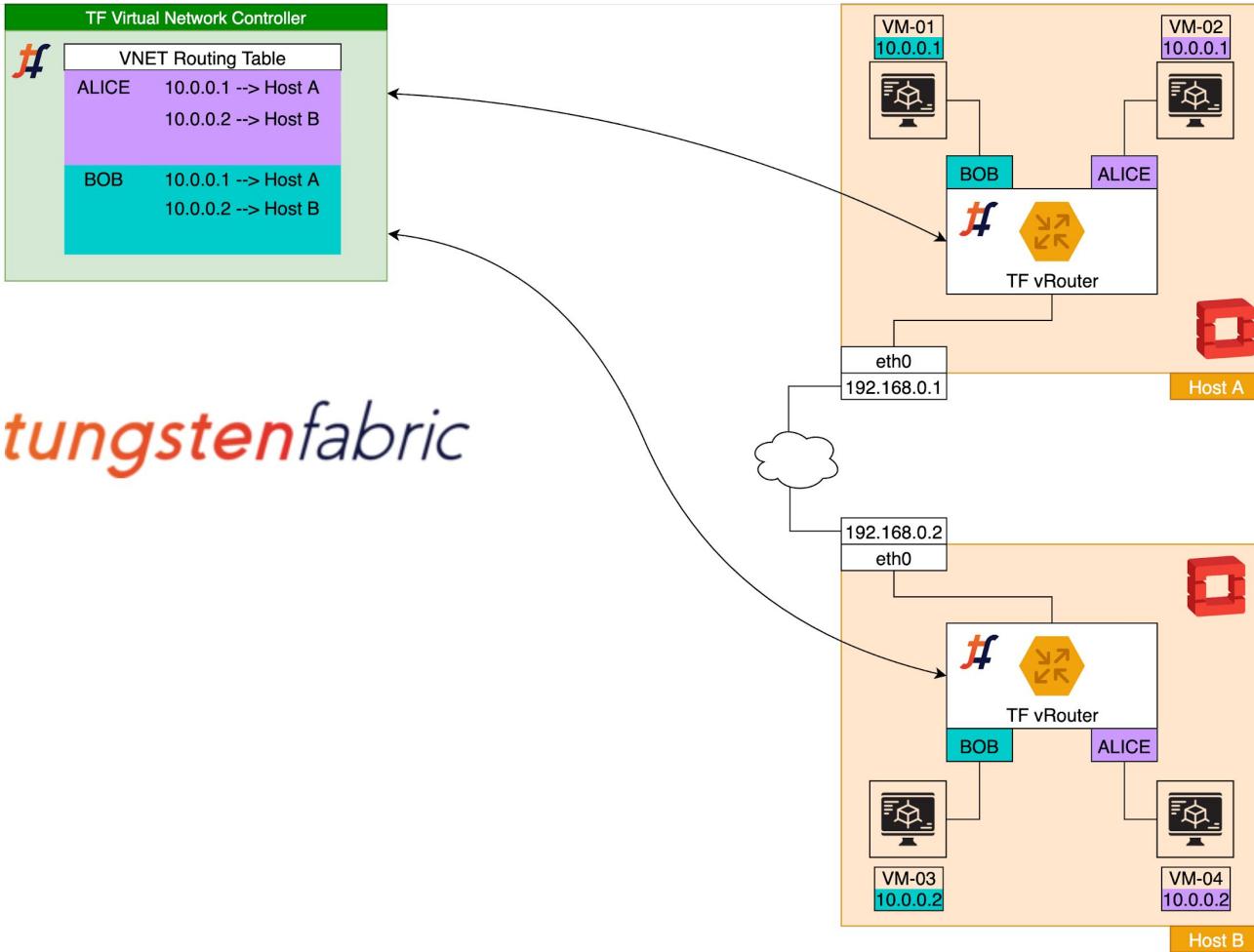


External Network

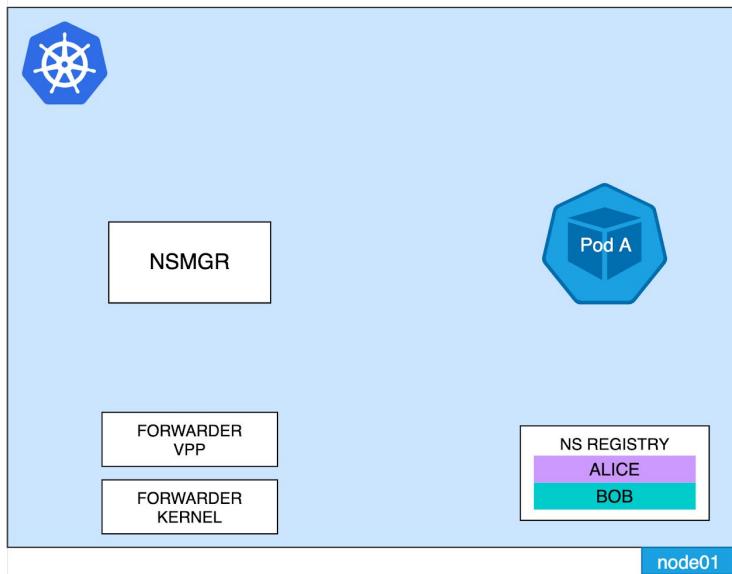


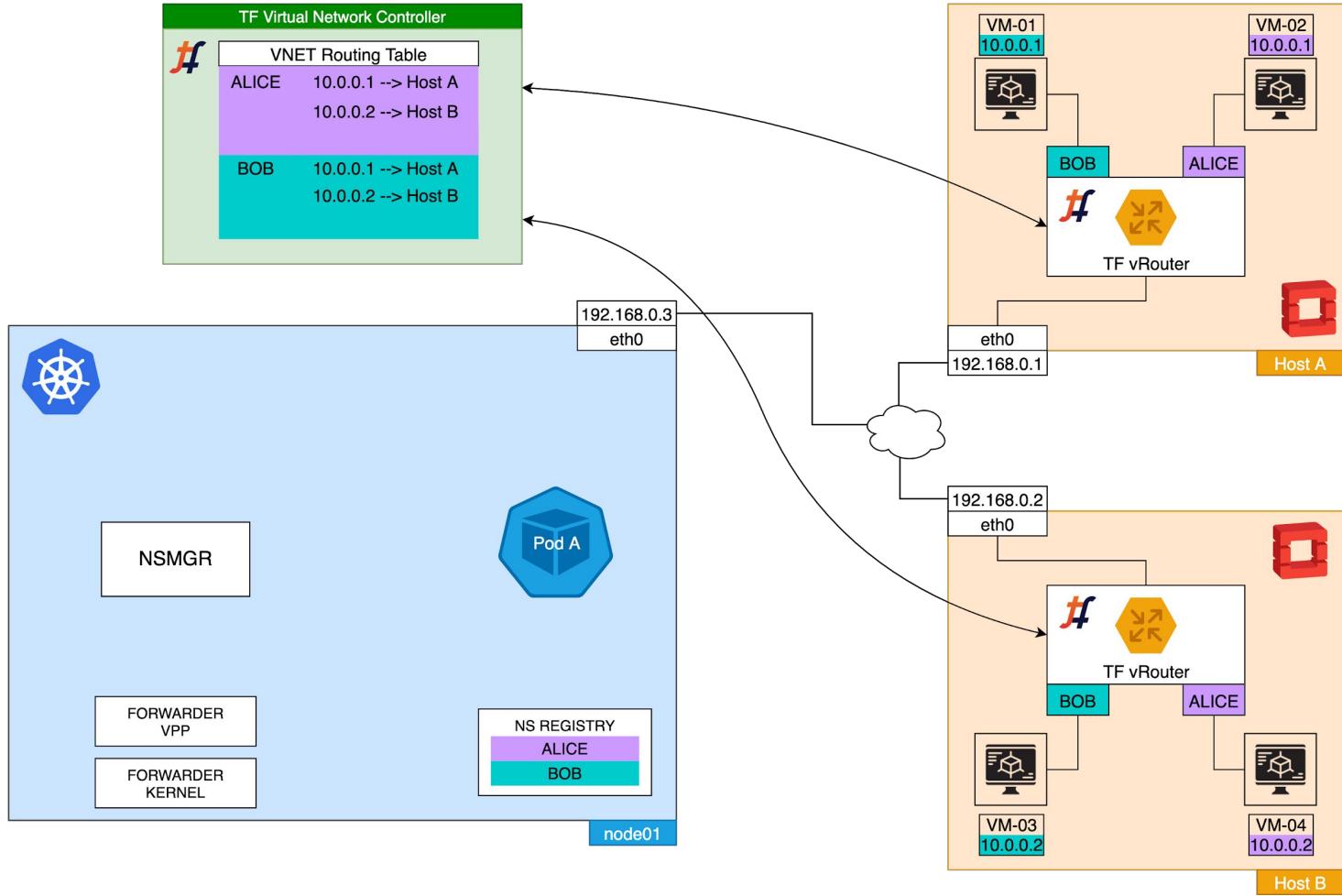
What is TF?

