



How to Leverage Integration Labs?

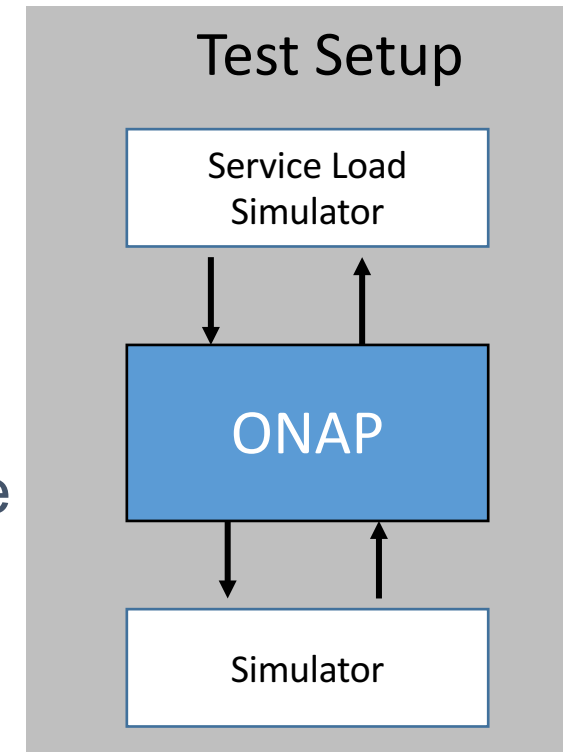
Helen Chen, Rich Bennett, Stephen Gooch, Gary Wu

Agenda

- **How to Leverage Integration Labs**
- **Deploying OOM Using Heat**

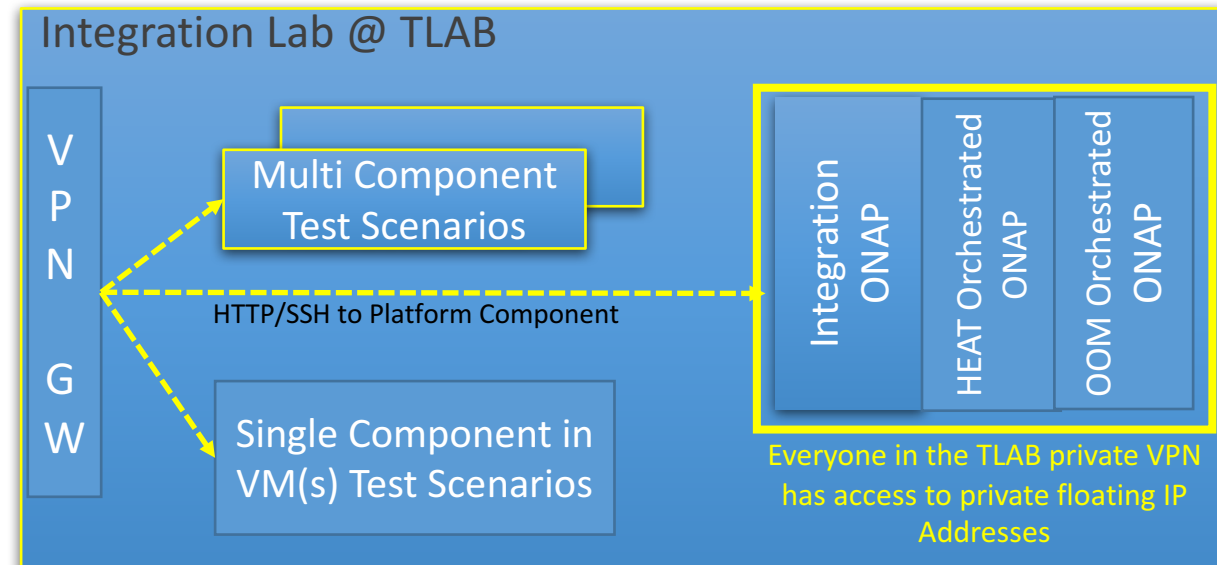
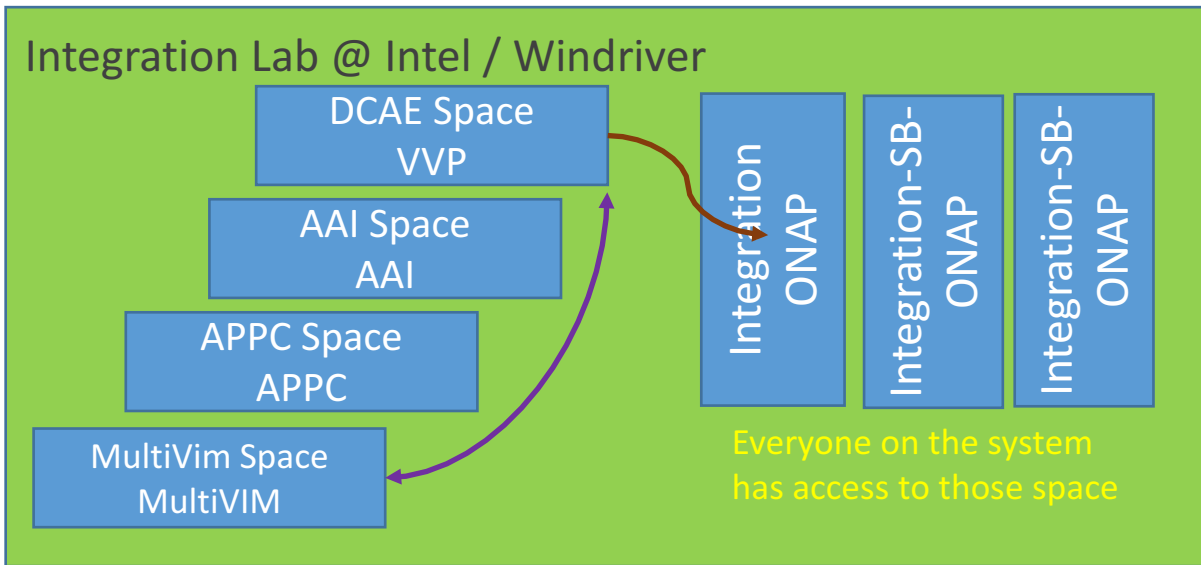
Integration Labs' Infrastructure

