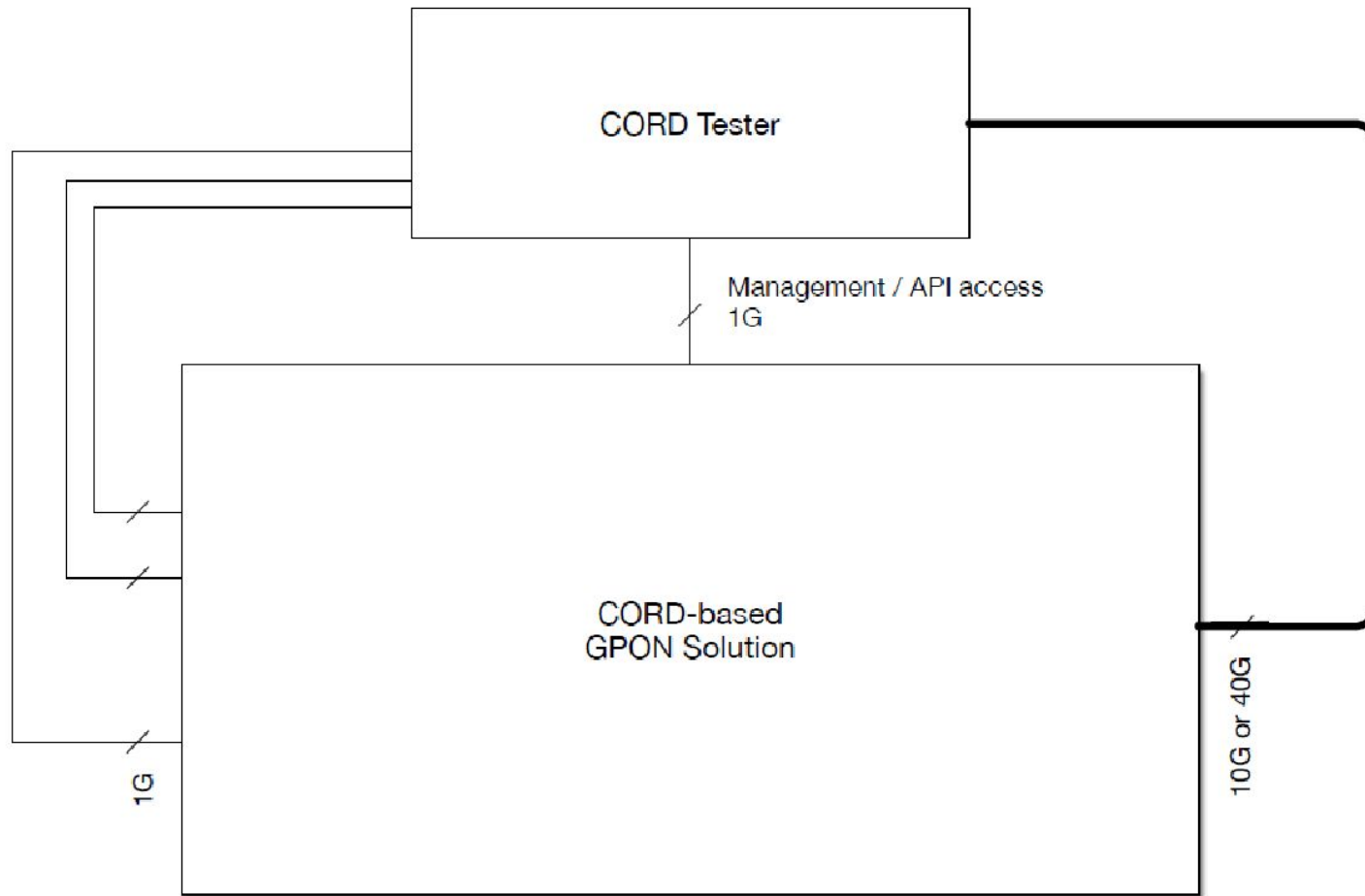


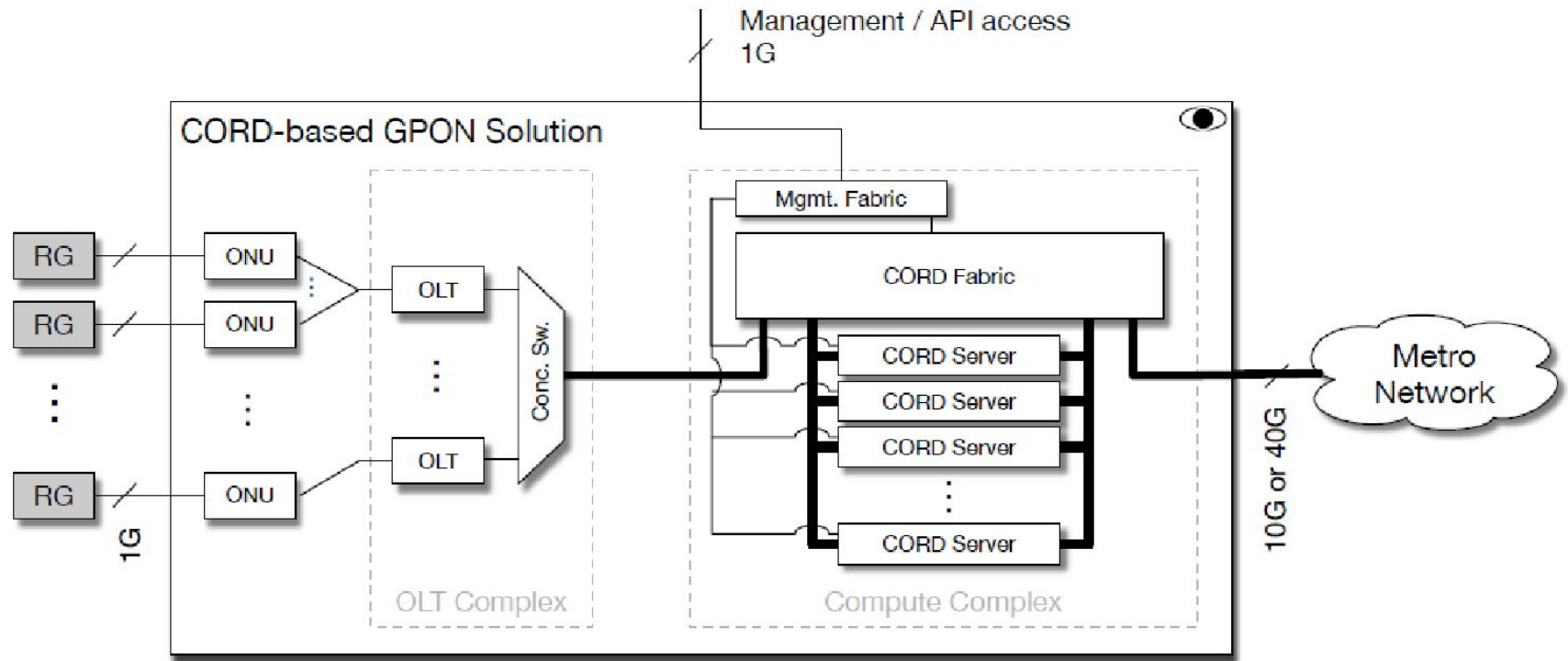
CORD TESTER

Automation Framework

