ONAP version management

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contributions: Yang Xu, Gary Wu

February 7th, 2019
Today (our understanding ... sorry to be late at the party)

With Major & minor defined statically in version.properties at the root of the main repo of the project

Daily Docker build

Patchset Project X

https://jenkins.onap.org

1

Nexus

CSIT

Docker build

OK +1

Unit tests

Java build

Project X-master-project-merge-java jenkins job

+2/Merge

Integration

Versions in integration repo

Docker-manifest-staging.csv

Docker-manifest.csv

http://onapci.org/jenkins/

Tlab-oom-daily

Tlab-oom-staging-daily

Windriver-oom-daily

Windriver-oom-staging-daily

....

10-12h

http://onapci.org/jenkins/

3

OOM

Versions in OOM repo

(helm charts)
Today (our understanding … sorry to be late at the party)

Nexus (staging images kept for 25 days – probably longer on mirrors)

Project

Static declaration `version.properties`
Used to create on +2/merge and/or on daily docker build
  - Snapshot
  - images

But no link between the version and the code

Integration

Ref official versions
Historically 2 installers
  - Heat
  - OOM

Need 1 ref ➔ Integration
But now only 1 installer

OOM

Also up to the project developers to commit in OOM `helm charts`

⇒ migration to the helm chart under the responsibility of the project

3 human commits to manage the version...high risk of inconsistency
For Discussion

Nexus

1a. More linters

1b. Build

- Docker build
- PR to OOM (new docker to be tested)
- +2/Merge

OK +1

1c. Gate/deploy

- OOM standard Gating
- Versions in OOM repo (helm charts)

OK verified +1

1d. Gate/test

- CSIT
- Gating - Healthcheck - Basic E2E

Integrations

- Versions in integration repo
- Docker-manifest-staging.csv
- Docker-manifest.csv

Integration

Major.minor: gerrit_idX

Push docker images

1a. More linters

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OK +1

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Integration

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- Docker-manifest-staging.csv
- Docker-manifest.csv

Integration

http://onapci.org/jenkins/

Tlab-oom-master-daily
Windriver-oom-master-daily
....
<table>
<thead>
<tr>
<th>Goal</th>
<th>Proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have a better control of the code we are testing</td>
<td>* Docker naming change: introduction of unique id (gerrit id) rather than static value</td>
</tr>
<tr>
<td></td>
<td>* Remove manifest (consider helm chart as reference)</td>
</tr>
<tr>
<td>Ensure more stability on Master (Rolling release) to ensure a smoother integration</td>
<td>* Introduce a PR to OOM on any change on Master, any new change would trigger a deployment and test sequence</td>
</tr>
<tr>
<td></td>
<td>* Ref versions are in the helm chart</td>
</tr>
<tr>
<td>« Blame » the right people as soon as possible</td>
<td>Gerrit vote on each patchset submission</td>
</tr>
</tbody>
</table>
For discussion: docker naming

Today lots of docker staging for a given docker e.g. aai babel
- Most of them are coming to daily build (similar to day N-1)
- Hard to know precisely what the docker contains

Using gerrit ID we would lead to (for aai-babel)
- 14.0-staging-78241 (12/2)
- 14.0-staging-77888 (11/2)
- 14.0-staging-77905 (6/2)
- 14.0-staging-77875 (6/2)
- 14.0-staging-77455 (30/1)

<table>
<thead>
<tr>
<th>docker</th>
<th>Nb staging dockers (2019)</th>
<th>Due to patchset change (2019)</th>
</tr>
</thead>
</table>
| aai-babel  | 50
- 25 x 1.3.3-staging
- 25 x 1.4.0-staging | 6 |
| so         | ~ 60
- 1 x 1.3.0-staging
- 1 x 1.3.1-staging
... 
- 1 x 1.3.6-staging
- 28 x 1.3.7-*
- 27 x 1.3.8-* | 109 |

No more need of daily build
https://gerrit.onap.org/r/#!/q/project:aai/babel
https://nexus3.onap.org/#browse/browse:docker.public:v2%2Fonap%2Fbabel
For discussion: gating resources

- Systematic gating will require machine (deploying 1 single instance of ONAP is costly)

