



# OLF NETWORKING

---

LFN Developer & Testing Forum



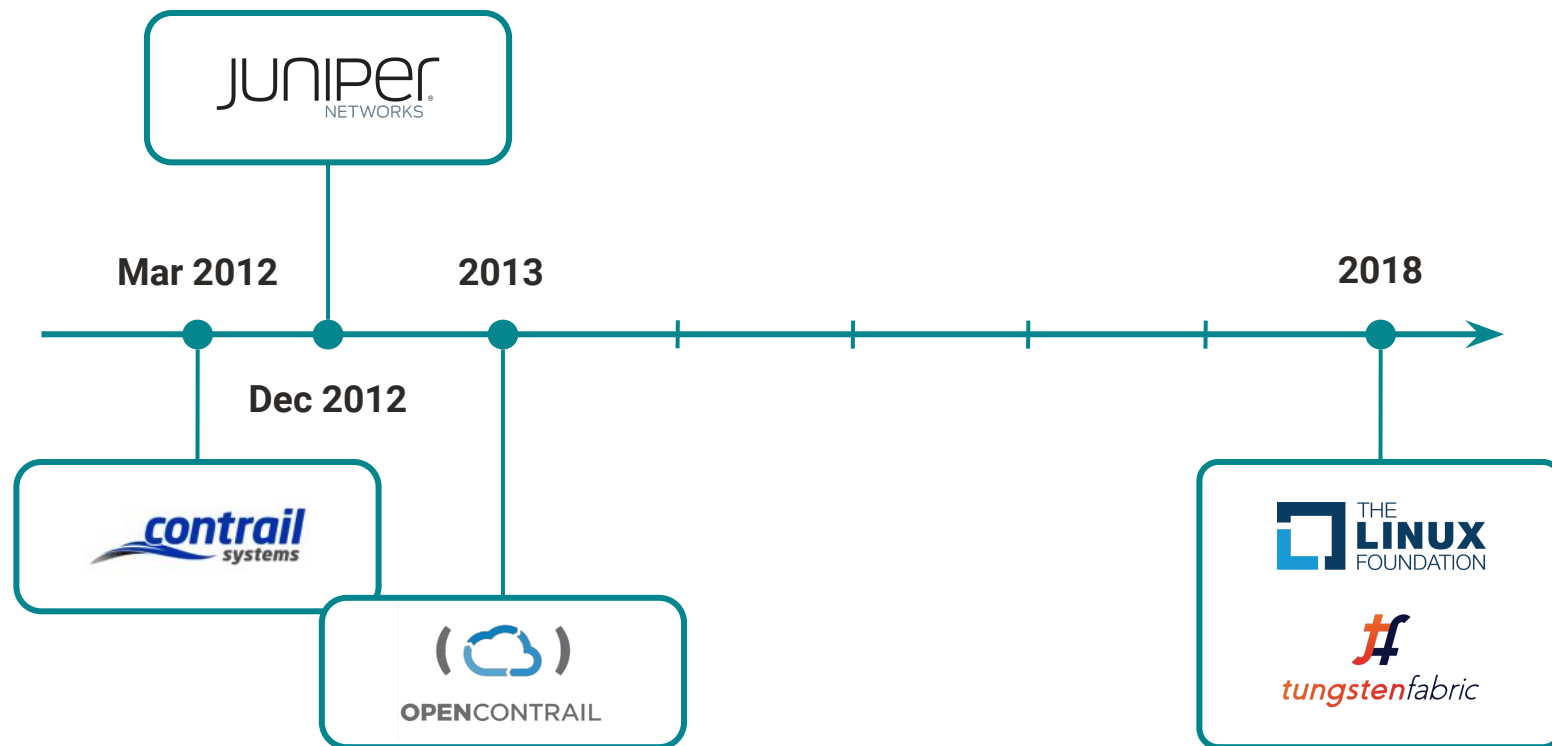
LFN Developer & Testing Forum

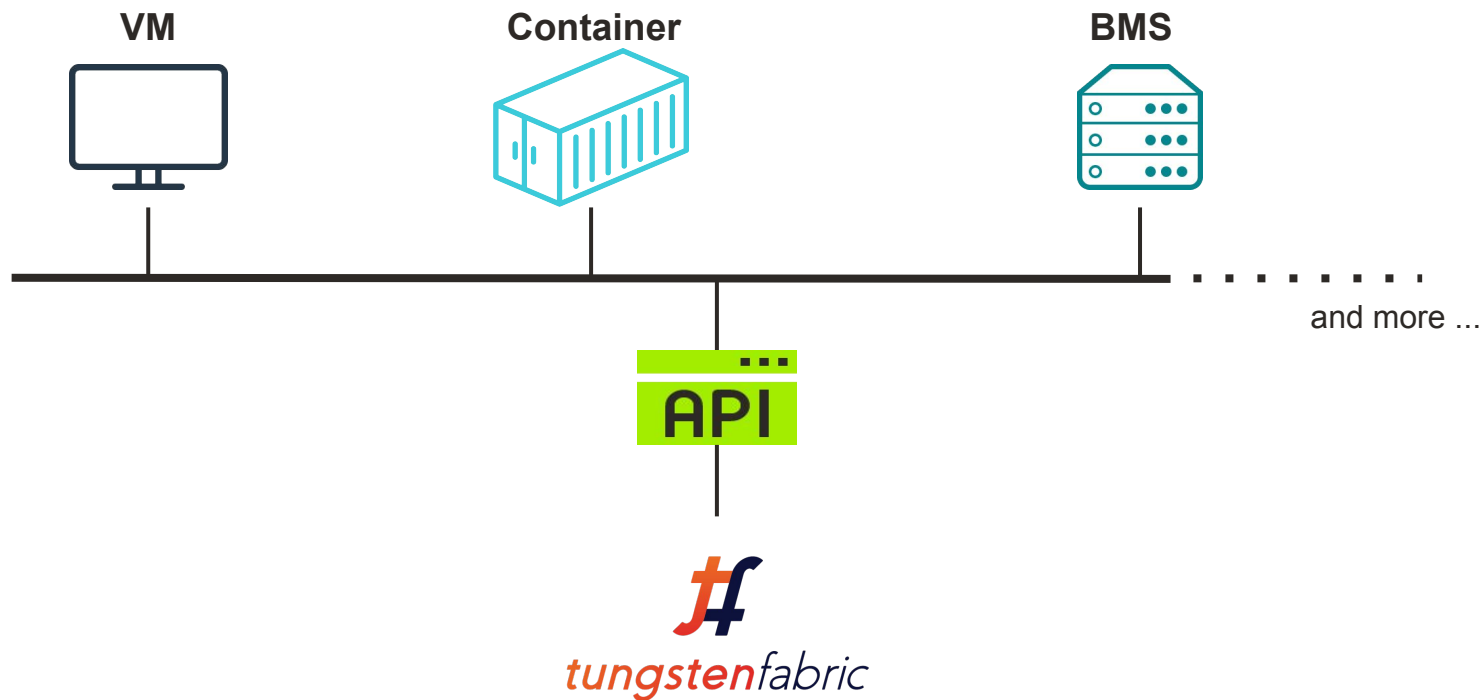
# TF architecture

An overview

Szymon Krasuski

**codilime**<sup>®</sup>  
CREATING VALUE





# # tungstenfabric

## orchestrators or virtualization platforms



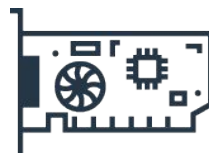
kubernetes



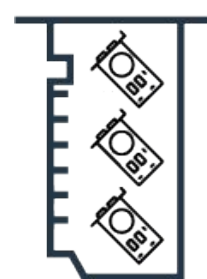
OPENSIFT



