TF DDF 2019: TF Roadmap

Date

18 Nov 2019

Minutes

- Nick Davey, PLM at Juniper, talking about Tungsten Vision & Futures
- Hoping to achieve in the future: One of the best, most performant, SDN solutions for telco, service provider, and next gen solutions
    - Improve NFVi deployments
        - Looking to improve dataplane perf
        - Improve vRouter portability
    - Position TF for 5G
    - Optimize TF for Edge Compute
- Operability will be key
    - "Don't fail quietly"
    - Improve dataplane perf by pushing it further down toward the kernel
- Deployment is hard
    - For distributed systems in particular
    - Takes a lot of time and expertise to do this right at the moment
    - Will be working on the operator framework within TF
    - More than just an installer; will be a lifecycle management tool for containers, the system, and its state
        - Will rely on other mechanisms w/in k8s to store and communicate that state
    - Hopefully will lead to smoother upgrades and operation
        - Guarantee the results of the operations
- Telco 5G transformation
    - A lot of edge compute's gonna be needed
    - Vendors are shipping VNFs in containers, so containerisation is key in a 5G environment
    - Looking to get dpdk perf, but for containers
        - Building on multi-interface support in k8s
        - Can connect multiple interfaces to arbitrary networks
    - Make the encrypted dataplane more robust
        - Already have this solution, but it's not particularly visible next
- Edge compute
    - Support for the OpenStack edge compute project
    - Intro support for real time hypervisors (want to test this? Talk to Nick!)
    - Looking to decouple things to make them more flexible
- Questions!
    - DH: Anything messaging outside of telco? Cloud native, for instance?
        - Lots of work happening in the cloud native deployments
        - Operator lifecycle management is going to help a lot with this
            - Better fold into the orchestrators we're working with
        - Will be bringing in support for service meshes this year
            - Support SMI, for instance, inside TF
            - Would be able to work for any service mesh
    - RLB: When will we get rid of the dependency on OpenStack Keystone?
        - No hard details on this, but it's definitely a black eye
        - On the radar, but need a plan
    - WS: More about that orchestration extension…?
        - It's about deployment and mostly installers
        - "What orchestrates the TF deployment?"
        - Things like Docker Compose and the like
        - Want an operator agnostic approach
        - Will leave the door open for other orchestrators themselves, of course
    - AA: Is it a problem for TF that k8s doesn't scale well beyond 200 hypervisors?
        - Have a lot of power here in multicluster peering and our seamless overlays
        - Wrap TF around all of the clusters, and it's easier
        - Don't get larger clusters, but get a lot more smaller clusters that act as one
        - More reachability across services

Action items

- [x] Nick will send slides ASAP after this so we can attach them to this page