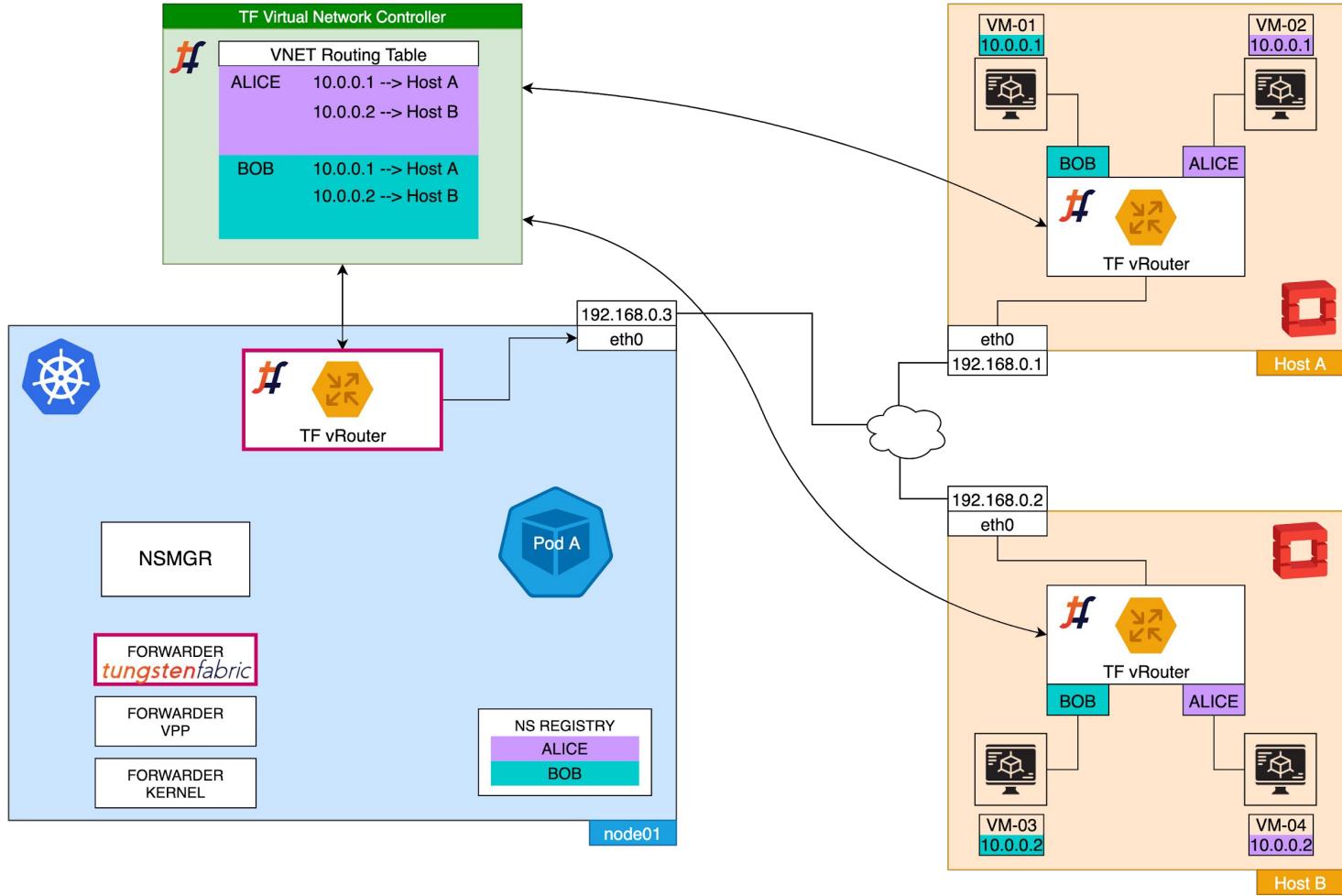
- network virtualization platform
- networking backend for
 - OpenStack
 - Kubernetes
 - OpenShift
 - VMWare
 - ...
- we want to use its versatility to connect pods to different environments with NSM

