

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
 - › Release Notes: <https://tungsten.io/introducing-tungsten-fabric-5-1/>
- › **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.
 - › <https://wiki.lfnetworking.org/display/LN/Infrastructure+Working+Group+Summary+Report>
- › 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)