- 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



Integration Lab Deployment Diagram

- 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.

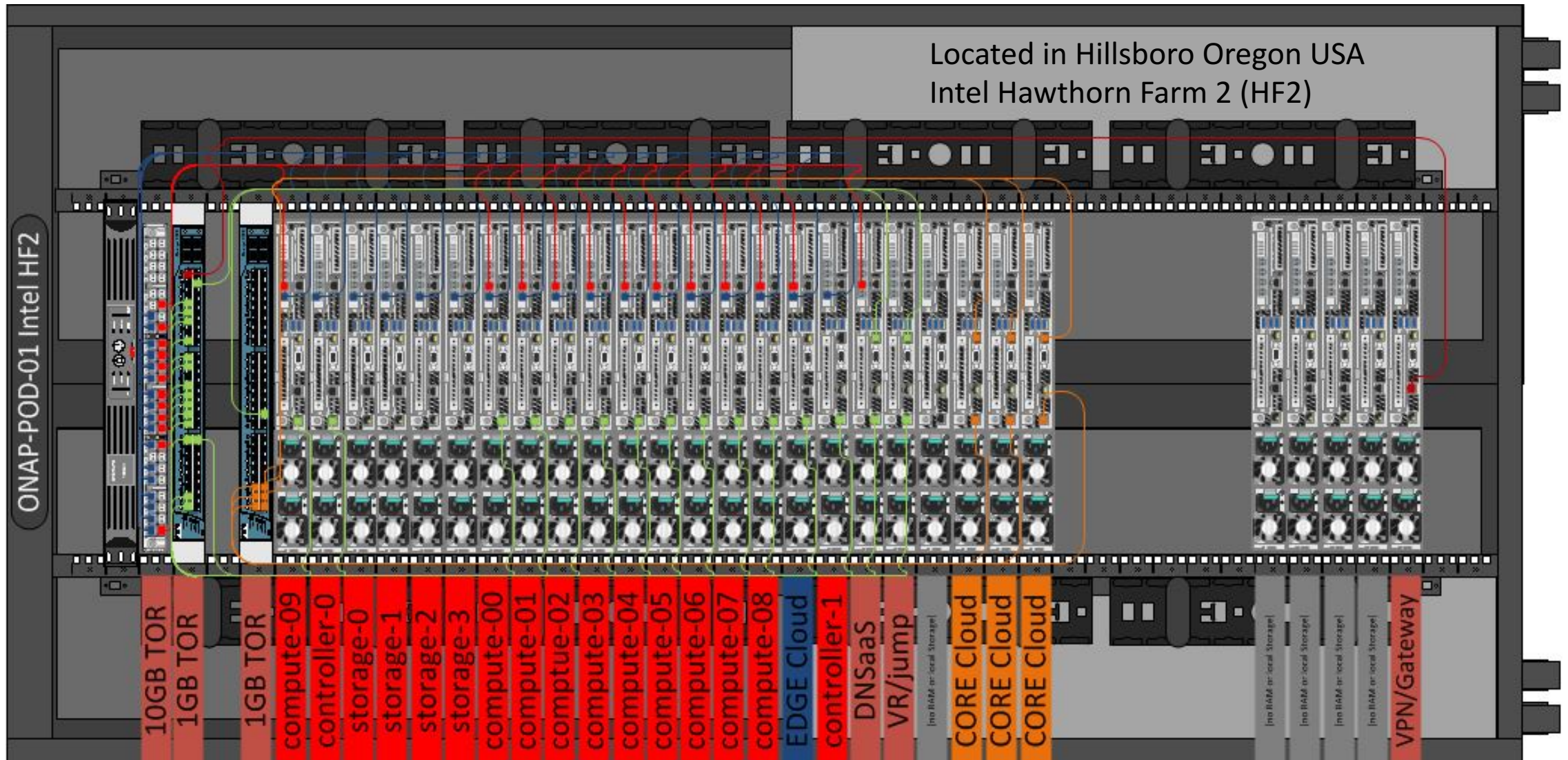




Intel HF2 ONAP Community POD 01 (AKA: POD-25)

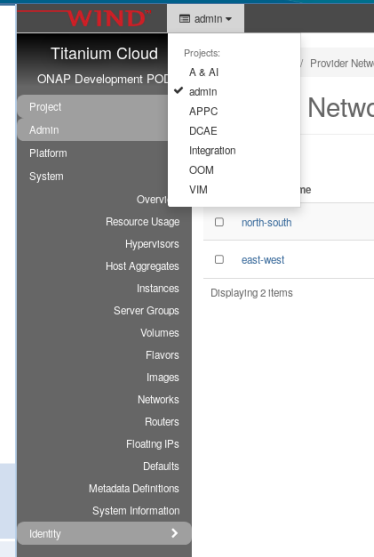
Gooch Stephen, Windriver, stephen.gooch@windriver.com

ONAP Developer POD Overview



ONAP Developer POD - Projects

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



A & AI	AAF	APPC	CLAMP	CC-SDK
DCAE	DMaaP	External-API-Framework	Holmes	Logging
Microservices	Modeling	VIM	CLI	PFPP
PPPP	SDN-C	SO	VID	VFC
VNF-SDK	OOM	SDC	PAF-PAL	vCPE
Integration-SB-00	Integration-SB-01	Integration-SB-02	Integration-SB-03	Integration-SB-04

How to Request Access to Windriver Lab?