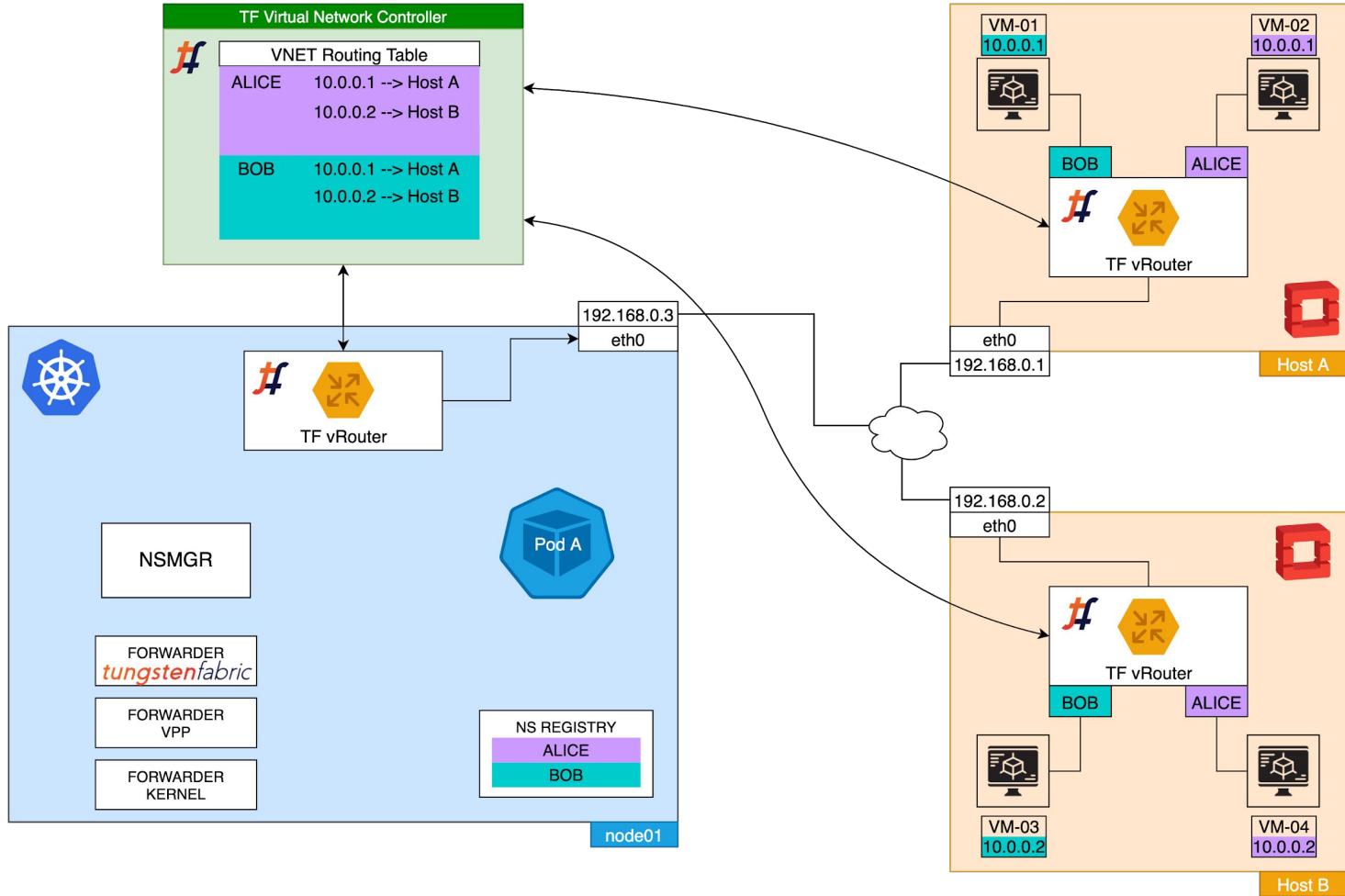


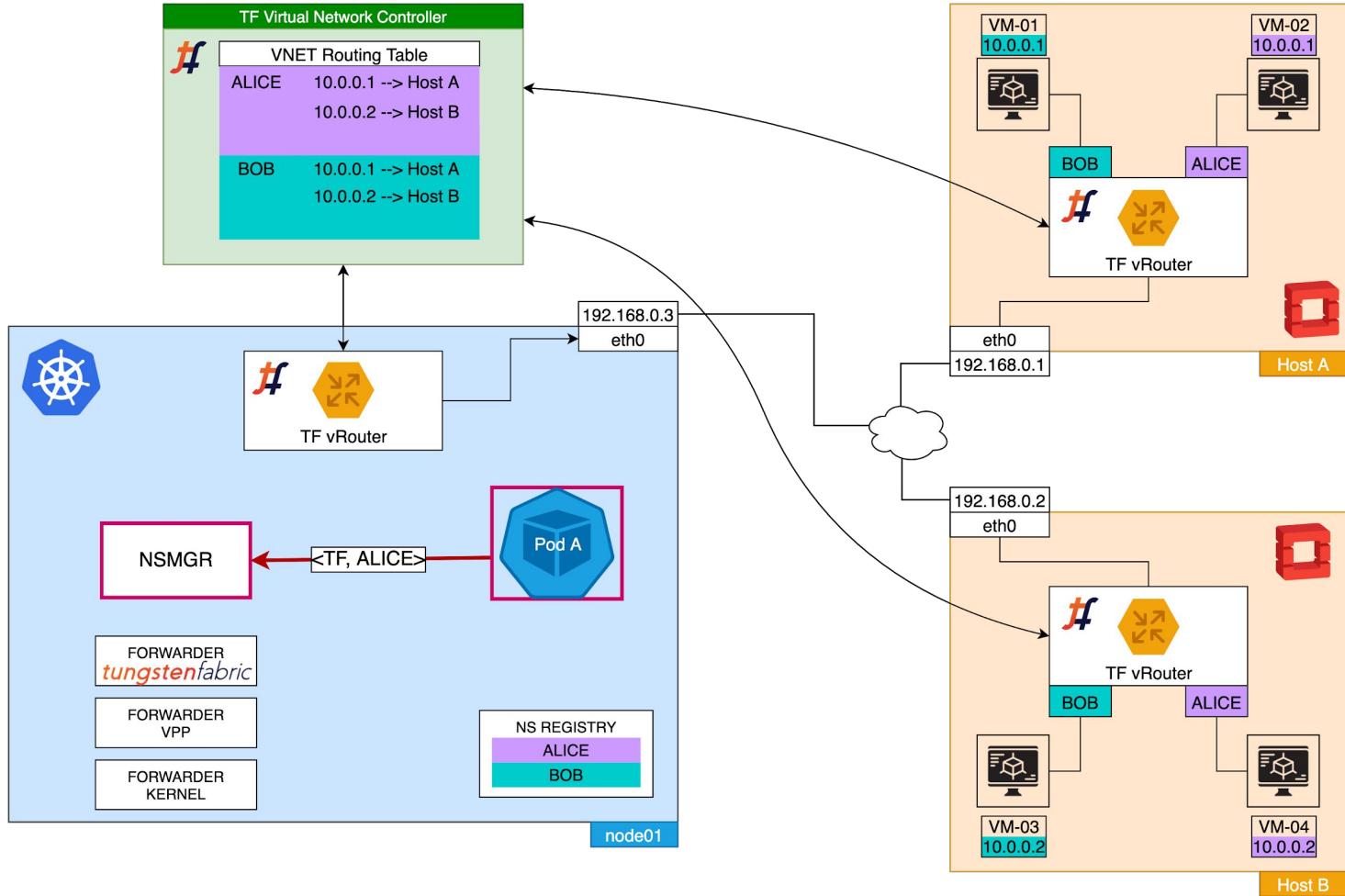
NSM Forwarder for TF

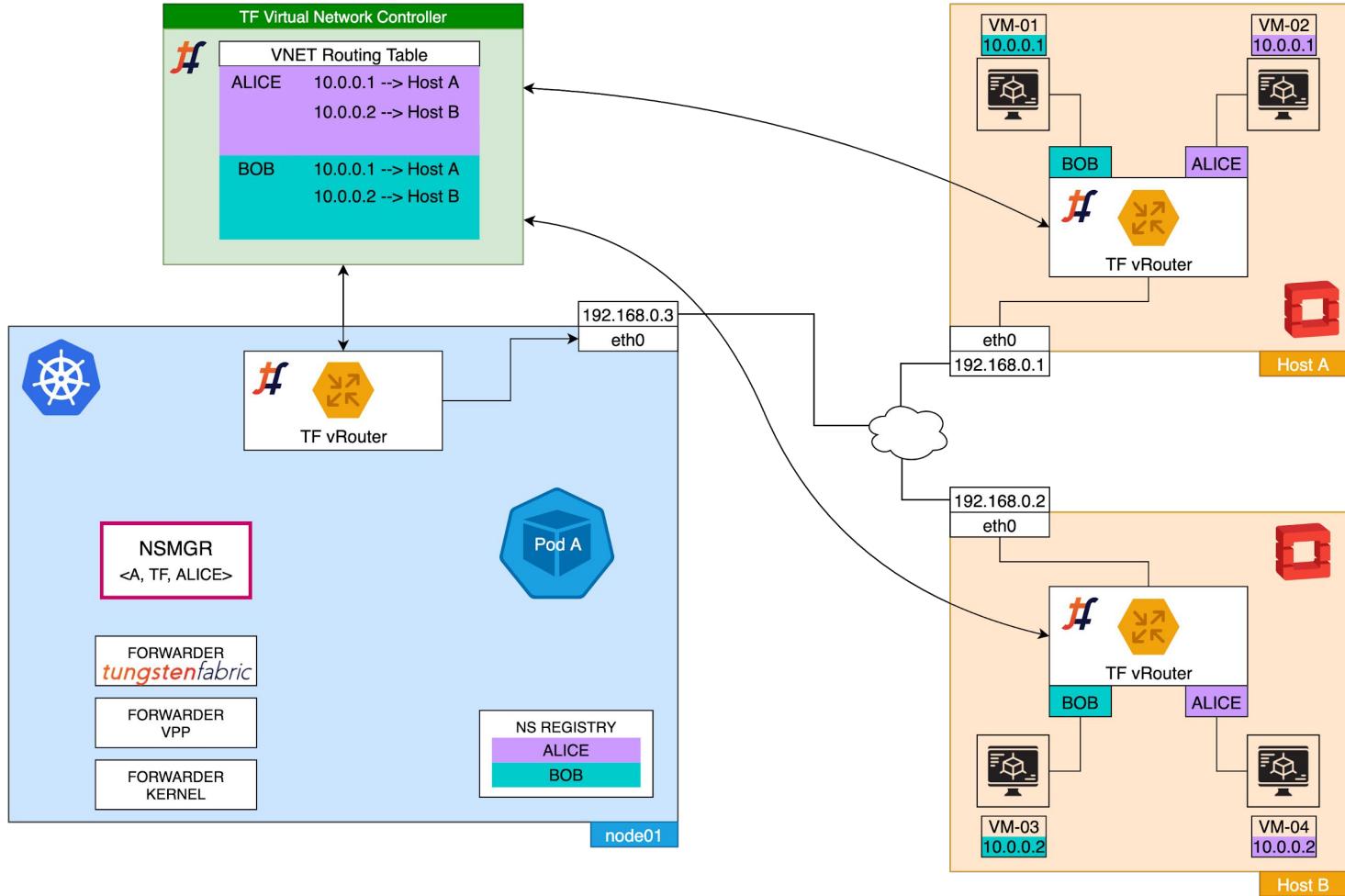


