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

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