

Tungsten Fabric Training

Call for Volunteer Subject Matter Experts (SMEs)

The Linux Foundation (LF) is creating 1 ¼ day Tungsten Fabric training that will be offered as paid online and face-to-face courses. This is a call for SME volunteers to conduct train-the-trainer sessions with the team creating the training materials.

The course outline is provided below. Most chapters below will include lecture (slides/writeup) and hands-on labs. The labs will be on AWS. Each train-the-trainer session is expected to be 30-60 minutes long. The agenda for these train-the-trainer sessions will be:

- Point the training material developer to slides/wiki/documentation that can be used to create slides.
- Show the training material developer a demo of the hands-on lab. If needed, an AWS environment will be stood up before the call.

Please volunteer by putting your name below. If you are interested in contributing to a chapter which already has an SME listed, please add your name to that chapter's list.

	Chapter	SME (Insert Name)	Chapter Length	Status
1	Introduction to Tungsten Fabric <ul style="list-style-type: none"> • The TF project • Community; benefits of TF • Describe TF architecture and overlay network principles • Explain components of TF • Service Chaining • Monitoring • Multi Tenancy • TF and Containers 	Sukhdev Kapur Armen Martirosyan winahyu utomo	30 slides	In proofreading
	Introduction to Tungsten Fabric Lab <ul style="list-style-type: none"> • Pre-lab: Install TF & Kubernetes and make sure the services are up and running. • Lab-1: Create and deploy a Kubernetes pod and make sure the Virtual Networks (vrouters/gateways) are configured so that the pod can be accessed. <ul style="list-style-type: none"> • As part of this lab exercise, the pods will be created in k8s and the corresponding configurations will be defined in services yaml file. • TF uses the configuration defined in the service yaml file and creates virtual networks. • Labs: Create Simple Gateway 		30 minute lab	In review & testing
2	Architecture Deep dive <ul style="list-style-type: none"> • Architecture Overview • TF Control Plane • TF Data Plane • TF Management • TF Basic Troubleshooting • TF Security Policy Framework 	No SME required, we will refer to arch page	30 slides	In proofreading
3	TF Configuration <ul style="list-style-type: none"> • Configuration techniques • vRouter configuration • Virtual networks configuration • Network policy/security group configuration • TF API • Remote edge 	Sukhdev Kapur Shivayogi Ugaji	20 slides	In proofreading
	TF Configuration Lab <ul style="list-style-type: none"> • Lab-2: Create multiple tenants (namespaces and pods) and deployments with access restrictions (Network policy) and show the communications between pods from different namespaces. This involves: <ul style="list-style-type: none"> • Creating multiple namespaces and a few pods and deploying corresponding services • Define network policies to allow and deny communication between two pods • Labs: Virtual networks and policies 		45 minute lab	In review and testing
4	TF & External Networks <ul style="list-style-type: none"> • Connecting virtual and physical networks • Floating IPs • Simple virtual gateway configuration • EVPN 	Edward Ting winahyu utomo	15 20 slides	In proofreading

	<p>TF & External Networks</p> <ul style="list-style-type: none"> • Lab-3: Create and deploy a pod using Floating IP so that the pod can be accessed externally. <ul style="list-style-type: none"> • This exercise could be combined with Lab-1 because the floating IPs are created automatically by TF upon deploying a service. • Labs: Creating floating IPs and gateways 		45 minute lab	Being worked on
5	<p>TF Network Services</p> <ul style="list-style-type: none"> • Baremetal workloads • BGP-as-a-service • LBaaS (Load Balancer as a Service) • vRouter deployment models (Kernel, DPDK, SRIOV, SmartNic) • How to run the DPDK vRouter standalone and pass traffic • vRouter performance monitoring • DNS server • Broadcast/multicast • Device manager • TF and Docker containers 	Will Stevens Joseph Gasparakis	20 25 slides	In proofreading
	<p>TF Network Services</p> <ul style="list-style-type: none"> • Lab-4: Create multiple tenants (namespaces and pods) and deployments with access restrictions and show the communications/access through Load Balancer • Labs: Docker containers with TF TF using k8s for container networking 		45 minute lab	In review and testing
6	<p>Observing and Logging TF</p> <ul style="list-style-type: none"> • Monitoring • Logging • Analytics 	Darien Hirotsu	15 slides	In proofreading
	<p>Observing and Logging TF</p> <ul style="list-style-type: none"> • (Optional) Demo/Recorded session of Logging/Monitoring 			