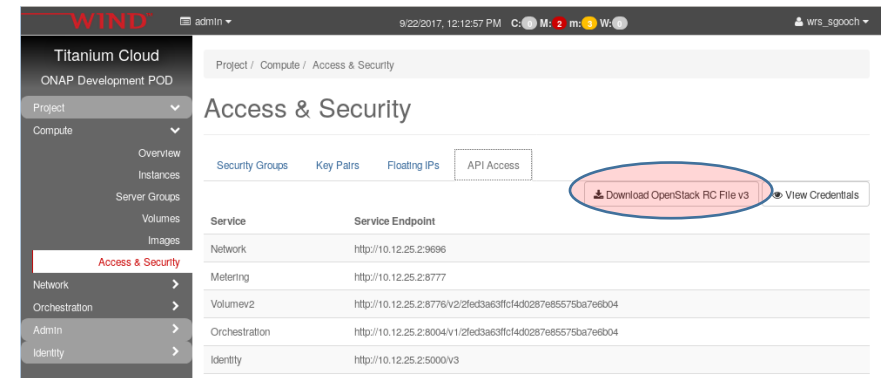
- Open JIRA: <https://jira.onap.org/projects/OPENLABS>
 - Component MULTI_GEO LAB
 - Which project you belongs to?
 - Assign to Stephen Gooch