CORD for GPON - Blackbox

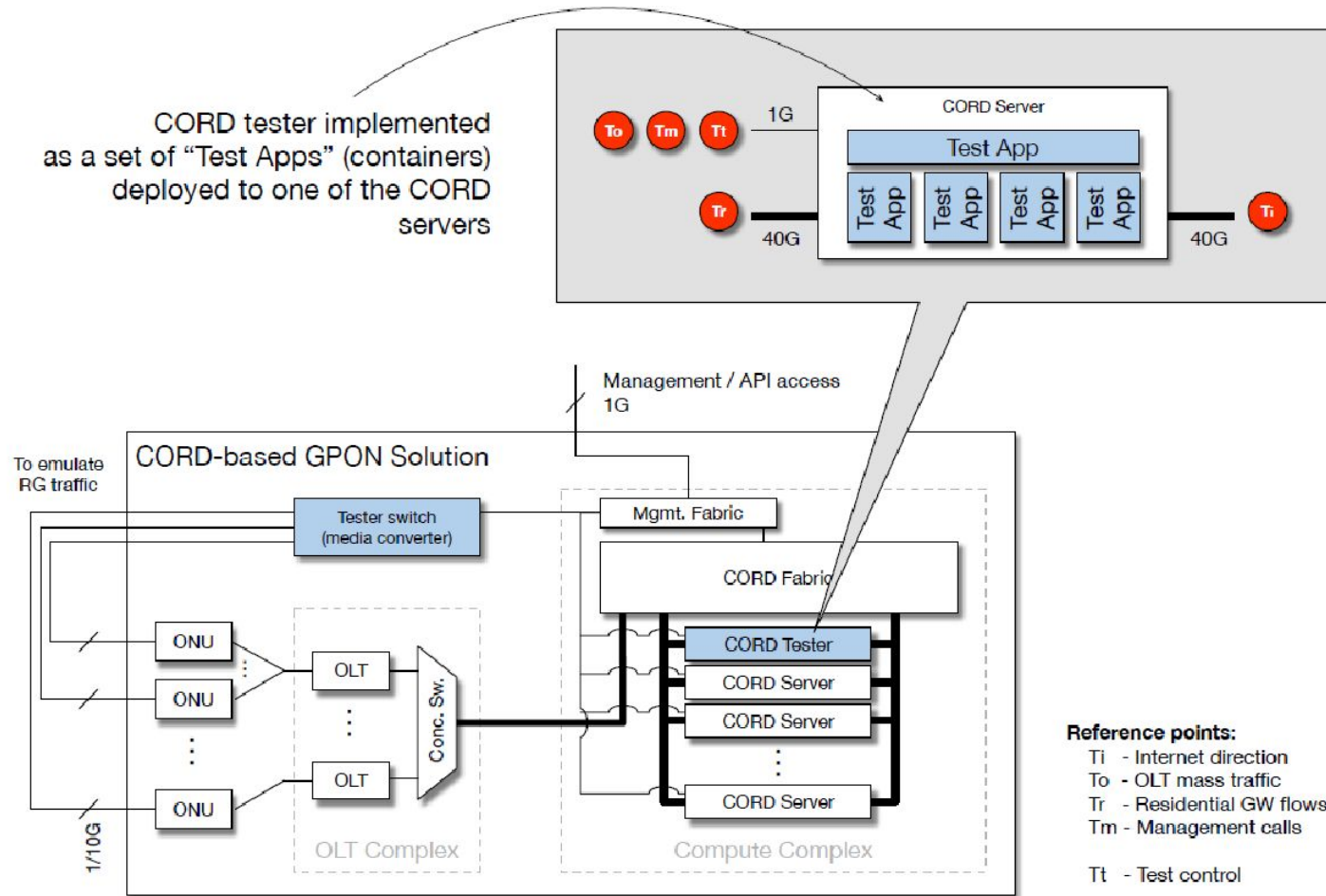


CORD-POD Testing

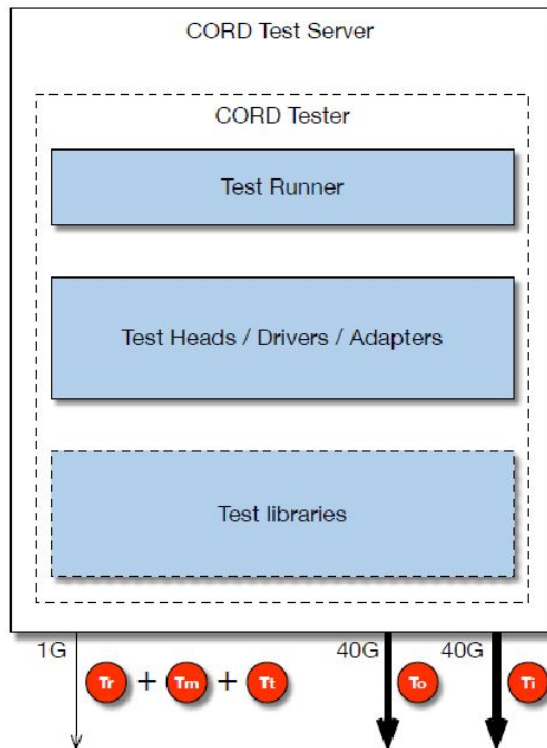


CORD Tester as an Embedded Component

CORD tester implemented as a set of "Test Apps" (containers) deployed to one of the CORD servers