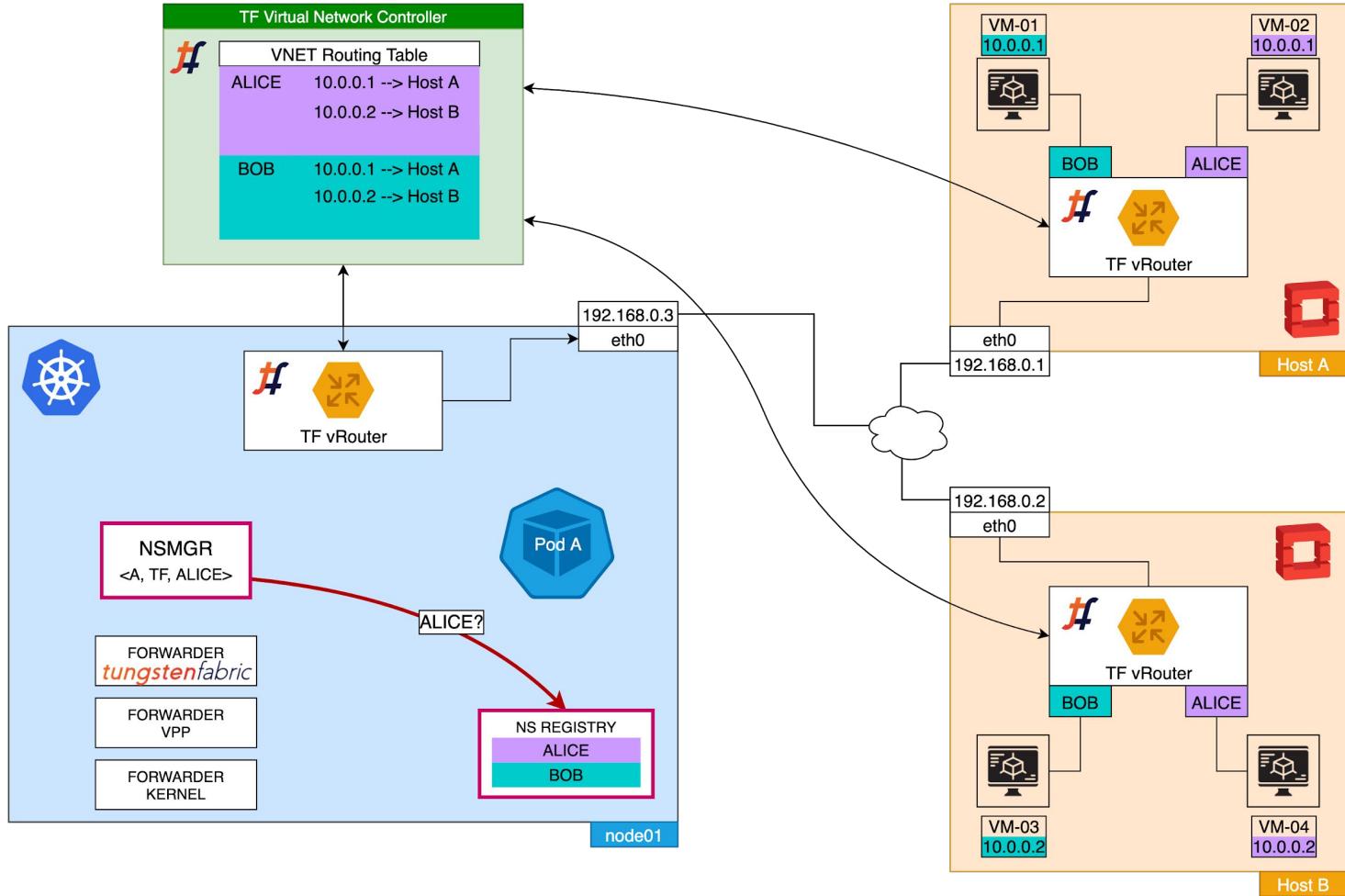


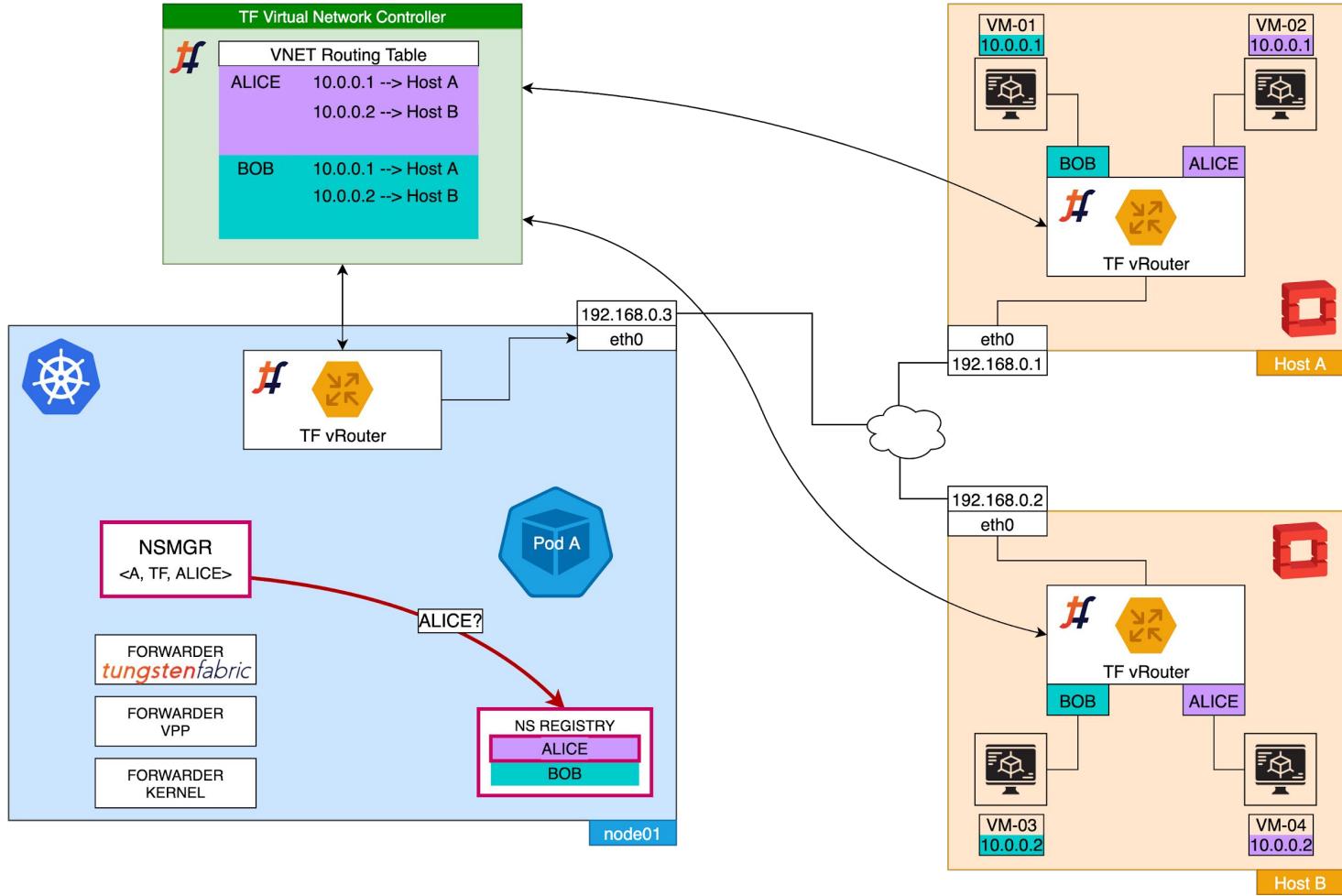


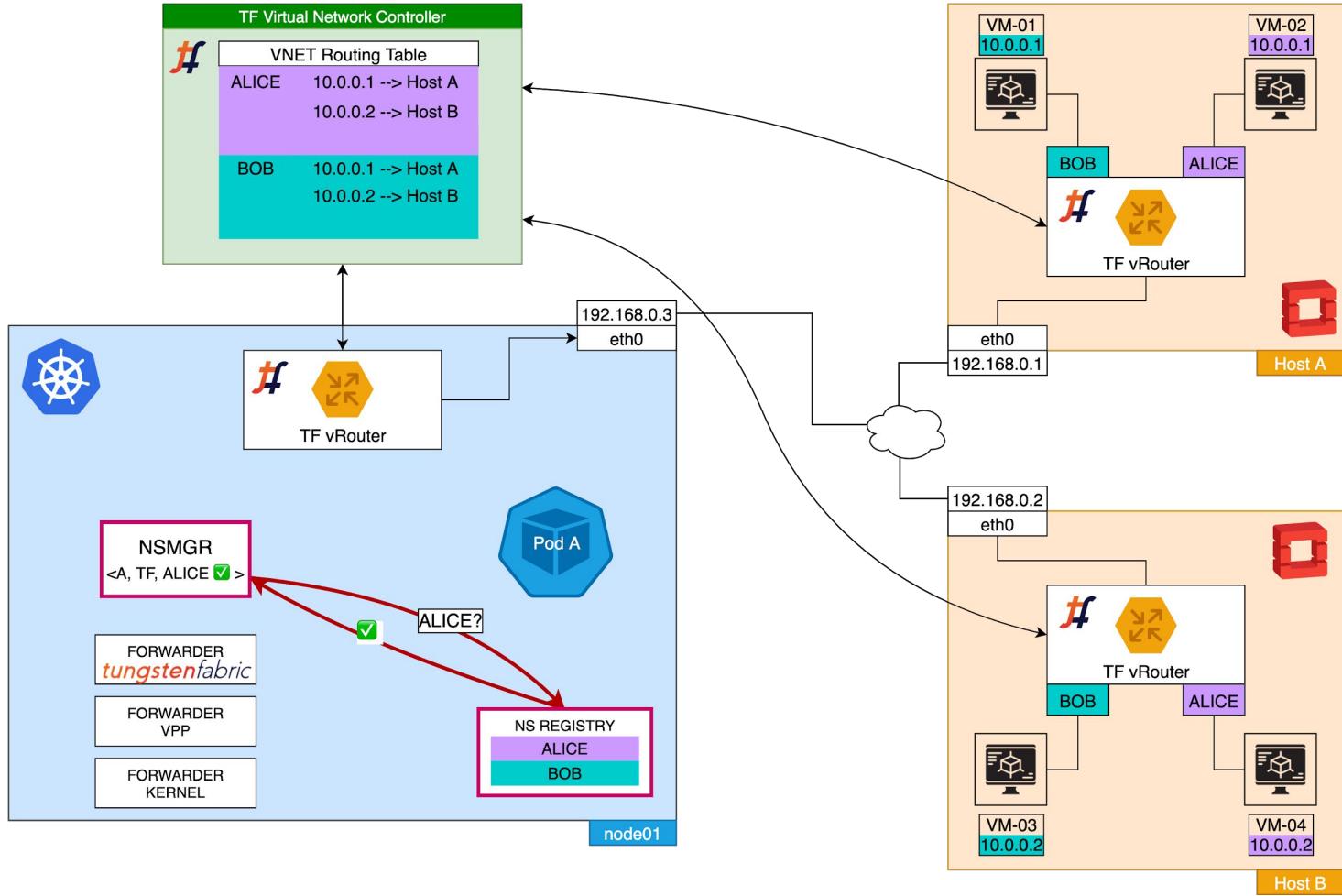