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
```

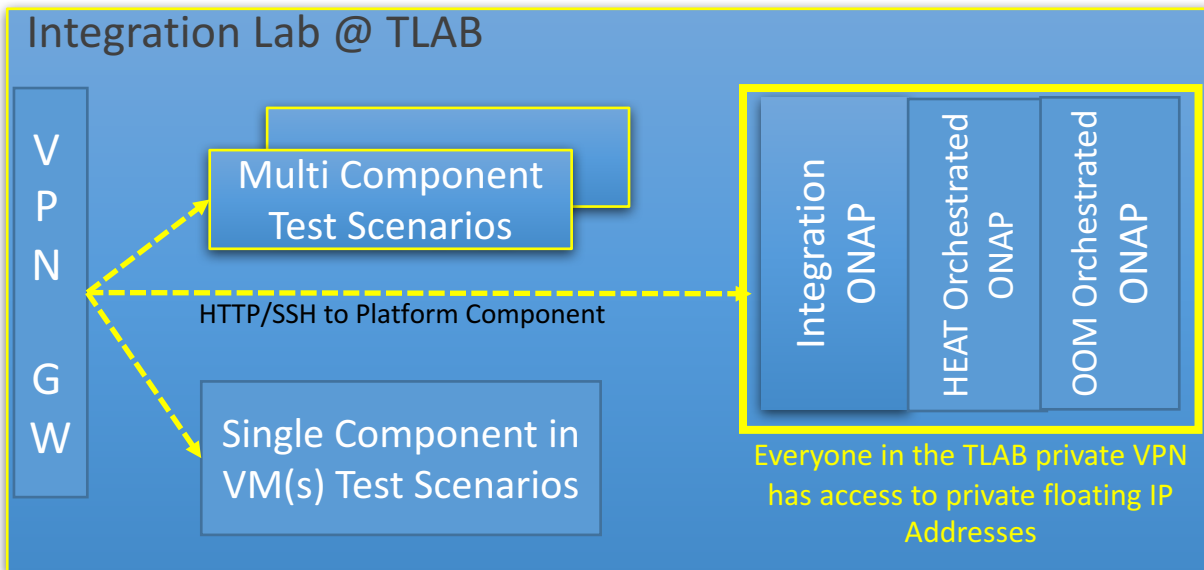
- Jumpstation IP 10.12.5.140



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

The screenshot shows a JIRA Epic page for 'TLAB - ONAP Daily Deployment Tests' under the project 'Open Labs / OPENLABS-160'. The page includes a header with navigation buttons (Edit, Comment, Assign, More, To Do, Implemented, Done) and a 'Details' section with the following information:

Type:	Epic	Status:	IN PROGRESS (View Workflow)
Priority:	Medium	Resolution:	Unresolved
Affects Version/s:	None	Fix Version/s:	Beijing Release
Component/s:	TLAB		
Labels:	None		
Epic Name:	TLAB - ONAP Daily Deployment Tests		

The 'Description' section contains the following text and bullet points:

This epic will encompass the work to be done by the ONAP Integration Team in running full ONAP instances to run ETE (robot-based) tests. This means that ONAP instances will be created/torn-down frequently.

- There will be 2 tenants created under this effort (one for OOM-based deployment, the other for HEAT-based deployment)
- TBD approach to automatically run the daily job and report results here <https://developer.openstack.org/api-guide/compute/versions.html>
- **Timeframe** of this epic (for now) is scoped to focus on Beijing release