CORD Tester Interfaces and Internals



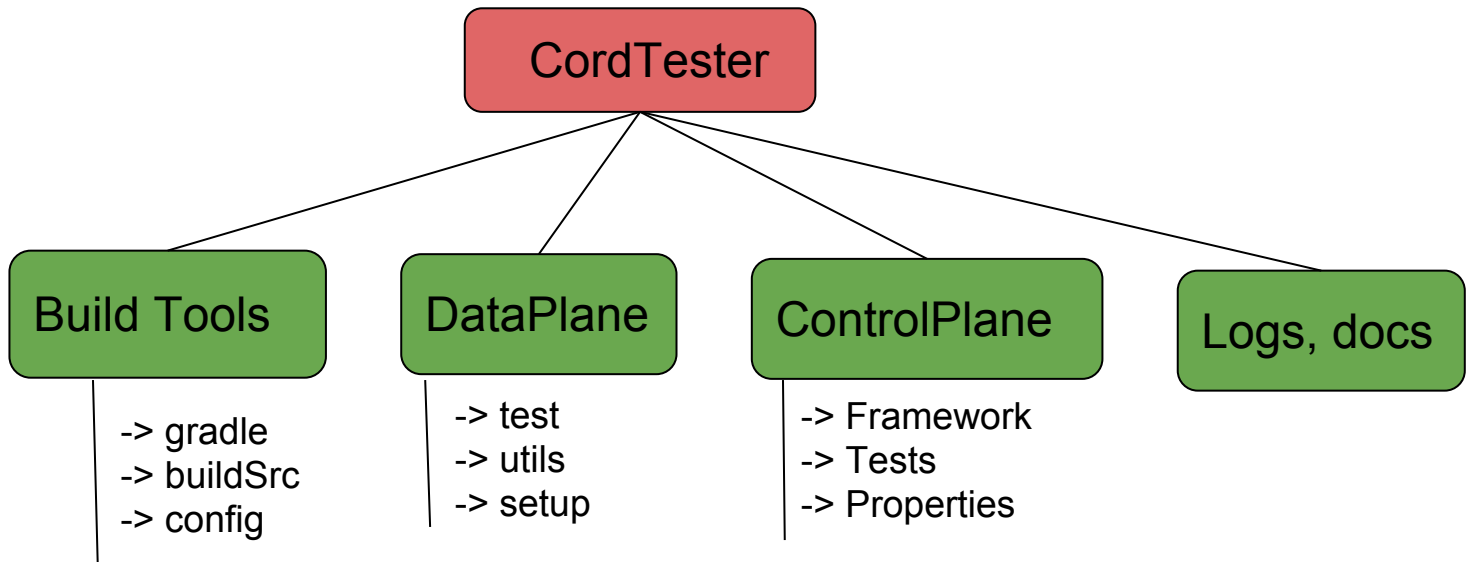
Test roles per reference point:

- Tr** **Emulate a few residential gateways. Includes:**
 - Authentication, DHCP/DNS
 - Multicast participation (channel surfing + receiving streams)
 - Internet access
- Tm** **Emulate service management flows. Represents the centralized Orchestrator/Controller/OSS. Includes:**
 - Subscriber management
 - Service instantiation
 - Provide Radius test server
 - Read service status
 - Receive async events/callbacks (KPI, Alarms, etc.)
- Tt** **Test-specific control of the infrastructure. Includes:**
 - Media converter management (VLANs)
 - Any gray/white box probing (e.g., validation via flow entries and flow counters, direct API access for low level functions, etc.)
- To** **Emulate mass OLT traffic to mimic 100s or 1000s of subscribers. Includes:**
 - Mass Internet access
 - Receive large number of multicast streams
 - [- Lots of concurrent multicast join requests]
 - ... all encapsulated as if coming from RGs via OLTs
- Ti** **Emulate the Metro network and the Internet. Includes:**
 - Fine-grained flow emulation for few select subscribers
 - Coarse-grained flow emulation for 100s/1000s of subscribers
 - Provide multicast feeds

