CSIT TOI

CSIT Libraries

Tibor Frank

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CSIT Libraries

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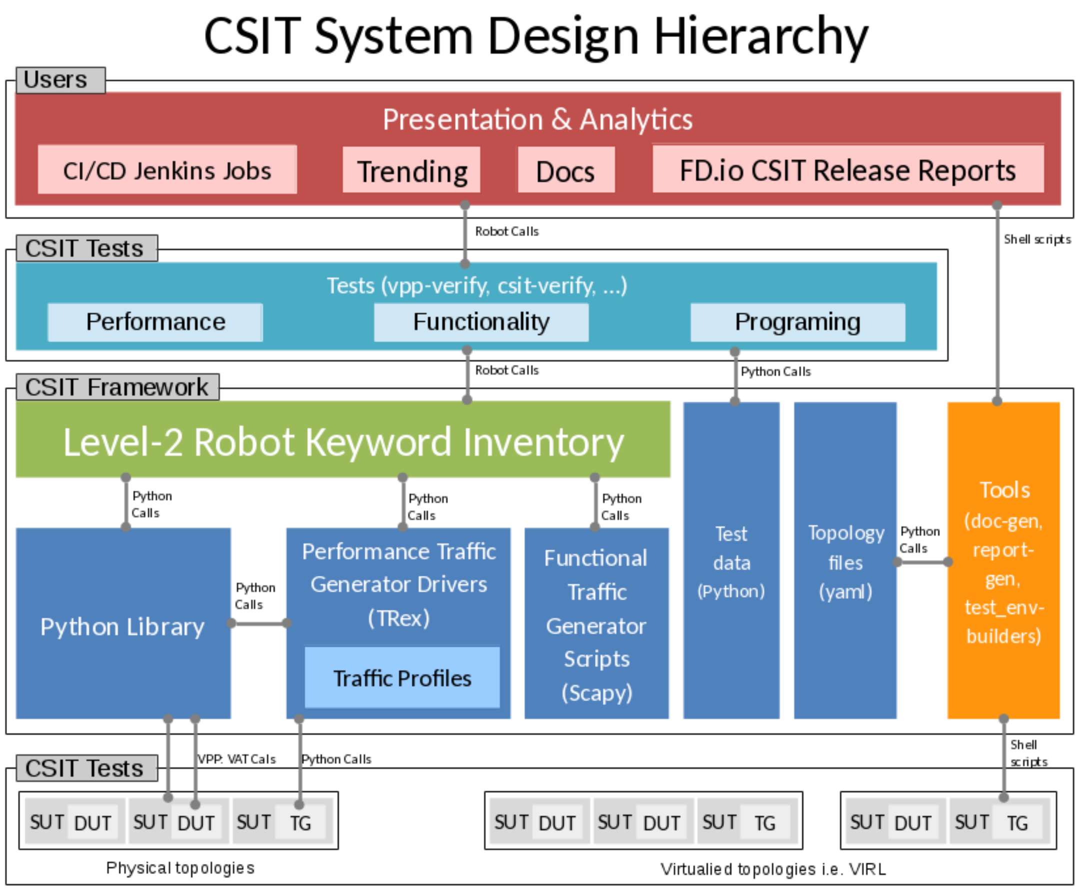
- L1 Python Libraries
- L2 Robot Libraries
- Test Lifecycle Abstraction
- L2 RF Keywords Functional Classification
- CSIT Design Guidelines

L1 and L2 Libraries in CSIT Hierarchy



L1 Python Libraries

- Lowest level CSIT libraries abstracting underlying test environment, SUT, DUT and TG specifics;
- Used commonly across multiple L2 keywords.

- Performance and functional tests:
  - L1 keywords are implemented as Python libraries.

Source code: https://git.fd.io/csit/tree/resources/libraries/python

For more information see: https://wiki.fd.io/view/CSIT/Design_Optimizations#CSIT_System_Design_Hierarchy

Performance TG L1 Keywords

- Support for TRex and wrk traffic generators today;
- CSIT IXIA drivers in progress.

Source code: https://git.fd.io/csit/tree/resources/tools/trex

Source code: https://git.fd.io/csit/tree/resources/tools/wrk

Traffic profiles and scripts

- Performance data plane traffic profiles
  - TG-specific stream profiles provide full control of:
    - Packet definition;
    - Stream definitions;
    - Stream profiles are independent of CSIT framework;
    - Easily extensible;
    - Same stream profile can be (and is) used for different tests.
- Functional data plane traffic scripts
  - Scapy specific traffic scripts

Source code: https://git.fd.io/csit/tree/resources/traffic_profiles

Source code: https://git.fd.io/csit/tree/resources/traffic_scripts

L2 Robot Libraries

- Higher level CSIT libraries abstracting required functions for executing tests;
- L2 KWs are classified into the following functional categories:
  - Configuration;
  - Test;
  - Verification;
  - StateReport;
  - SuiteSetup;
  - TestSetup;
  - SuiteTeardown;
  - TestTeardown.

Source code: https://git.fd.io/csit/tree/resources/libraries/robot

For more information see: https://wiki.fd.io/view/CSIT/Design_Optimizations#RF_Keywords_Functional_Classification

Test Lifecycle Abstraction

- Anatomy of Good Tests for CSIT:
  - Suite Setup
  - Test Setup
  - Test Case – uses L2 KWs with RF Gherkin style:
    - prefixed with {Given} – Verification of Test setup, reading state: uses Configuration KWs, Verification KWs, StateReport KWs;
    - prefixed with {When} – Test execution: Configuration KWs, Test KWs;
    - prefixed with {Then} – Verification of Test execution, reading state: uses Verification KWs, StateReport KWs;
  - Test Teardown
  - Suite Teardown

For more information see: https://wiki.fd.io/view/CSIT/Design_Optimizations#Test_Lifecycle_Abstraction

CSIT Design Guidelines

- Strictly follow the CSIT Design Hierarchy;
- Tests MUST use only L2 Keywords;
- All L2 KWs are composed of L1 KWs and/or other L2 KWs;
- Test and KW naming should be following CSIT naming guidelines;

For more information see: https://wiki.fd.io/view/CSIT/Design_Optimizations#Applying_CSIT_Design_Guidelines