## smartNIC devices



## SR-IOV clusters

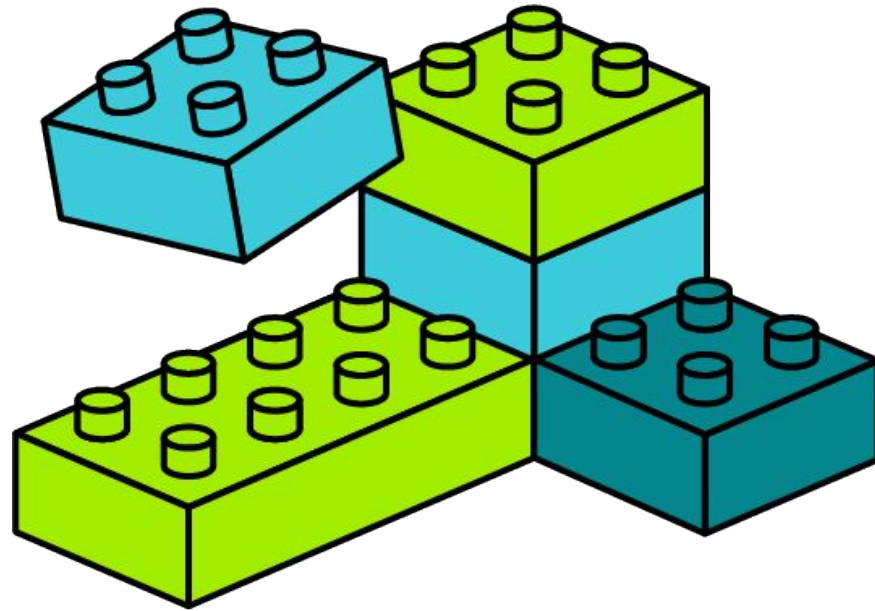


## Cloud Platforms



## 3rd party solutions







## Control Plane

## Data Plane

Config

Control

Analytics

vRouter

Kube manager

Device manager

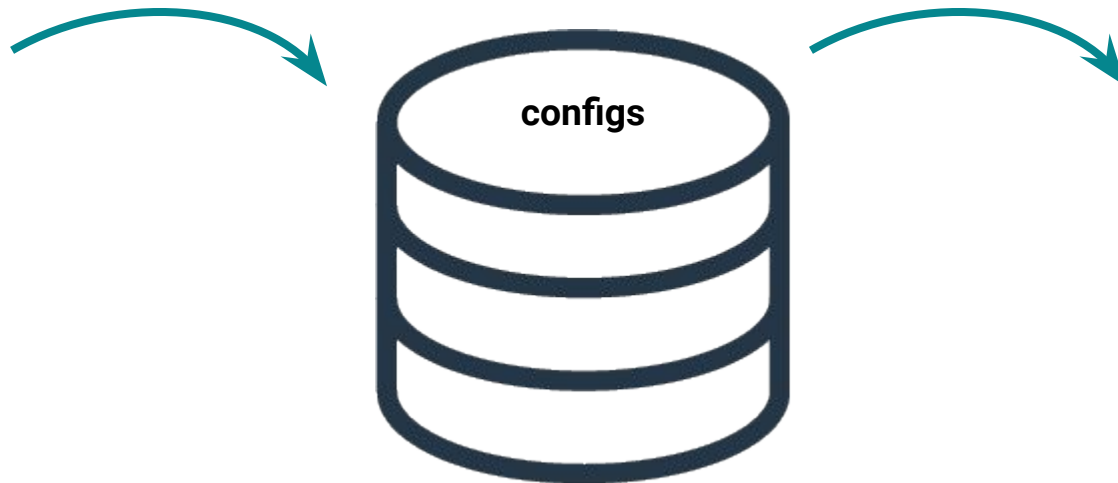


LFN Developer & Testing Forum

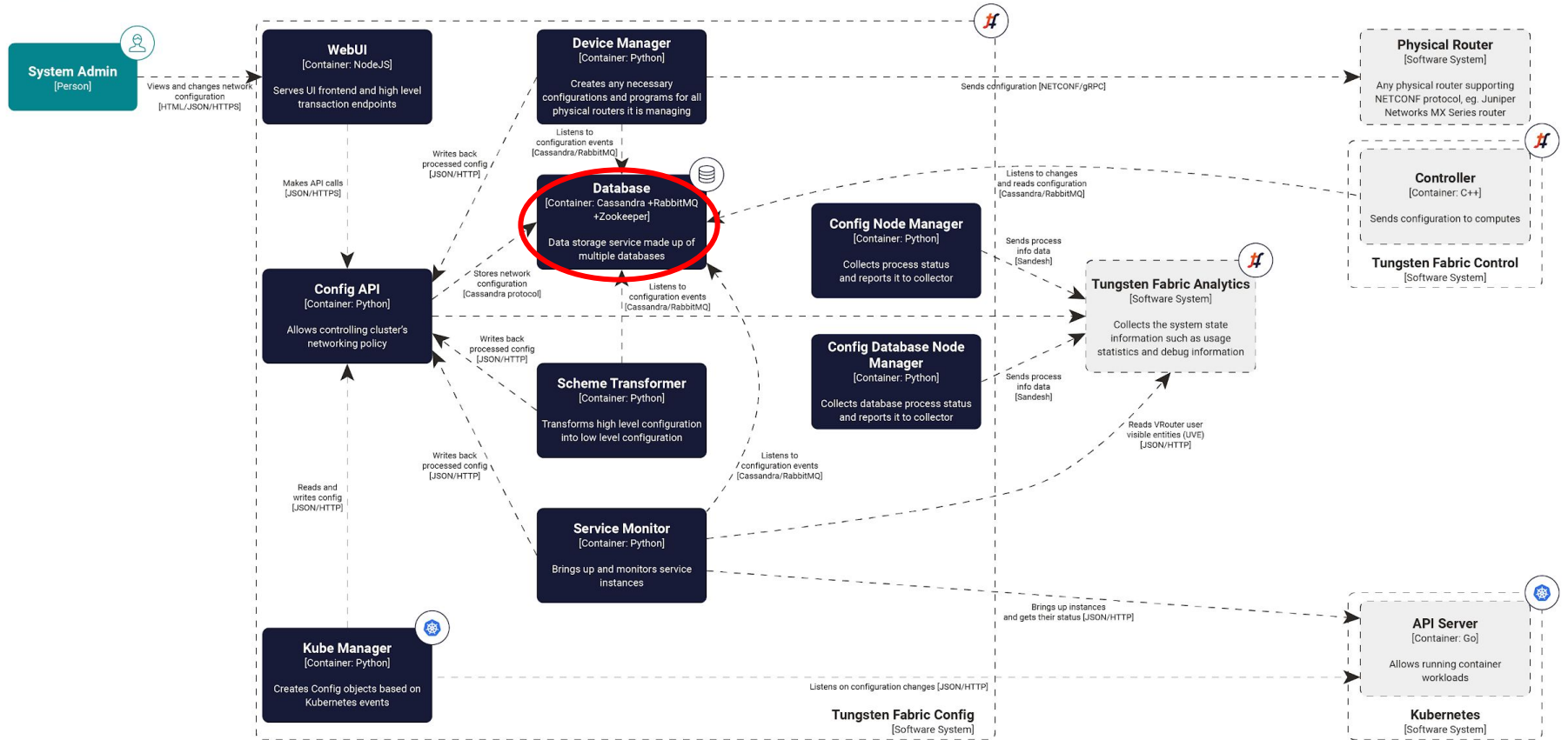
# TF Config

**The brain the platform**

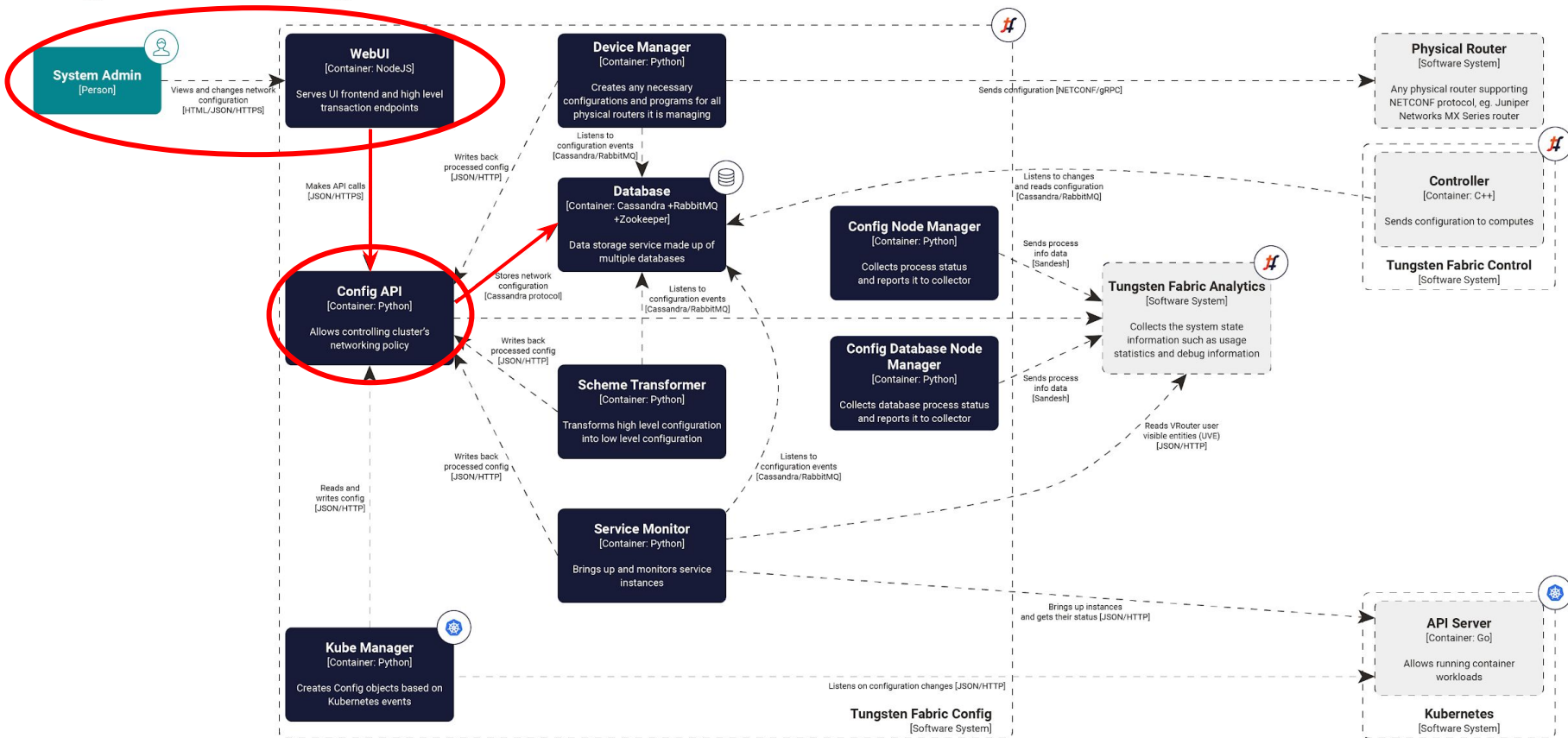


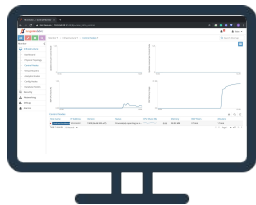