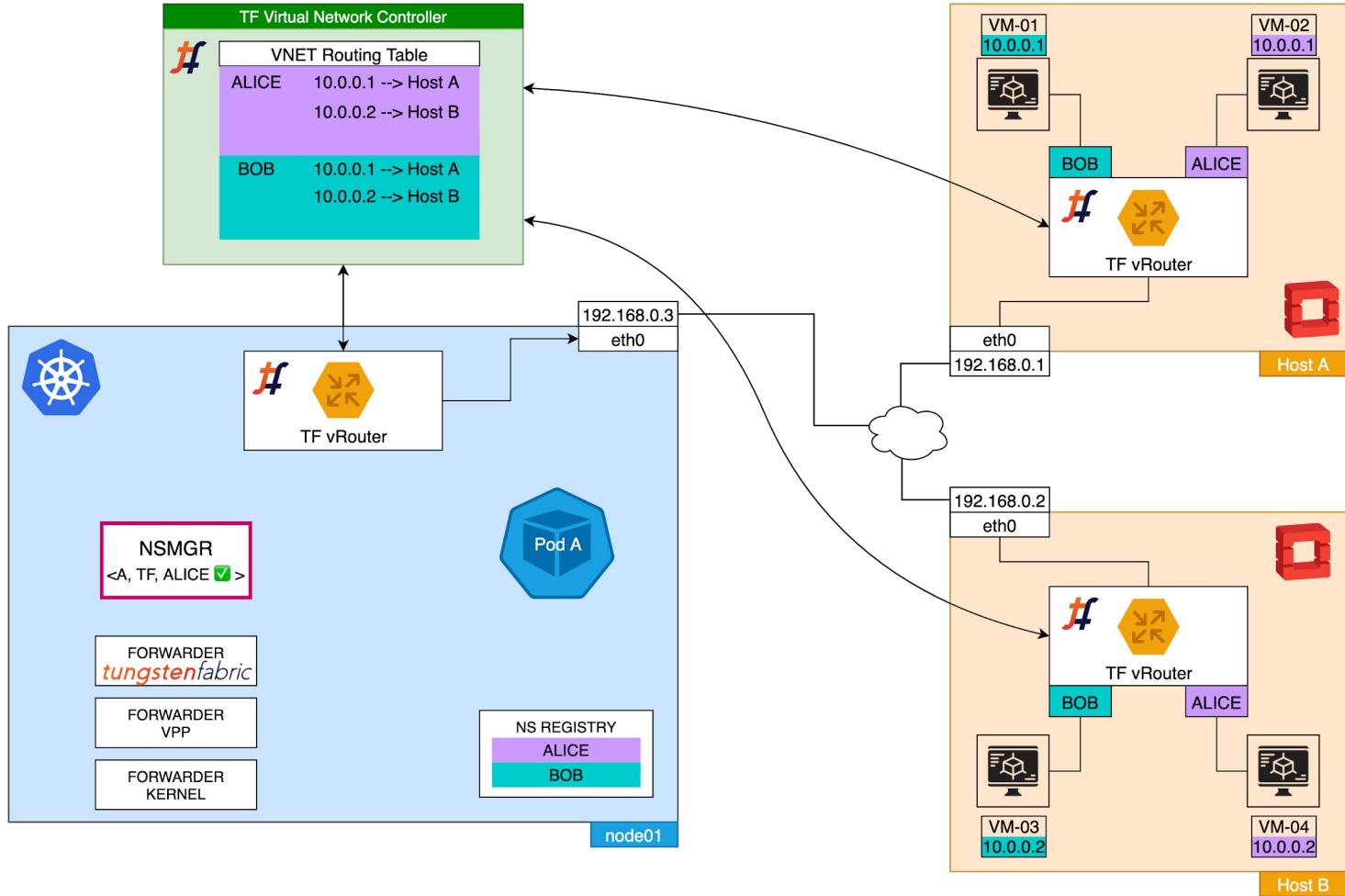


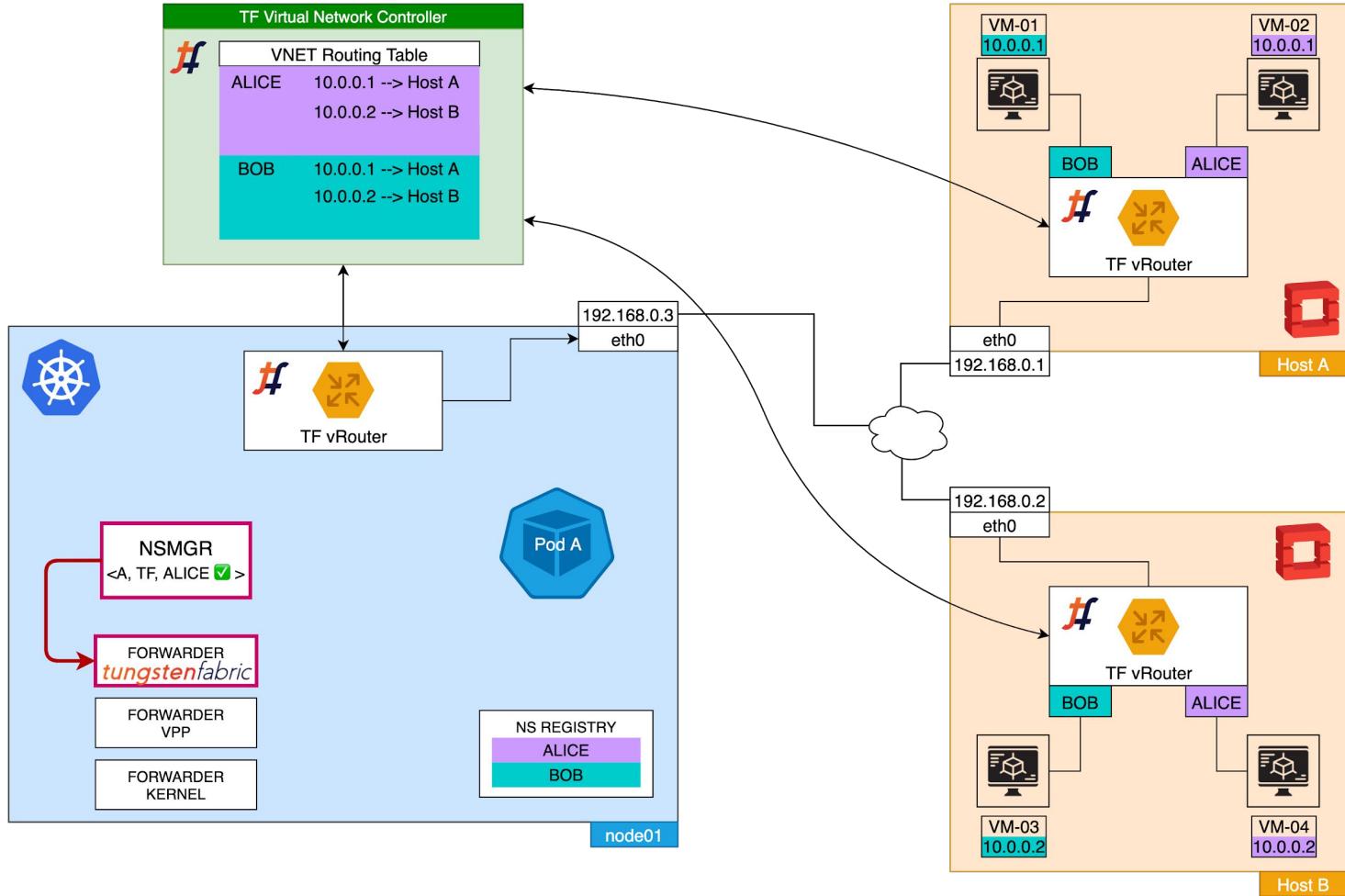


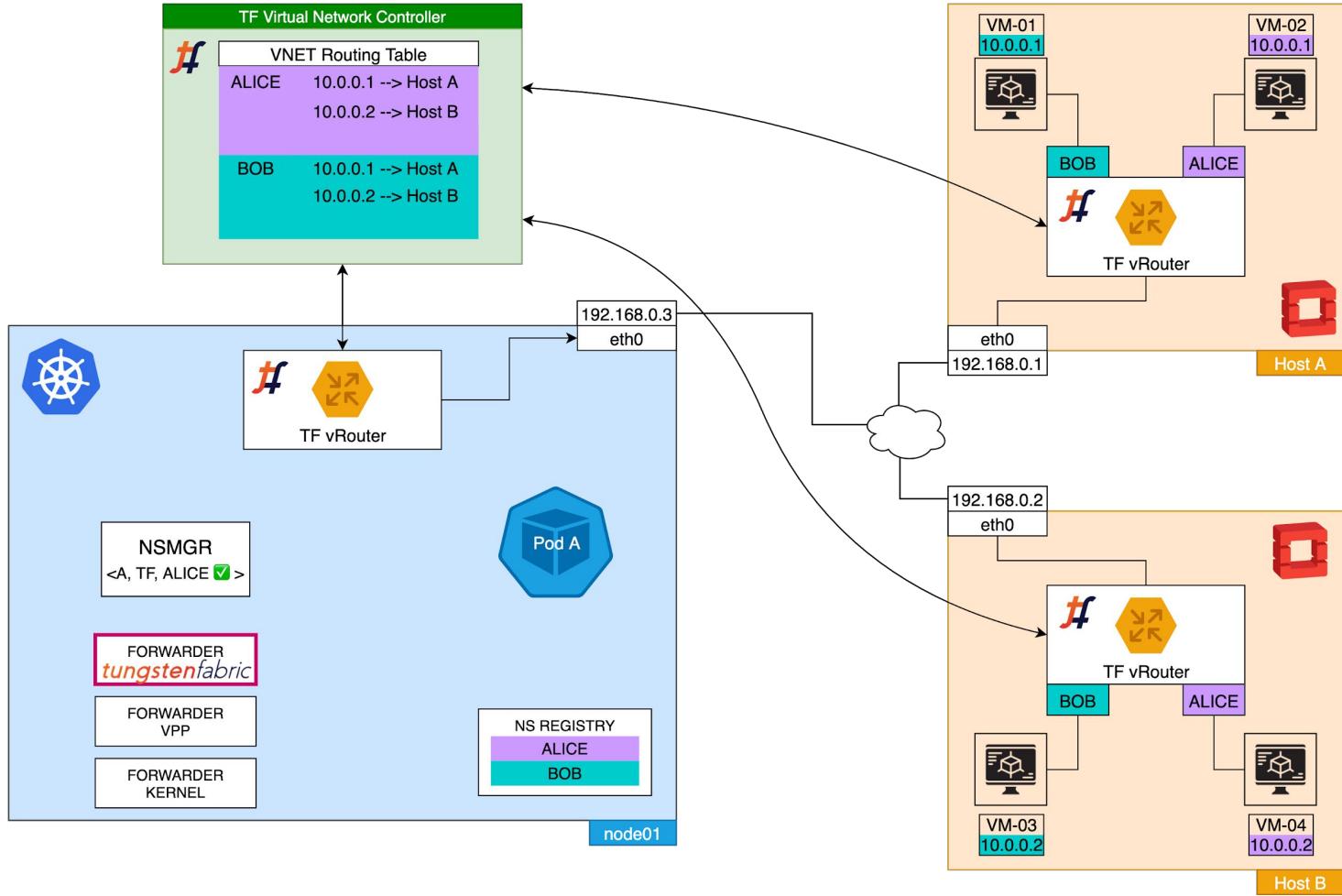


