Tungsten Fabric Project

Annual Incubation Health Review

8 April 2020

THE LINUX FOUNDATION
Tungsten Fabric - Summary

› Project Functionality: Tungsten Fabric is a networking and security provider that allows users to connect workloads in any cloud and any orchestrator including Kubernetes and OpenStack while providing policy control and visibility.

› Latest Release:
  › 5.1
    › Significant focus on bug fixes and stability

› Community Highlights:
  › Updated the community release plan to improve and align to other open source projects
  › Repo migration from Juniper to LF is nearing completion
  › Toolchain support added for Jenkins
  › Community investigating workflow migration to GitHub to improve ease-of-use
Tungsten Fabric - Community Health

- Number of sub-projects & changes in state: 56 Repositories
- Number of committers: 494
- Number of committers per-organization: 72 Organizations by email domain (modding out for Gmail)
- Number of active committers: 154 over the past year
- Number of active committers per-organization: 22 orgs over the past year, with roughly half from Juniper and ~10% from CodiLime
- Number of commits (by release): Roughly 42500 +/- 1500
- Number of non-trivial (generated code, version bump, ...) commits >5k LoC: 106
- Wiki edits: 267 new pages w/ 54 active editors
- Mailing list activity/subscribers: 396 mailing list members
- Twitter followers: 2383
Tungsten Fabric - Infrastructure Tooling

› Version Control: Gerrit with mirroring to GitHub
  › The community is discussing migrating our version control system from Gerrit to GitHub. There are a number of workflows that the current community relies on that are tied to Gerrit. That said, we are evaluating how we can align to the LFN recommendations.

› CI/CD: Zuul and Jenkins
  › To improve the quality of our CI/CD pipeline and to ensure the community can support the software development lifecycle, Tungsten Fabric is migrating to Jenkins as the primary CI platform.

› Bug tracking: JIRA
  › Tungsten Fabric has migrated from Launchpad to Jira
Tungsten Fabric - Cross-Project Interaction

› DPDK: TF migrated from a Juniper forked repo of DPDK to the upstream repo. The community is in process of moving to a later LTS release to take advantages of new DPDK enhancements.

› FD.io: ATS developed an integration/demo to use VPP as datapath with TF. ATS is exploring adoption of VPP as an alternate data plane.

› ONAP: Identified as part of LFN - whitepaper contribution, community is looking forward to address this integration.

› Network Service Mesh: Created a working group exploring integration of service mesh with TF focusing on network service mesh.

› Akraino: The Akraino edge compute stack leverages TF to interconnect remote, edge compute nodes running VM and container workloads.
  › Three Akraino blueprints use Tungsten Fabric
  › Additional on the way
Tungsten Fabric - Your Feedback

What’s working well that others should know about?

- The Tungsten Fabric (TF) community is migrating repositories from the legacy
- TF’s China engagement has been well received
- TF’s involvement in Google Summer of Code is driving enhancements and ease-of-use exercises such as within our docs team
- TF’s cross project collaboration with communities external to LFN has driven technical enhancements to help customer adoption (Akraino, DPDK, etc)

Where is help needed?

- Our TSC is focused on growing through Kubernetes communities
  - Guidance or help with our outreach from the LFN would be valuable
  - Community based access to infrastructure (e.g. compute) for integration testing activities (e.g. TF integration with Network Service Mesh)

What would do differently over past year?

- Better focus and visibility with LFN marketing
  - Better clarity on LFN provides for marketing for TF
  - Should the community focus on our own user stories and highlights?
- Focus on developer events for cross project and community collaboration (e.g. DPDK, CNCF, ONAP etc)