# Tungsten Fabric Config with Kubernetes



# Tungsten Fabric Config with Kubernetes



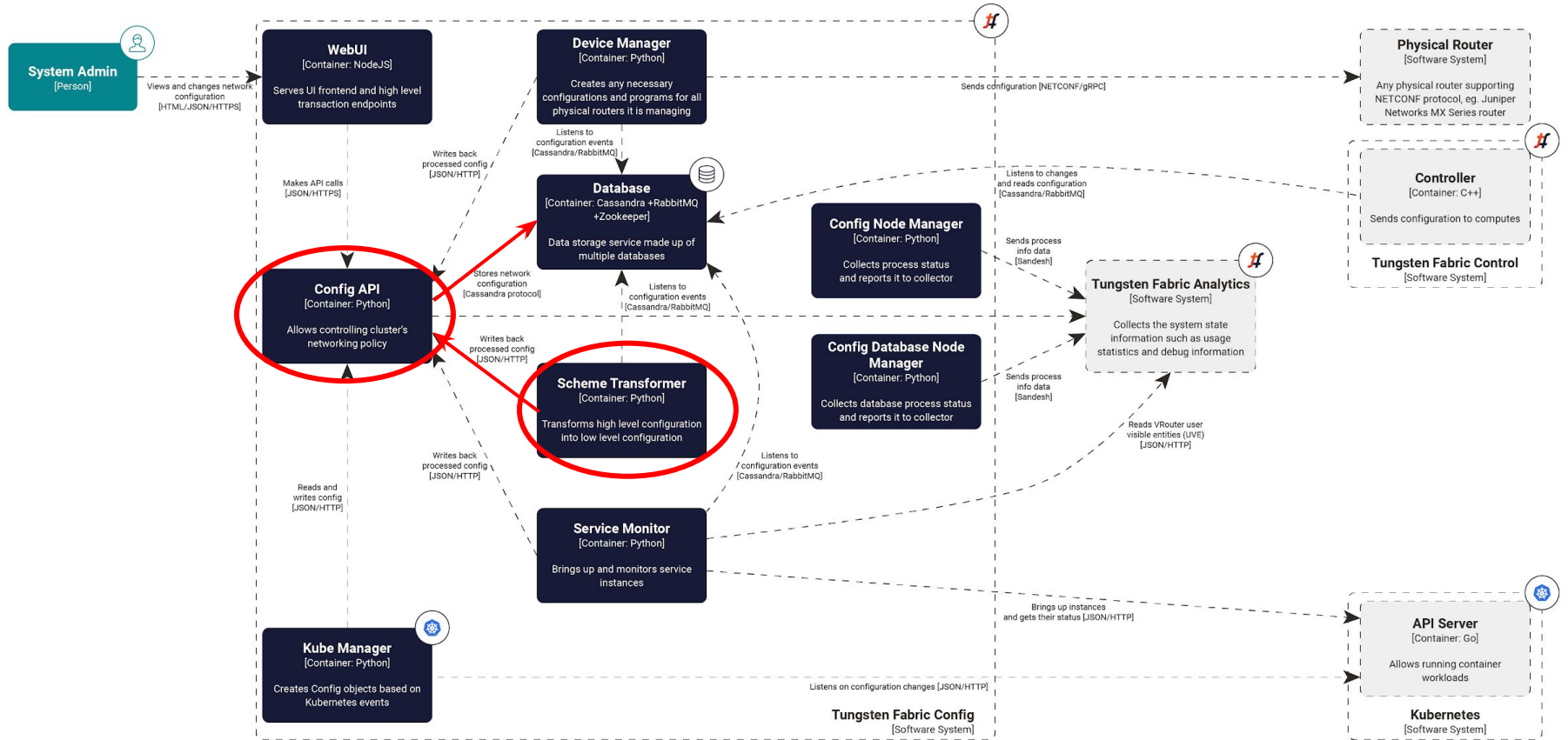


curl://

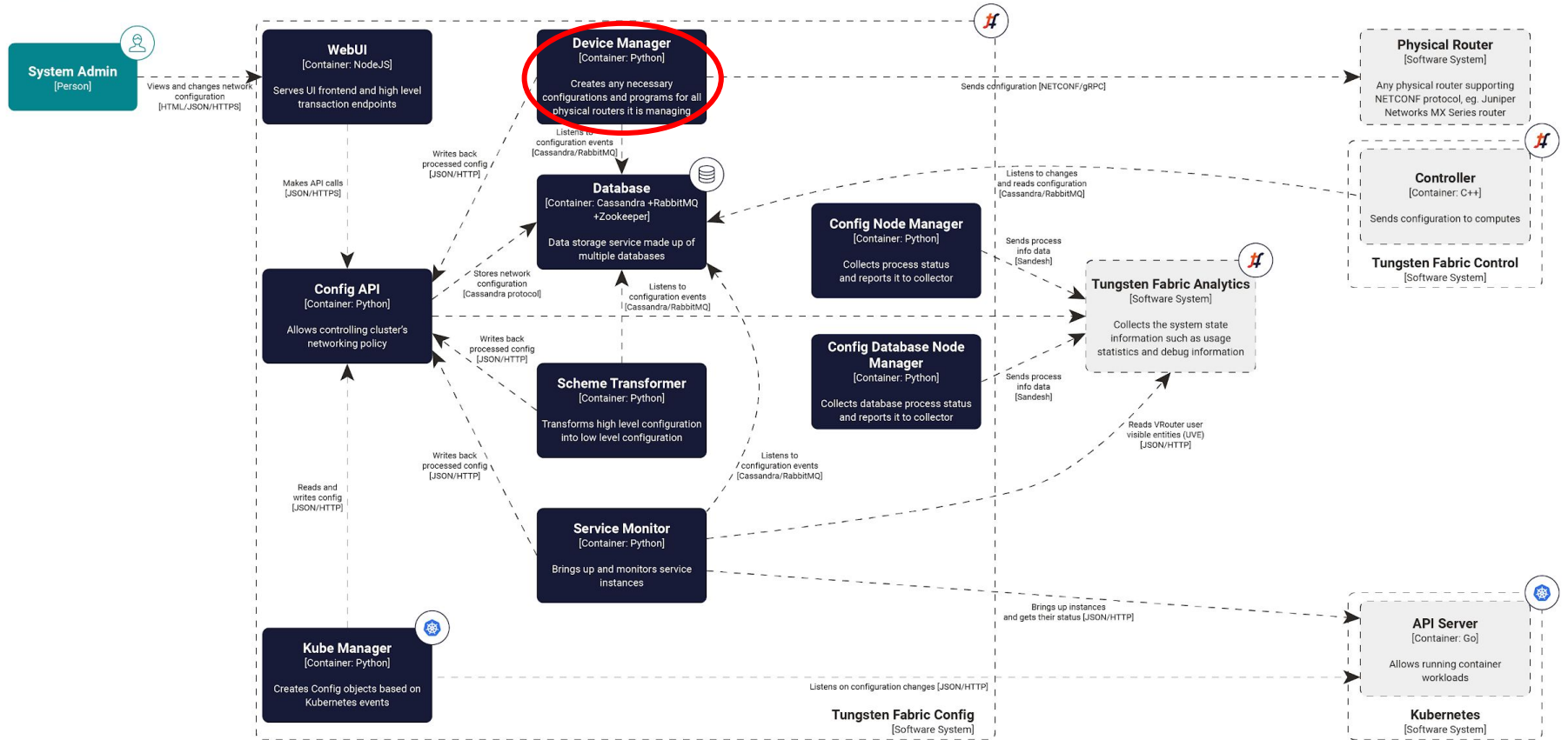


**Config API**

# Tungsten Fabric Config with Kubernetes

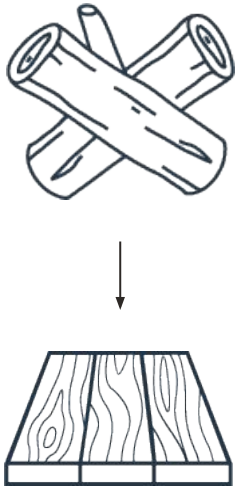


# Tungsten Fabric Config with Kubernetes

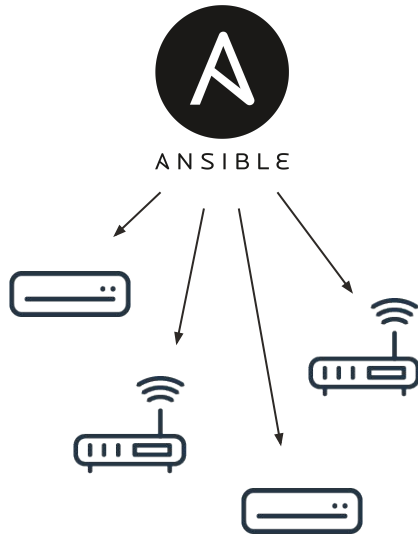


# Device Manager

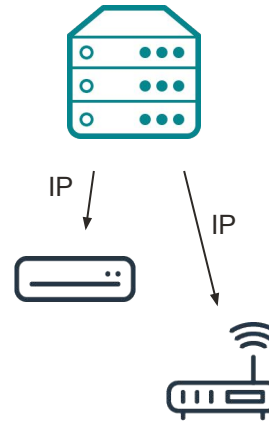
device-manager