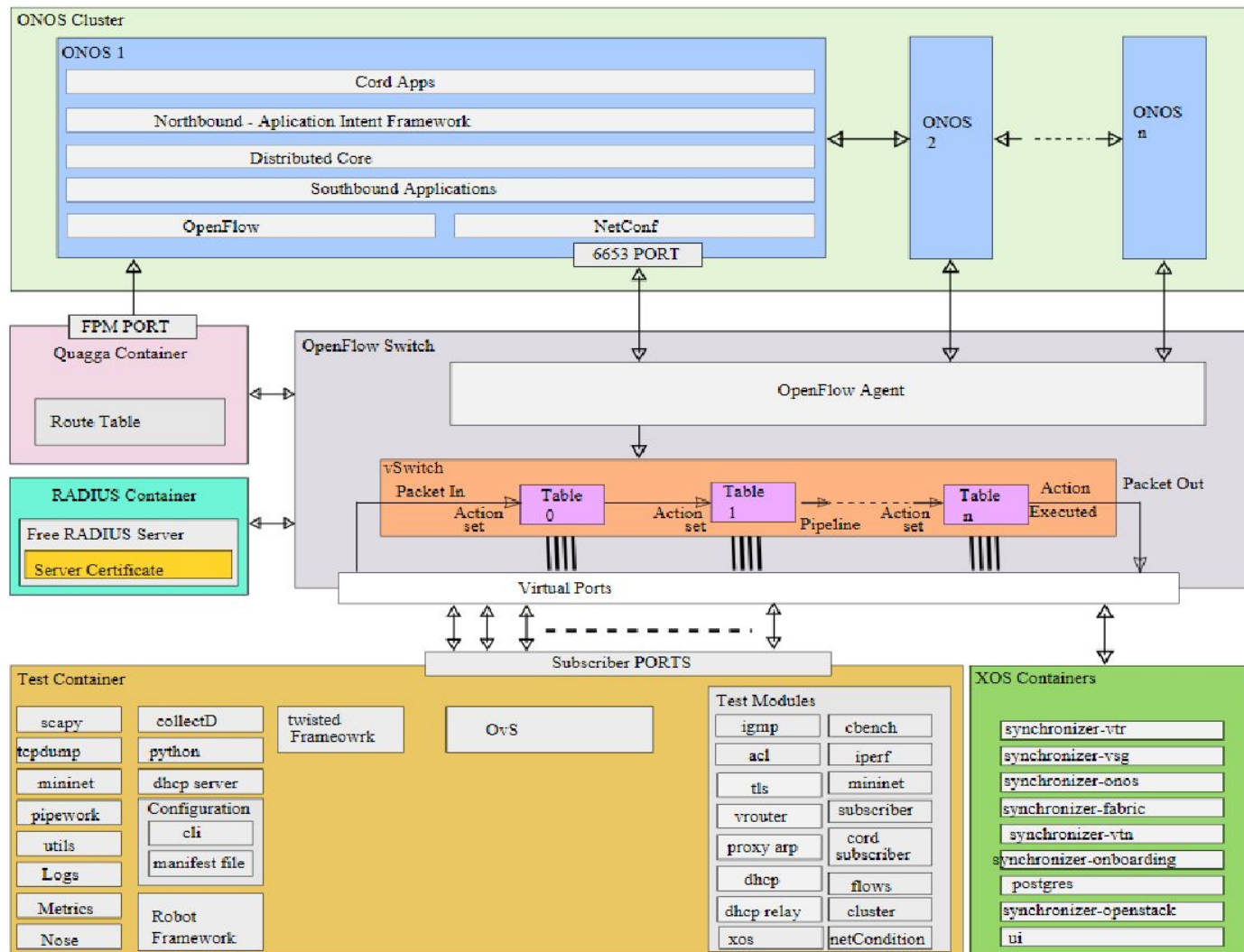
CORD Tester - Tools

- Cord-tester framework tools - docker containers , multiple tools and concepts from scratch for opensource community:
 - Python,GIT, mininet, scapy ,Containers, dockerfile embed,docker-compose,Gradle, Pipework,OVS, LXC, Ansible playbooks
 - Password less access, Vagrant, sandbox, openstack services, volume sharing, CLI (Extensive options),sed, awk, grep, Nose, Robot, virtualenv,log {DEBUG,TRACE,ERROR,WARN,INFO}.
- Test beds :- Functional Testing, Regression Testing, Accepting Testing, Health Testing.
- Test Modules covered :- IGMP, TLS, 802.1x, ACL, Subscriber, Ipv4 and Ipv6 vRouter, DHCP, DHCP-relay,CordVTN, vSG, Performance testing test cases.

