How to Leverage Integration Labs?

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Agenda

• How to Leverage Integration Labs
• Deploying OOM Using Heat
Integration Labs’ Infrastructure

• Testing environment: currently we have two labs ready for ONAP community to use for end to end integration testing and pairing testing
  - Intel / Windriver Lab
  - TLAB

• Tools (under investigating)
  - Performance / Scalability: JMeter / Locust
  - Profiling: JProfile (for Java code only)
  - Resilience: Chaos Monkey
  - Security: Sonarqube, Bandit, Nexus Auditor, Nmap, Burp suite
  - Stability: we plan to write some python scripts

• Simulators for controllers, VNFM and PNF
• Access
  • We will support both OOM and Heat deployment (Windriver & TLAB).
  • In Windriver, each project has a tenant. In TLAB, projects may share tenant resources and/or work on scenarios involving multiple components in a tenant.
  • Each project has access to all Integration’s tenants.
• Tools: we’ll install all necessary ONAP Maturity testing related tools and simulators in Integration tenants space.
Intel HF2 ONAP Community POD 01 (AKA: POD-25)

Gooch Stephen, Windriver, stephen.gooch@windriver.com
ONAP Developer POD Overview

Located in Hillsboro Oregon USA
Intel Hawthorn Farm 2 (HF2)
ONAP Developer POD - Projects

- **Integration** – every has visibility.
- **Individual Projects**

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<th>APPC</th>
<th>CLAMP</th>
<th>CC-SDK</th>
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How to Request Access to Windriver Lab?

• Open JIRA: [https://jira.onap.org/projects/OPENLABS](https://jira.onap.org/projects/OPENLABS)
  - Component MULTI_GEOLAB
  - Which project you belong to?
  - Assign to Stephen Gooch
ONAP Developers Lab – Using the VPN

• From the JIRA, a form letter is sent with an encrypted zip file.
  - There are two files in this zip
    • login.txt (your username and password)
    • pod-onap-01.ovpn (Open VPN CA same for all)

• Edit pod-onap-01.ovpn to include login information
  - Linux/Mac
    • auth-user-pass login.txt
  - Windows
    • auth-user-pass “C:\Program Files\OpenVPN\config\login.txt”
  - You may need to add “http-proxy url:port” or “socks-proxy url:port”
    • Discuss with your IT representative.

• Execute
  - Linux
    • $ sudo openvpn --config pod-onap-01.ovpn
  - Windows
    • Install the Open VPN client, import pod-onap-01.ovpn and select connect
ONAP Developers Lab – Using remote CLI

• After connecting the VM. You can use a local Linux machine or the supplied jumpstation for OpenStack CLI access.

• Download OpenStack RC File from UI: Project -> Compute -> Access & Security -> API Access

• Upload file to jumpstation (or local machine)
  - If running on local machine, ask stephen.gooch@windriver.com for remote CLI SDK.

• Source and run OpenStack commands
  
  user@pod-onap-01-vjhost:~$ source ./Integration-openrc.sh
  
  Please enter a path for your CA certificate pem file, #or press enter if you are not using HTTPS
  
  Please enter your OpenStack Password for project Integration as user username:
  
  user@pod-onap-01-vjhost:~$ openstack usage list

• Jumpstation IP 10.12.5.140
TLAB

Rich Bennett, AT&T, rb2745@att.com
TLAB OpenStack Tenants

- 3 Tenant Types – Estimated total of 4 + n tenants
  1. Tenants for frequent integration testing → 2
  2. Tenants to deploy ONAP Platform Instance & Services/VNFs for multiple scenarios → n
  3. Spare Tenants for emergency deployment / demo purposes → 2

- Individual project team could use a single ONAP component in either:
  - the daily end to end build or
  - other tenants as created for shared single or multi-component test scenarios.
How to Request Access to TLAB?

- Create 1 JIRA EPIC for each Release Integration Scenario
  - Can include multiple Open Labs Components in JIRA Project (i.e. WINLAB, TLAB, MULTI-GEOLAB, etc.)

- After creating JIRA Epic, create one or more stories within the EPIC and describe:
  - Release integration Scenario
  - Tenant Resource Requirements
  - Networking requirements
  - Time frame the resources are needed
How to Request Access to TLAB?

• For VPN access to TLAB, create a sub-task issue on this story: https://jira.onap.org/browse/OPENLABS-128

• Include your...
  - Name:
  - Email:
  - Company:
  - Linux Foundation ID:
  - Reason for access (eg. OPENLAB Project TLAB Component JIRA Issue(s)):

• VPN Client
  • Under Select Component select SoftEther VPN Client
  • Under Select Platform choose your platform
  • Under Select CPU select appropriate CPU for your platform
  • Select the latest NON-BETA build
Deploying OOM Using Heat

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Sr. Staff Engineer, SDN Orchestration, Huawei US R&D
Deployment of OOM is currently tedious, error-prone, and in-flux

- Explicit version requirements on entire stack including Docker, Kubernetes, Helm, Rancher

- DCAE complications
  - DCAE support not yet in OOM master branch; currently being stabilized in amsterdam
  - Expected to be cherry-picked into OOM master branch in a week or two

- OOM master branch is under other active development / refactoring

Documentation still needs work

- [https://wiki.onap.org/display/DW/ONAP+on+Kubernetes](https://wiki.onap.org/display/DW/ONAP+on+Kubernetes)
Requirement: Automated Deployment on OpenStack

- Need easy way to deploy ONAP via OOM on any available OpenStack environment
  - OpenStack is required for running DCAE and VNFs even if ONAP is running on Kubernetes
- Need repeatable, reproducible, consistent deployments of OOM w/ DCAE
Solution: Deploy OOM Using Heat

- Installs K8S using Rancher
- Spins up ONAP using OOM in the K8S VM
- Passes DCAE config to dcae-bootstrap via OOM
How to Use

- **integration/deployment/heat/onap-oom** master branch
  - Currently deploys OOM amsterdam branch for DCAE
  - Will switch to master branch when OOM is ready (expected in 2 to 3 weeks)

- Configure your `.env` file
  - Working samples can be found in `env/` subdirectory

- Deploy via heat: “openstack stack create”
  - Requires the `openrc` file for your environment

- `scripts/deploy.sh`
  - deploys and runs health checks on the result
Demo / Walkthrough

- Overview of the heat template and scripts
- Run the deploy.sh script
- Explore the created VMs
Thank you