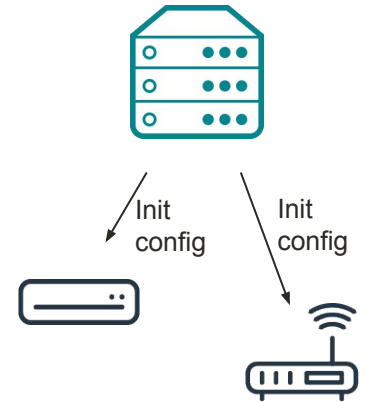
device-job-manager



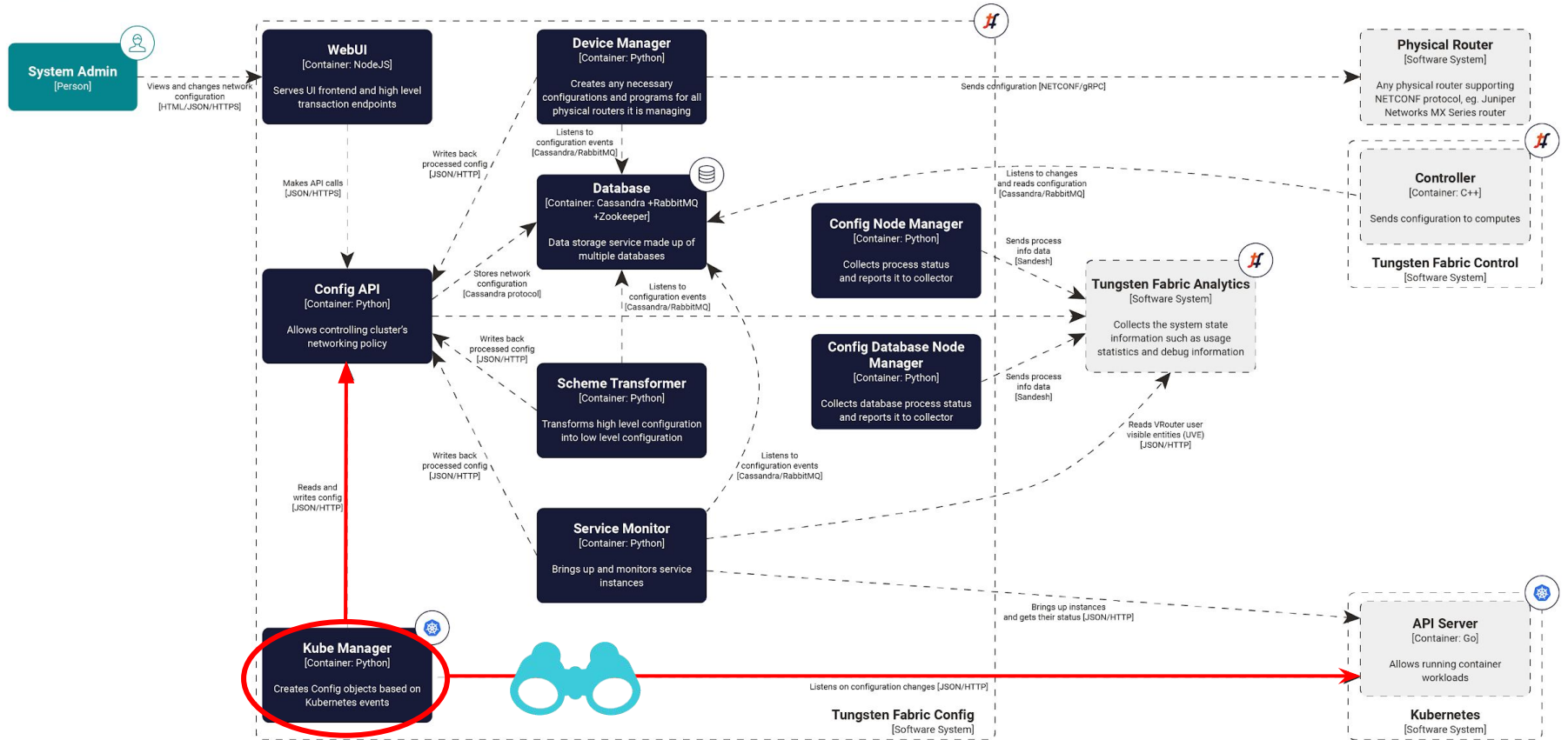
DHCP server



TFTP server



# Tungsten Fabric Config with Kubernetes



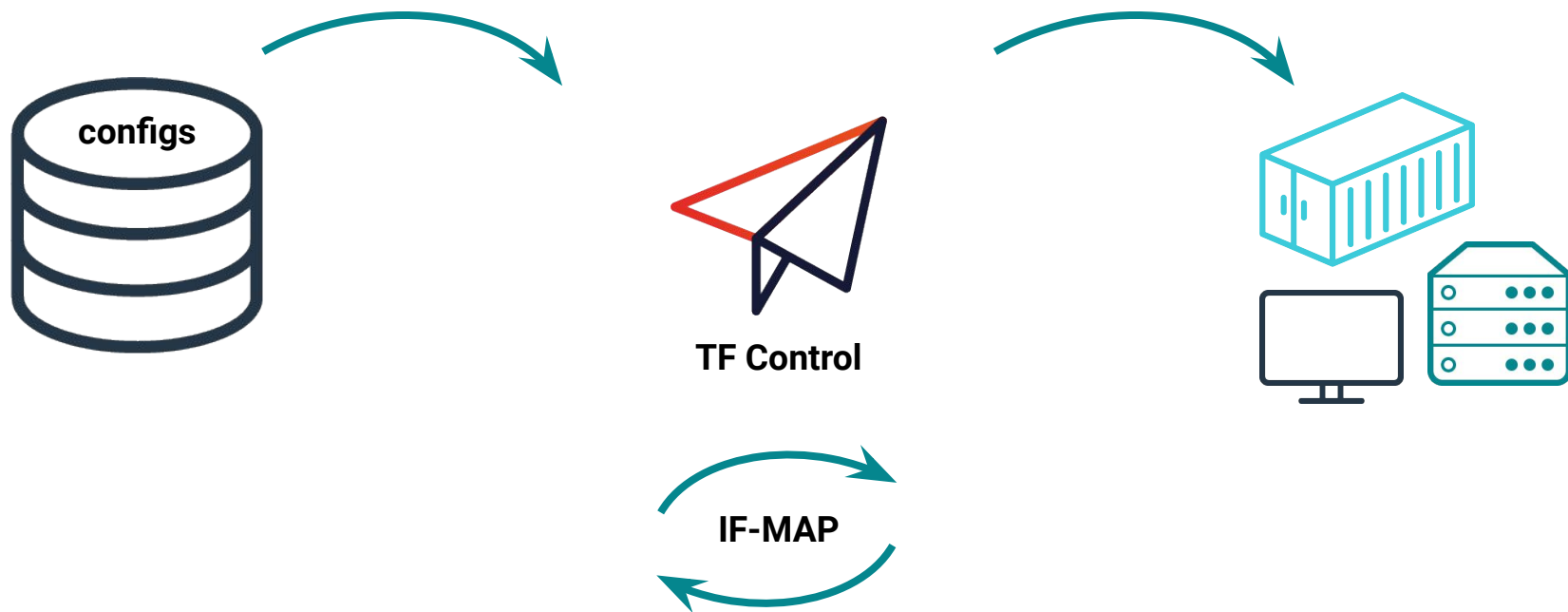




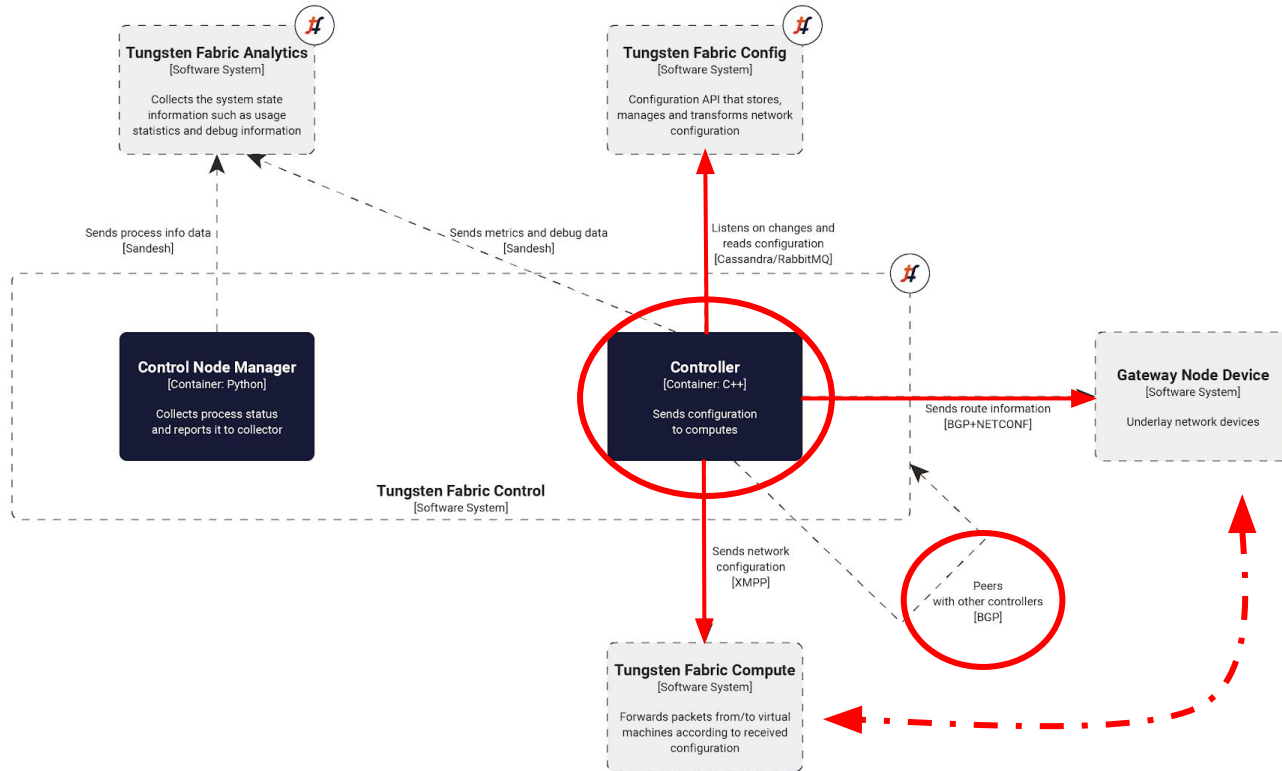
LFN Developer & Testing Forum

# TF Control

**The one in control**



# Tungsten Fabric Control



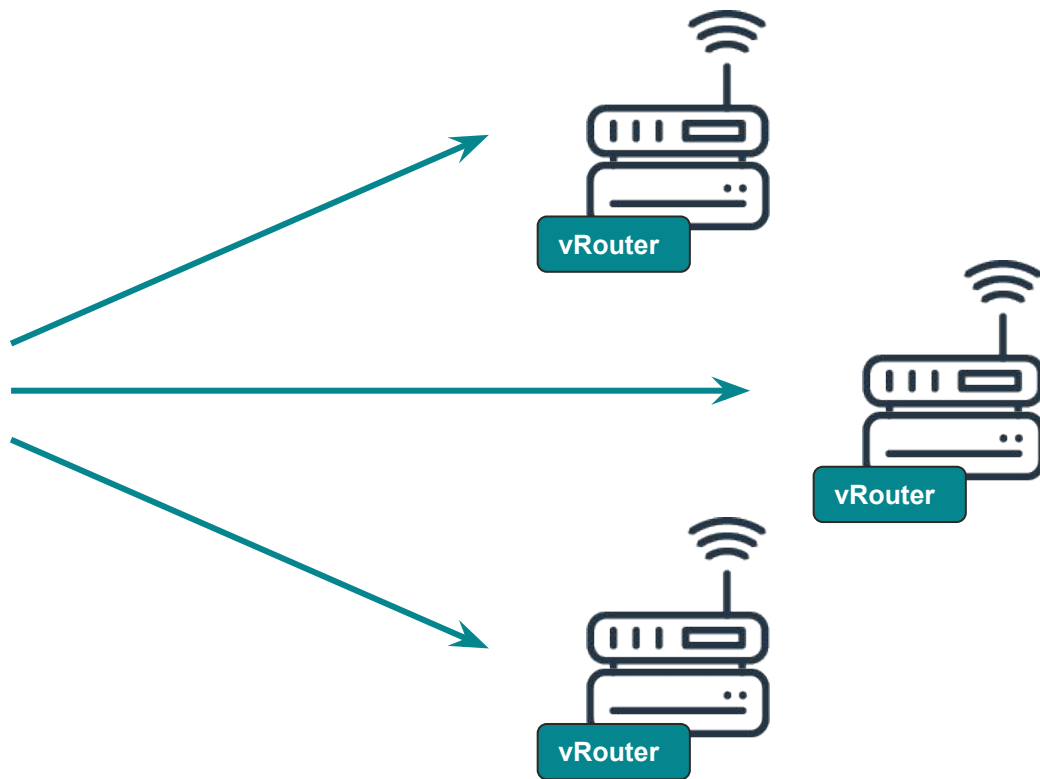


LFN Developer & Testing Forum

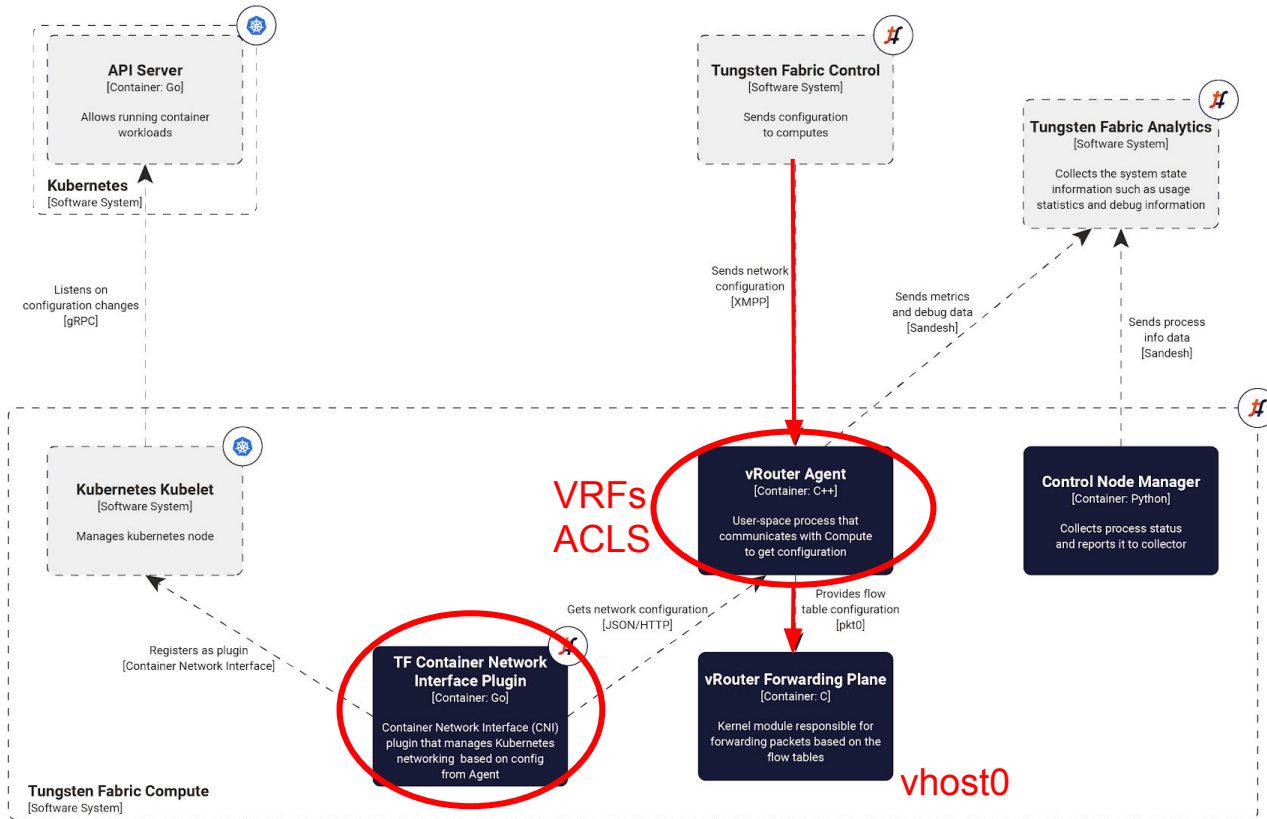