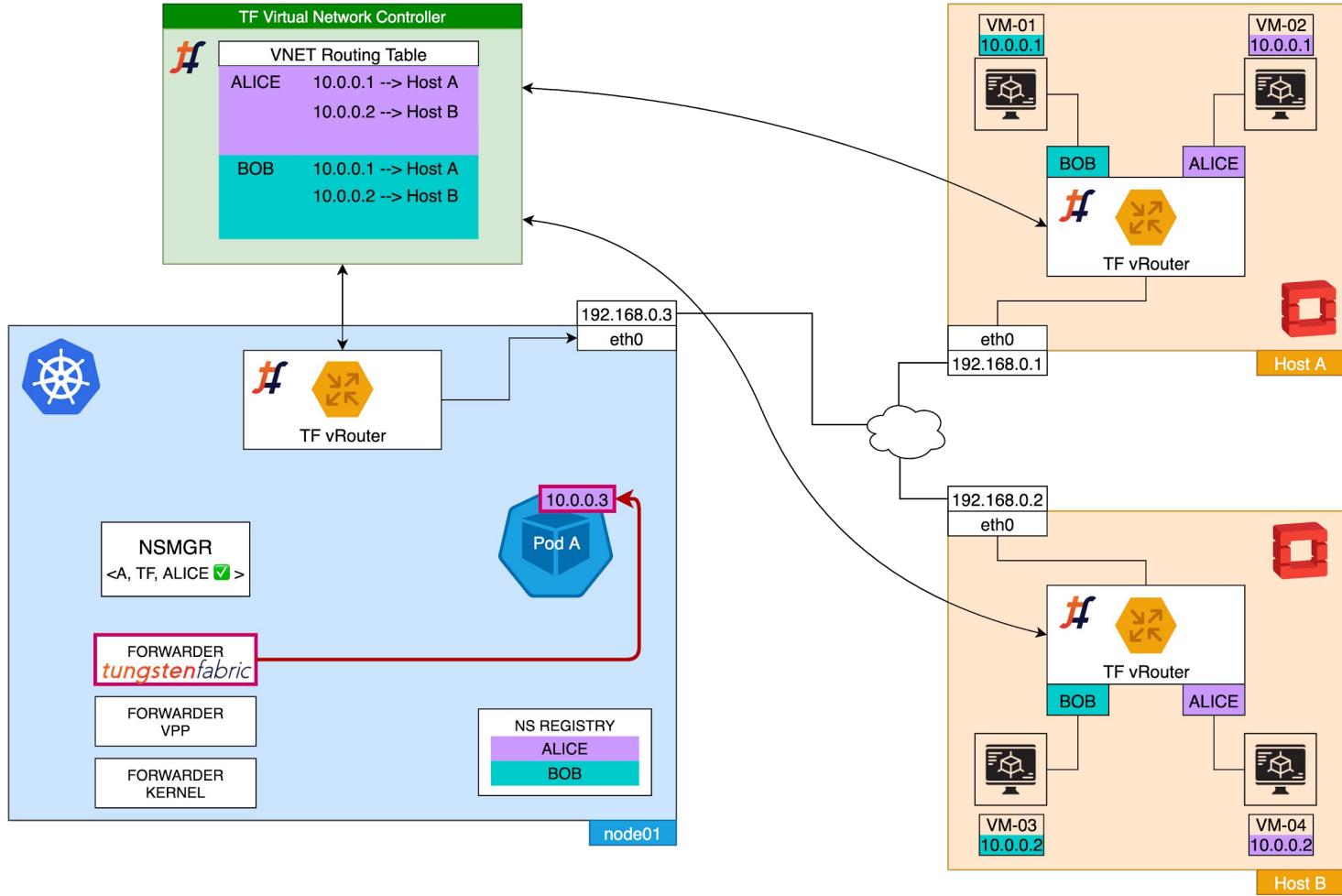


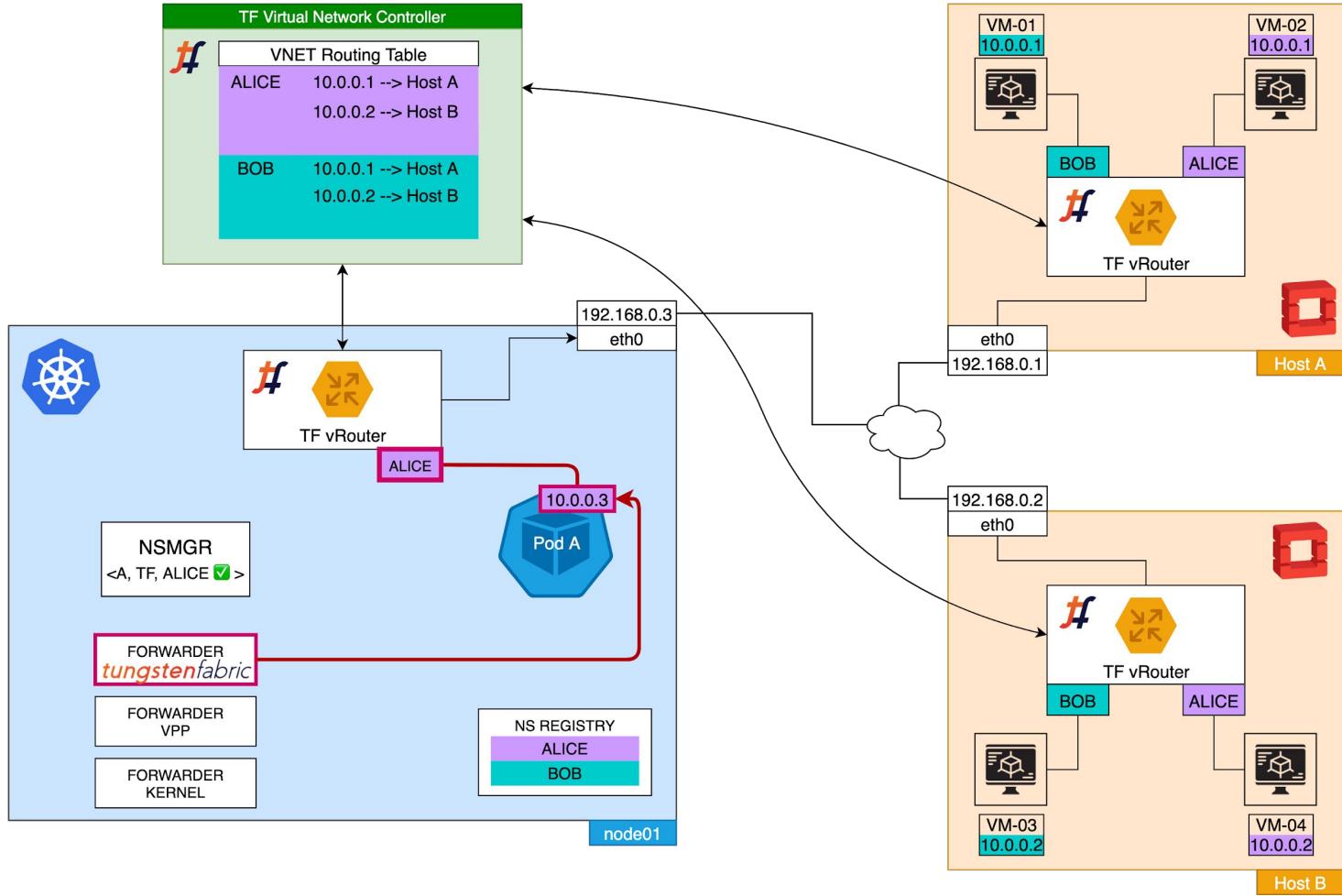


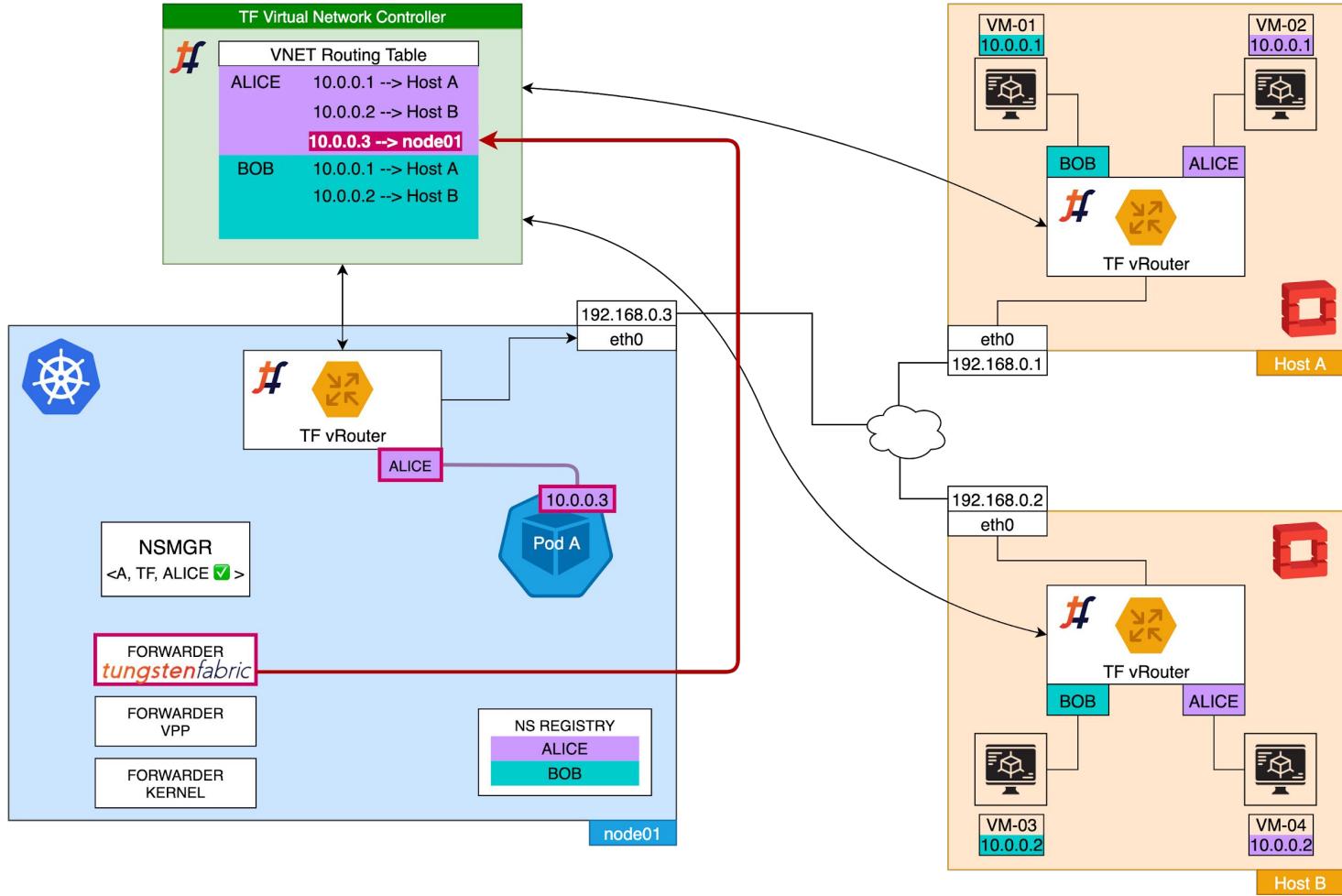


