

# 2019-06-18 Technical Work Stream

## Date

18 Jun 2019

## Attendees

- [Prabhjot Singh Sethi](#)
- [Casey Cain](#)
- [Daniel Pono Takamori](#)
- [Anand Rao](#)
- [Darien Hirotsu](#)
- [Gary Greenberg](#)
- [Martin Mailand](#)
- [Valentin Sinitsyn](#)
- [Will Stevens](#)
- [Alex Ankudinov](#)
- [Joseph Gasparakis](#)
- [Alex Levine](#)
- [Kiran KN](#)
- [Rudra Dubey](#)
- [Saket](#)
- [Pujita](#)
- [Soujanya](#)
- [Subramanian M](#)
- [Subbu](#)
- [Jim St. Leger](#)

## Agenda

- Start the Recording
- [Antitrust Policy](#)
- Agenda Bashing (Roll Call, Action Items (5 minutes))
- Future plan for TPC (Alex to share some details)
- Tungsten fabric with dpdk library from upstream
  - Compilation, commit to TF ?
  - Testing, what tests can be run to validate bugs/missing features in upstream code
  - TF-dev-env to include a build option for compilation against pre-compiled dpdk library/targets
- General Topics

## Minutes

- Intel perf doc
  - Joseph still working on getting legal approval to release this
- Joseph going on 9 week sabbatical next week
  - Getting coverage
  - Will email w/that info
- Future plans for TPCs (third party code/binaries being used to build the containers)
  - The issue: Currently have no insight into what source is being used for TPCs
  - Alex summary of existing
    - Some prebuilt rpms
    - Some pre-built by Contrail
      - rpm specs
      - Built from source by Contrail team
    - Some very complicated dependencies
      - Very old, can't even find provenance
    - Generally best not to change anything
  - PS: Will need to use pre-built, then?
    - Artefacts stored in Nexus
    - Only option right now, not building from source
  - PS: Community would like to switch to the upstream binaries
    - Are some Juniper binaries have contrail- in the name, implying Contrail-related fixes are in there, would rather not use those
  - Alex: these are open source & Juniper handed them to the community as well, maybe just need to rename the binaries
    - PS: Won't work; are still not upstream code; would like to start transitioning to this (will be a process)
      - Enable more community/project independence
    - Would like to move away from privately-provided/-built libraries
- Compiling TF with upstream dpdk
  - Would like to build with upstream dpdk rather than Contrail dpdk

- Pre-built binary from dpdk.org should theoretically work
- PS has made some minor changes in vrouter for this
  - Option in build process to pick which binaries to use
    - Doesn't work with just this
  - Was an assumption in the code in the stats collection
    - Configurable in upstream, assumed in Contrail
    - Add a void for it for now
  - Contrail variables for PKT\_RX\_GSO for TCP4/6
    - Contrail extension for GSO
    - Not sure how to work around this yet to get the compilation to work
    - JG: This has been around for a while, should upstream dpdk
      - PS: Don't know the process for this, since these flags won't be used by anyone else
      - JG: Sure, not used since they don't there exist yet
    - Rudra (RD): Is a config flag for this in Contrail kernel-based vrouter
      - Probably added this in their dpdk to support this in their code as well
    - PS: dpdk has own implementation of GSO support, though
      - But this looks like a TF/Contrail-specific implementation
      - Not getting benefit of complete GSO implementation in dpdk
- Short term
  - Not change the functionality
  - Just run using dpdk.org binaries
- Long term
  - Take advantage of features in upstream dpdk.org
- Existing changes allow the compile to complete
  - Still need to test
  - Who defines what needs to be tested with dpdk when using an external library?
- JG: Compile is step 1
  - Fix the GSO stuff
  - Does it start?
  - Test that it can pass traffic
  - Trace to make sure perf doesn't get degraded
- Contrail dpdk is v18.05
  - PS's version isn't the same, same compile instructions don't work, missing patches
    - Can't compile with gcc optimization on in v18.05
  - So used v18.08
  - Community needs to figure this out
    - If not building with optimization on, will be a perf hit
    - Need to choose a version
  - JG suspects it'll be OK to move to v18.08
    - Will also need to look at LTS releases & decide whether to go that way (would be slower updates)
      - RD: People using it in production
      - Versioning isn't very agile for this
      - If we stick to LTS it'll be more stable
      - If customer needs certain hardware support, can request/contribute it from/to community or vendor
- LG: For now, just trying to figure out the state of things
  - Then can start planning which release we wish to use and how to get there
- Patch needs a review: <https://review.opencontrail.org/#/c/51201>
  - Please have a look and give feedback on the patch

## Action items

- ✓ Prabhjot Singh Sethi Write up a Jira ticket for the GSO work
- ✓ Prabhjot Singh Sethi Write up a Jira ticket for which upstream dpdk version to use
- ✓ Prabhjot Singh Sethi Will send dpdk compile patch to Joseph Gasparakis for perf testing w/in Intel submit a patch for review