# TF vRouter

**The vRouter Forwarder and Agent**

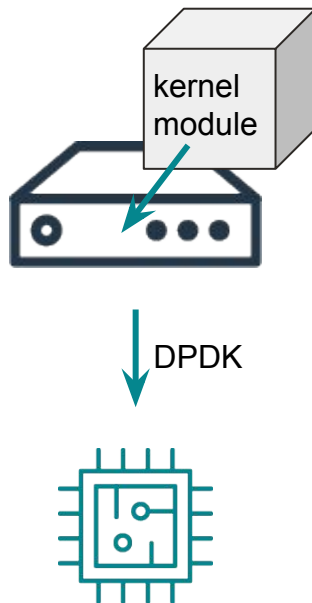
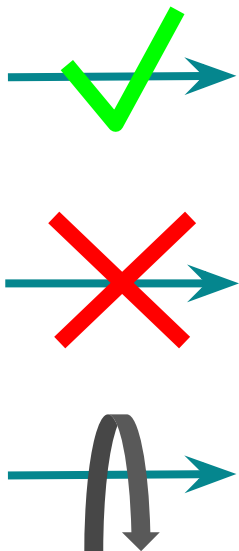
  
tungstenfabric



# Tungsten Fabric Compute with Kubernetes

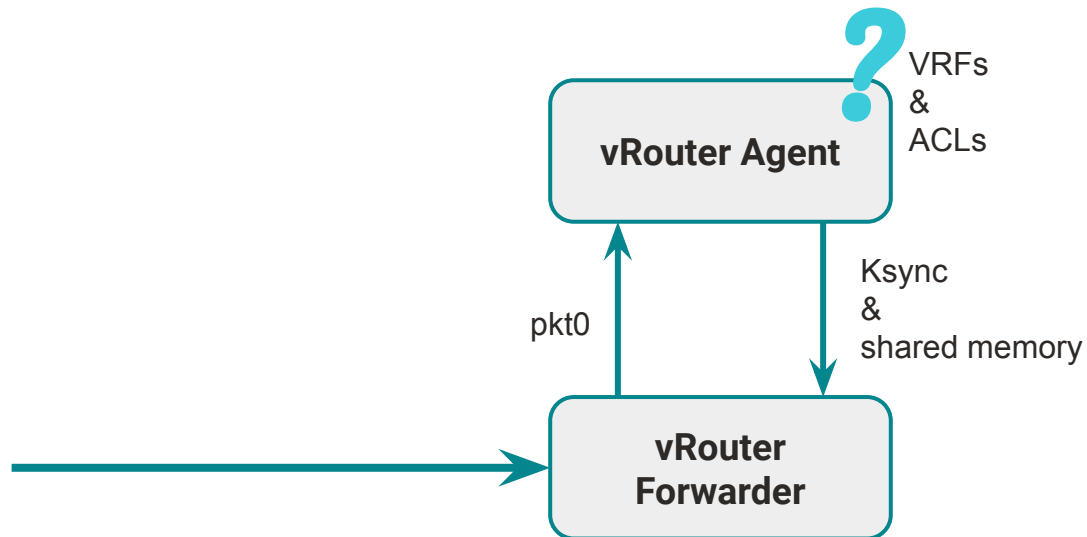


# vRouter Forwarder



## Kernel module pros & cons:

- + More efficient processing (kernel space vs user space)
- + Room for optimization
- Only specific kernel versions (may be build manually)
- Privileged mode on install