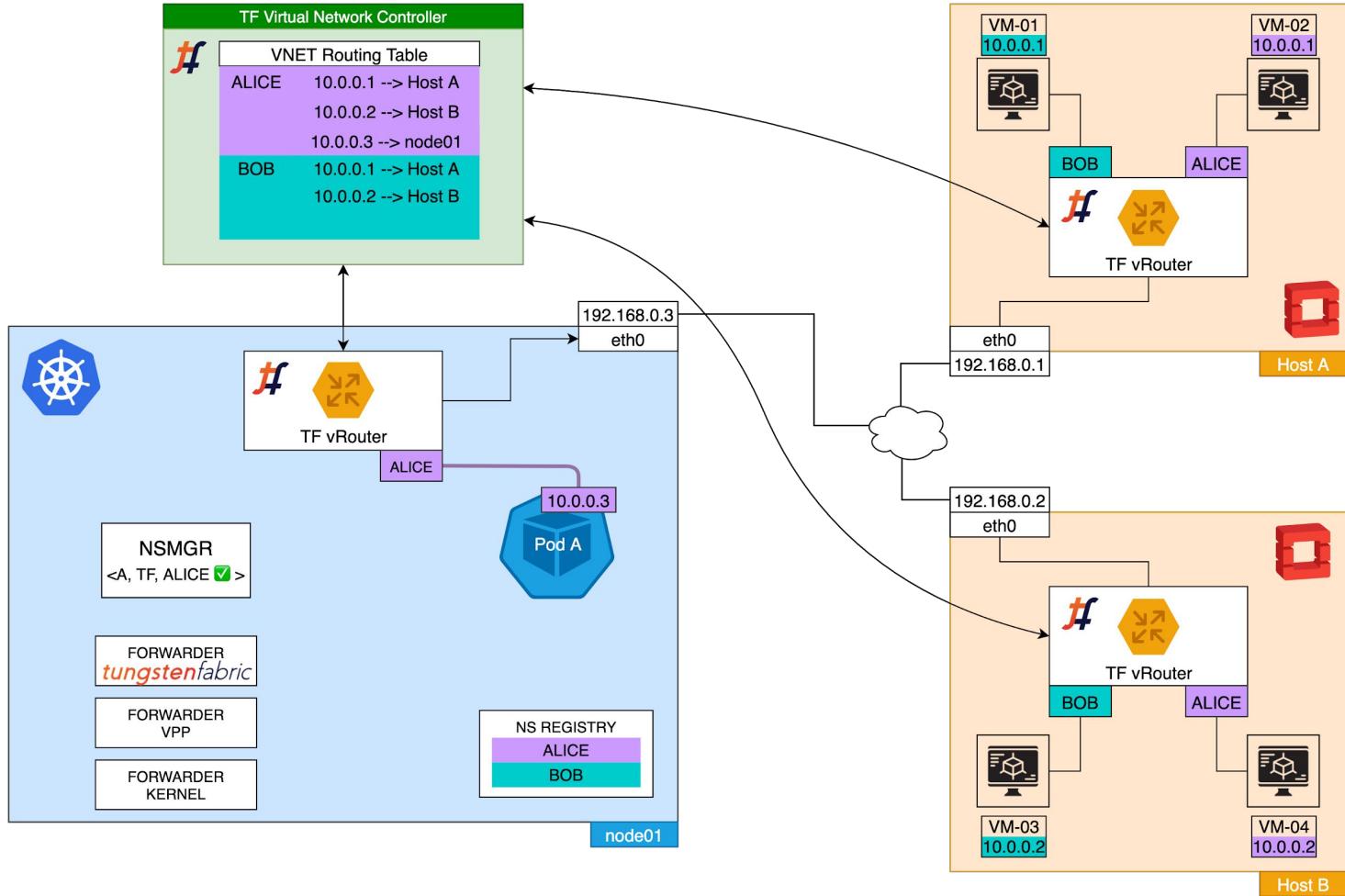


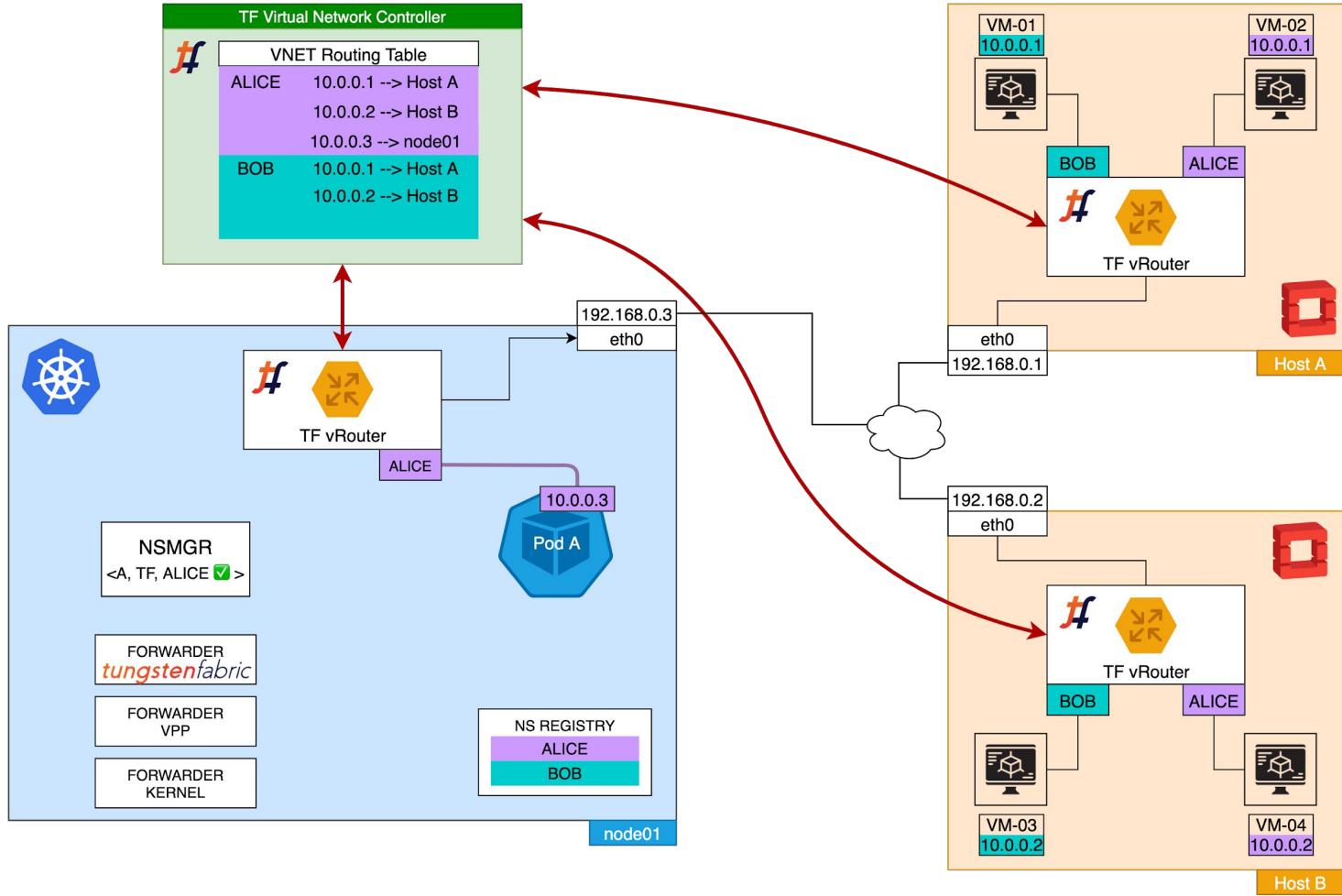














DEMO



Resources

Source code: <https://github.com/ninefiveslabs/networkservicemesh/tree/tf-forwarder>

Inspiration: Radoslav's talk at ONS EU 19 <https://sched.co/SYum>

Q&A