CSIT TOI

CSIT Performance tests

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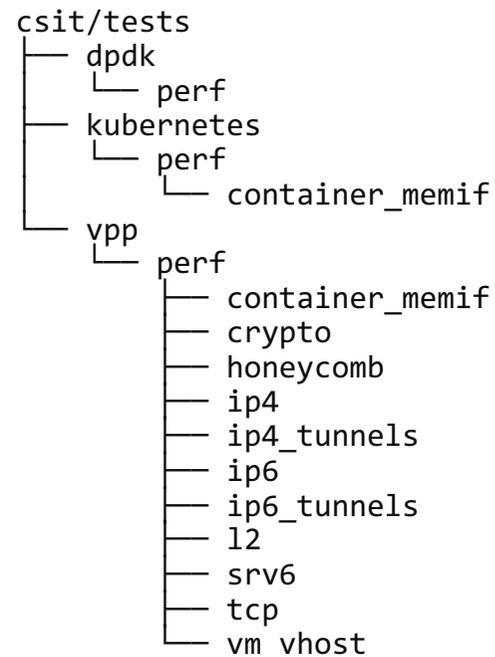
CSIT Performance tests

- Performance tests hierarchy.
- Performance test structure.
- Performance test jobs and execution.
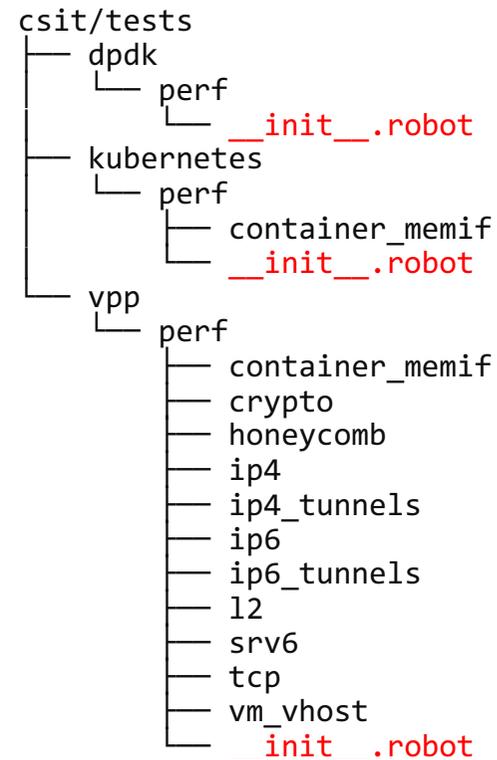
Performance tests hierarchy

- DPDK baseline tests.
  - testpmd, l3fwd
- Kubernetes orchestrated tests.
- VPP tests.

```
csit/tests
├── dpdk
│   └── perf
├── kubernetes
│   └── perf
│       └── container_memif
└── vpp
    └── perf
        ├── container_memif
        ├── crypto
        ├── honeycomb
        ├── ip4
        ├── ip4_tunnels
        ├── ip6
        ├── ip6_tunnels
        ├── l2
        ├── srv6
        ├── tcp
        └── vm_vhost
```

Performance test structure

- Global variables
  - Unique per test type.
  - Applies in subtree.
  - Contains global suite setup/teardown.
  - Contains global settings
    - TG trial duration.
    - PDR loss acceptance.
    - PDR loss acceptance type.
    - Nested VM image location.
    - Qemu parameters.

```
csit/tests
├── dpdk
│   └── perf
│       └── __init__.robot
├── kubernetes
│   └── perf
│       ├── container_memif
│       └── __init__.robot
└── vpp
    └── perf
        ├── container_memif
        ├── crypto
        ├── honeycomb
        ├── ip4
        ├── ip4_tunnels
        ├── ip6
        ├── ip6_tunnels
        ├── l2
        ├── srv6
        ├── tcp
        ├── vm_vhost
        └── __init__.robot
```

Performance test structure

- Settings
  - Resource   `resources/libraries/robot/performance/performance_setup.robot`
  - Force Tags!
  - Common/Custom SS/ST/TS/TT.
  - Documentation.
- Variables
  - Absolute miminum: s_limit, traffic_profile
- Behavior-driven style → Data-driven style

Performance test structure

- NDR/PDR discovery (range could be overridden)
  - Available search algorithms: Binary search, Linear search, Combined search.
  - Predictive search?
- NDR/PDR checks

- Variations
  - 64B, IMIX_v4_1, 1518B, 9000B, … .
  - 1t1c, 2t2c, 4t4c.

Performance test jobs and execution

- Executed against physical testbeds.
- Trending jobs
- CSIT-VPP jobs
- VPP-CSIT jobs

- Full list of Jenkins Jobs
  - https://wiki.fd.io/view/CSIT/Jobs

Q & A