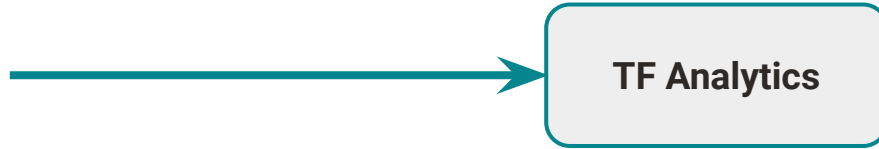




LFN Developer & Testing Forum

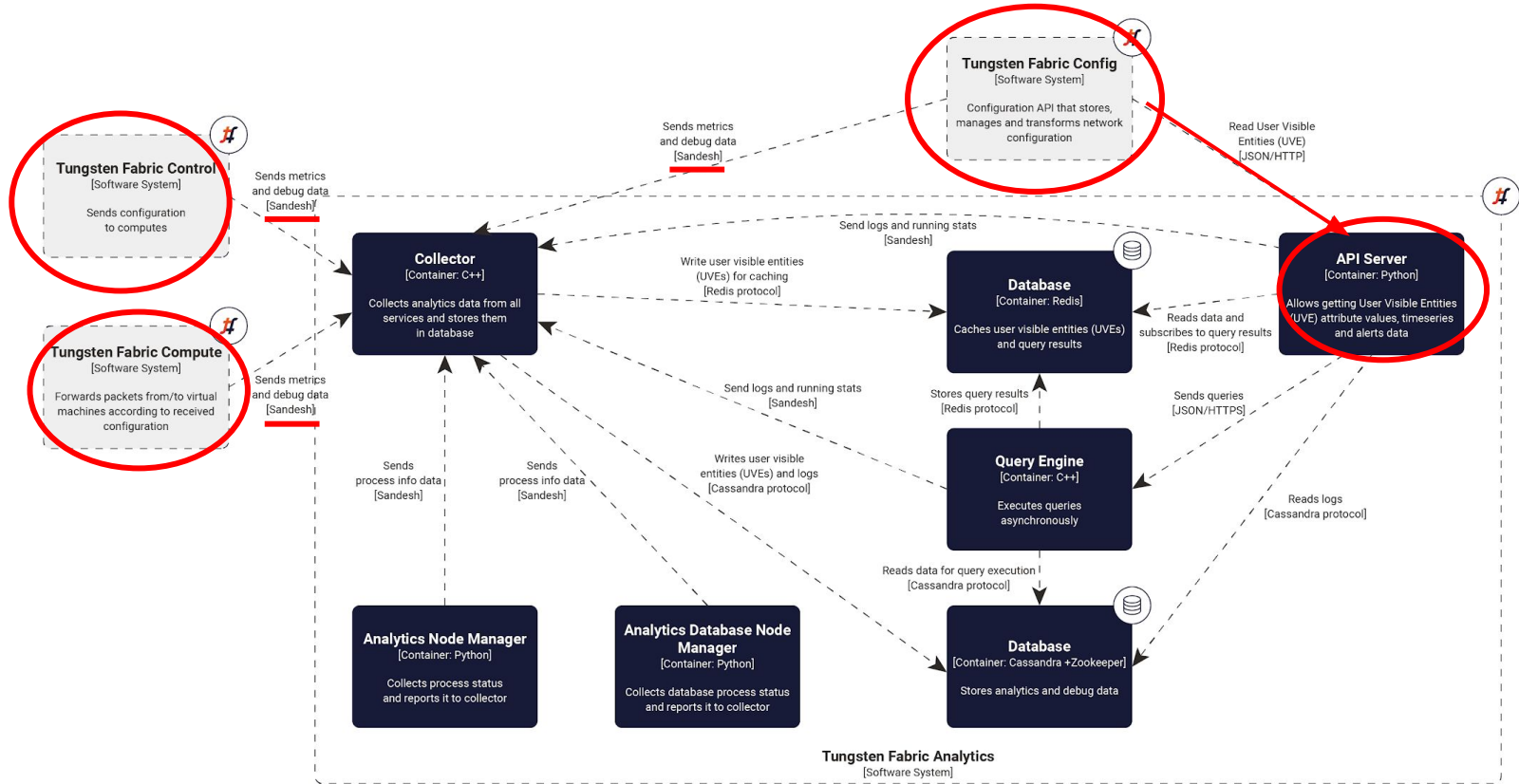
# TF Analytics

**Monitor and log everything**

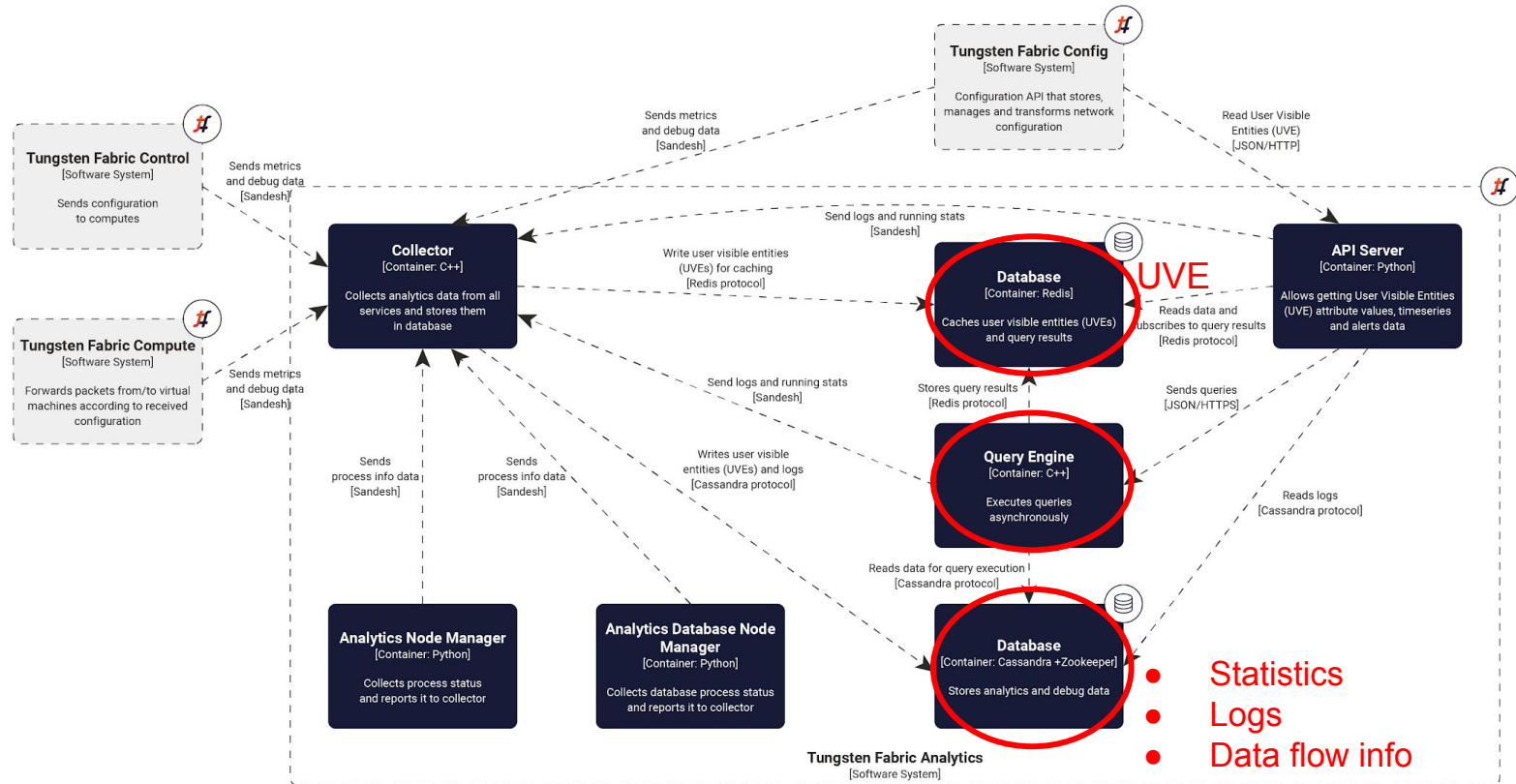


- Object logs (concrete objects in the TF structure)
- System logs
- Trace buffers
- Flow statistics in TF modules
- Status of TF modules (i.e. if they are working and what their state is)
- Debugging data (if a required data collection level is enabled in the debugging mode)