<table>
<thead>
<tr>
<th>Date</th>
<th>Number of merges</th>
<th>Cumulative nb of merges (X to now)</th>
<th>Relative merge activity</th>
<th>Average nb of merge rate*</th>
<th>ONAP needed**</th>
</tr>
</thead>
<tbody>
<tr>
<td>September</td>
<td>2600</td>
<td>9700</td>
<td>27 %</td>
<td>100 merges / day</td>
<td>9</td>
</tr>
<tr>
<td>October</td>
<td>1950</td>
<td>7100</td>
<td>20 %</td>
<td>72</td>
<td>6</td>
</tr>
<tr>
<td>November</td>
<td>2200</td>
<td>5150</td>
<td>23 %</td>
<td>81</td>
<td>7</td>
</tr>
<tr>
<td>December</td>
<td>1000</td>
<td>2950</td>
<td>10 %</td>
<td>38</td>
<td>4</td>
</tr>
<tr>
<td>January</td>
<td>1250</td>
<td>1950</td>
<td>13 %</td>
<td>48</td>
<td>4</td>
</tr>
<tr>
<td>February</td>
<td>700</td>
<td>700</td>
<td>7 %</td>
<td>28</td>
<td>3</td>
</tr>
</tbody>
</table>

*: Hypothesis Nb days(month) – nb full weeks (month)  
**: OOM Gating = 2h, 12 gating / day max

Currently in orange Openlab: 8 ONAP managed in // on
- 3 servers for OpenStack control (could be 1)
- 13 compute nodes (and by the way thanks again Huawei as half of them are lent by you ☺): 2 times 16 cores and 256G RAM
- 3 storage node
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<tr>
<td>February</td>
<td>1500</td>
<td>9350</td>
<td>16 %</td>
<td>63 merges / day</td>
<td>5</td>
</tr>
<tr>
<td>March</td>
<td>2150</td>
<td>7850</td>
<td>23 %</td>
<td>83</td>
<td>7</td>
</tr>
<tr>
<td>April</td>
<td>2750</td>
<td>5700</td>
<td>29 %</td>
<td>106</td>
<td>9</td>
</tr>
<tr>
<td>May</td>
<td>2300</td>
<td>2950</td>
<td>25 %</td>
<td>92</td>
<td>8</td>
</tr>
<tr>
<td>June</td>
<td>650</td>
<td>650</td>
<td>7 %</td>
<td>108</td>
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CASA MR

DUBLIN
For discussion: blame the right people ASAP
Open Questions

Nexus: diff between snapshots and images? Do we need snapshots?

Nexus: nexus policy to keep staging versions? => 25 days? Could be less...

Shall we use OOM and install it for CSIT (core/small/medium/full + custom to be added depending on the project)?

Assuming that heat installation is no more considered, shall we move the trust-ability to the helm chart (in OOM or under the project) to have only 1 source?

What are the criteria to move from staging to official? Gating? Integration Tests? Project decision?

Shall staging docker not include a ref to the code it corresponds to…e.g. 3.9.77943 for https://gerrit.onap.org/r/#/c/77943/? 3.9 => until Dublin is created, gerrit ID unique and provide a link between the docker and its code content

Build docker in Maven: is it really a good idea? Shall it not be decoupled (as it could be triggered if OOM gating OK)?
Thank you!
Illustration: CI chain using OOM master

In the SDC-FE example

**Sdc repo:**
version properties 1.4.0

**Integration:**
Docker-staging: onap/sdc-frontend:1.4-STAGING-latest
Docker: onap/sdc-frontend:1.3.4

**OOM:**
Master: onap/sdc-frontend: 1.3.5
Casablanca: onap/sdc-frontend: 1.3.6
3.0.0-ONAP: onap/sdc-frontend: 1.3.5

Changed on the 15 of November 2018
No git tag (tags only on official releases created by Jessica (LF))

Explains why the gate was broken
As the fix has been provided in 1.4-staging but not reported in 1.3.x
Moreover 1.4-staging is generic => impossible to know precisely which code it is..1.4-staging overwritting after each +2/merge

Casablanca version > Master ??

Tautologic naming
We know it is ONAP...

??

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??

Tautologic naming
We know it is ONAP...
High Level View of what we want (OOM Case)

1. Want to push new code

2. Code change notification

3. Trigger an automatic deployment of ONAP via OOM

4a. If deployment successful, trigger automatic tests

4b. If deployment not successful, checkbot vote -1

5a. Tests OK, checkbot vote +1

5b. Tests NOK, checkbot vote -1