The 'Attachments' section is currently empty with a 'Drop files to attach, or browse.' prompt.

The 'Issue Links' section shows a link to <https://wiki.onap.org/display/DW/ONAP+Deployment+Specification+for+Finance+and+Operations> and a link mentioned in a 'Page Failed to load'.

The 'Issues in Epic' section lists two sub-tasks:

OPENLABS-161	TLAB - Create tenant for OOM-deployed ONAP instance	IN PROGRESS	Richard Wright
OPENLABS-162	TLAB - Create tenant for HEAT-deployed ONAP instance	IN PROGRESS	Richard Wright

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
 - Download at <http://www.softether-download.com/en.aspx>
 - 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

Gary Wu <gary.i.wu@huawei.com>
Sr. Staff Engineer, SDN Orchestration, Huawei US R&D

OOM is Hard to Deploy

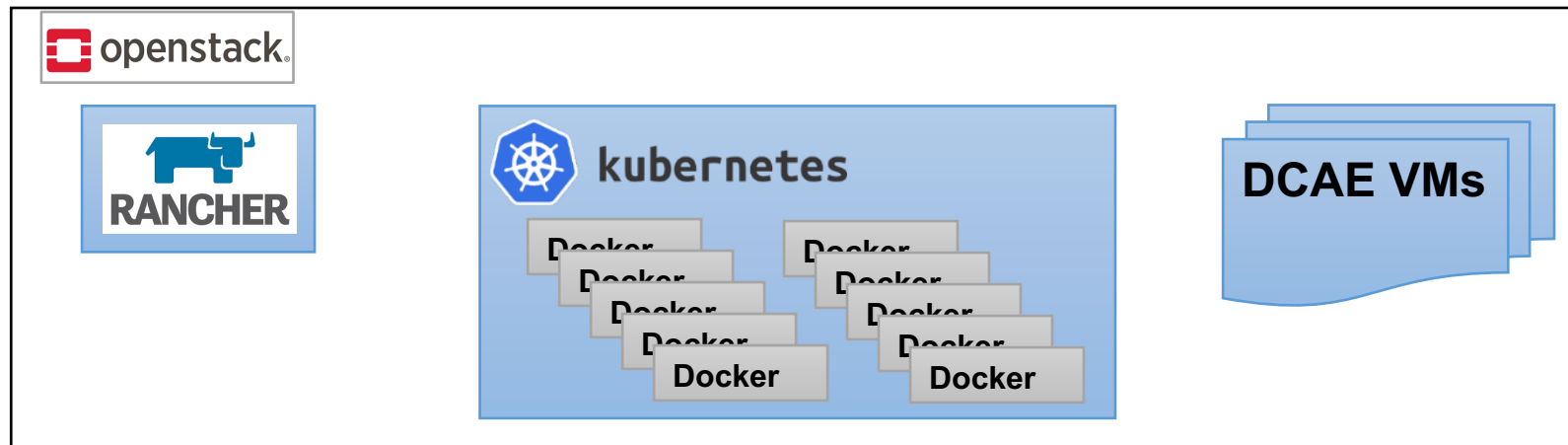
- Deployment of OOM is currently tedious, error-prone, and in-flux
 - Explicit version requirements on entire stack including Docker, Kubernetes, Helm, Rancher
 - DCAE complications
 - DCAE support not yet in OOM master branch; currently being stabilized in amsterdam
 - Expected to be cherry-picked into 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>

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

Q&A



ONAP

OPEN NETWORK AUTOMATION PLATFORM

Thank you