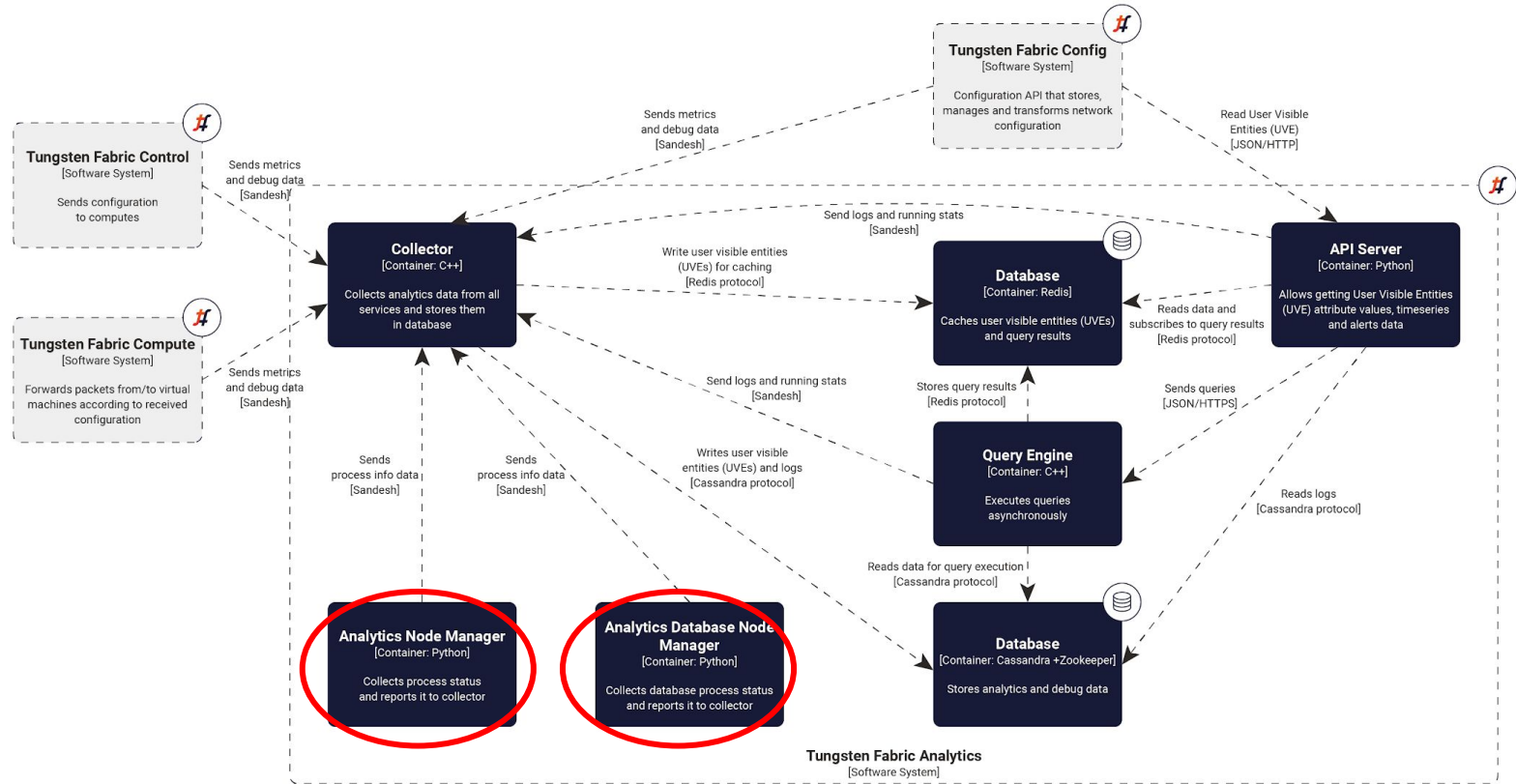
# Tungsten Fabric Analytics

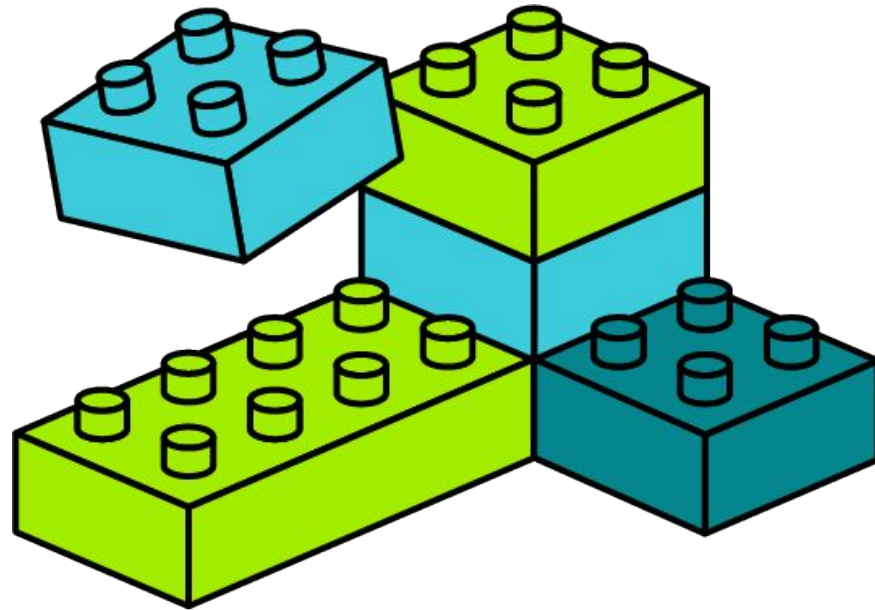


# Tungsten Fabric Analytics

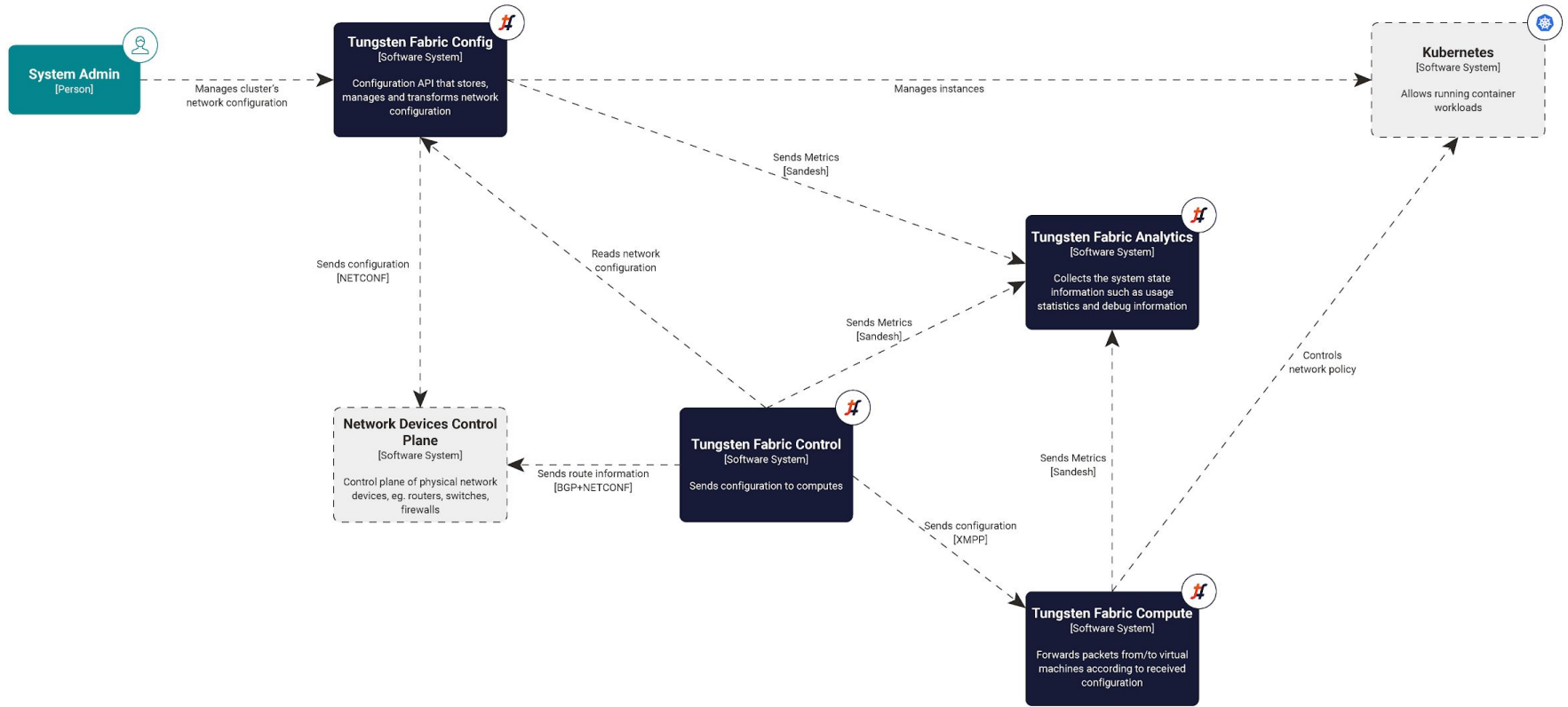


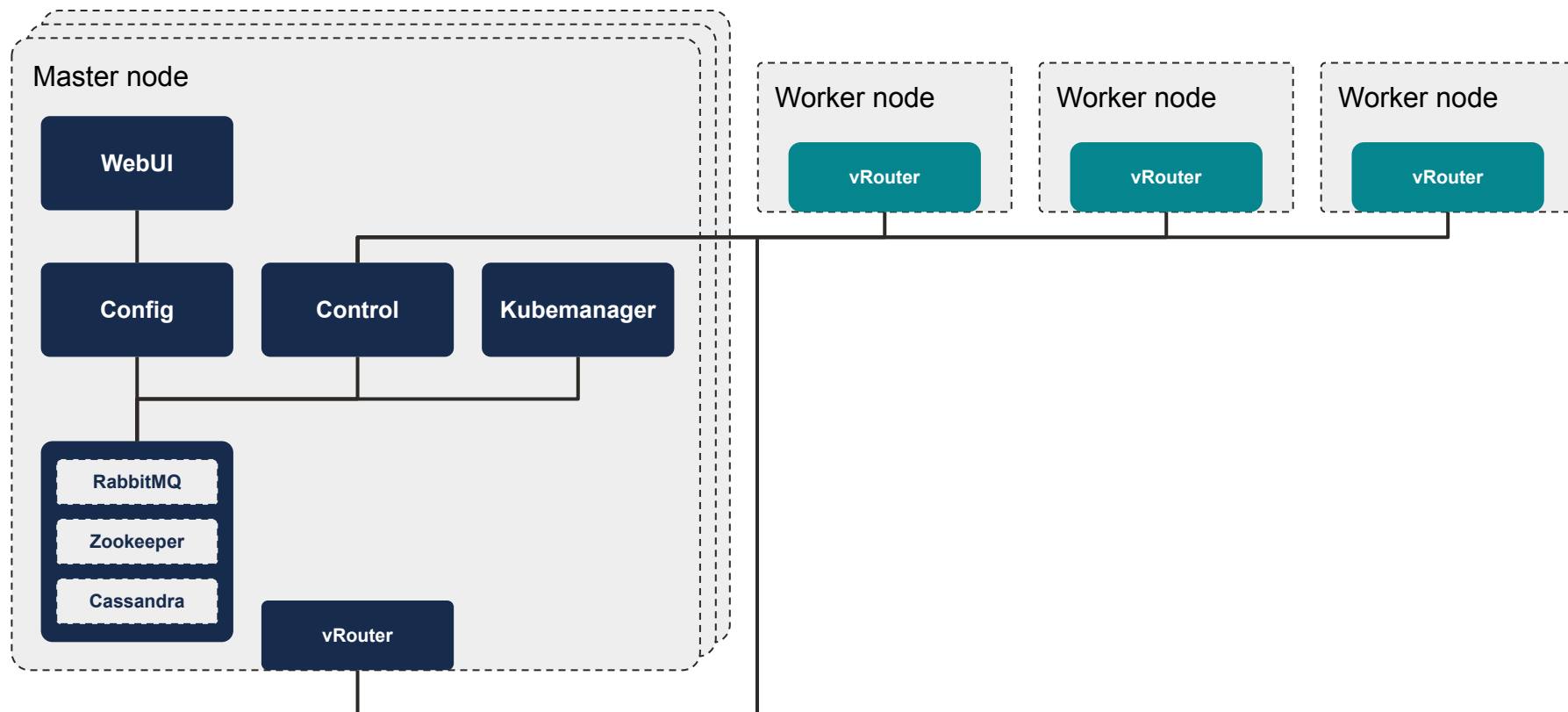
# Tungsten Fabric Analytics





# Tungsten Fabric with Kubernetes









# Thank you



2100 Geng Road, Suite 210  
Palo Alto, CA 94303  
United States of America  
+1 650 285 2458

Krancowa 5  
02-493, Warsaw  
Poland  
+48 22 389 51 00

al. Grunwaldzka 472B (OBC)  
80-309 Gdansk  
Poland  
+48 575 700 785

[contact@codilime.com](mailto:contact@codilime.com)

SDN & NFV  Cloud native & Multicloud  Software Engineering  UX / UI  DevOps