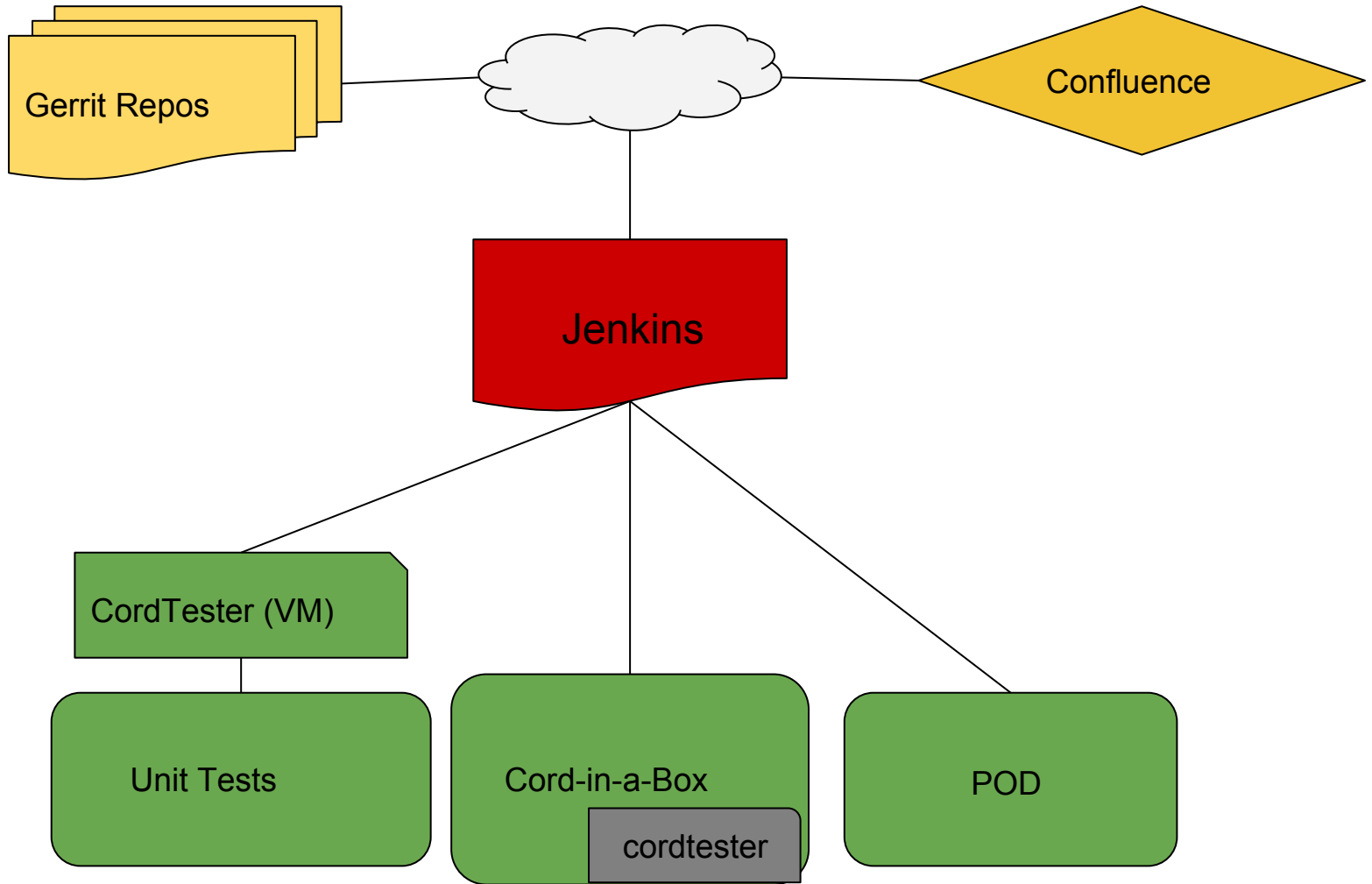
CORD Tester - Framework



Tester Architecture & Setup



CORD Tester - CI



Important Links

- Prerequisites :-
<https://github.com/opencord/cord-tester/blob/master/src/test/setup/prerequisites.sh>
- Link for clone :- **<https://github.com/opencord/cord-tester>**
- Getting started :-
<https://github.com/opencord/cord-tester/blob/master/docs/running.md>
- Cord-tester wiki link
:-**<https://wiki.opencord.org/display/CORD/R+--+CORD>**