OSM-MR #11 Hackfest
OAI 5G Core Onboarding Challenge
Team 8 – Team SUNY Poly
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Tasks at Hand

- Task 1 - Test OAI deployment according to the tutorial.
- Task 2 - Implement charms for OAI network functions.
- Task 3 - Implement deployment descriptors for OAI network functions.
- Task 4 - Automate a configuration parameter change.
- Task 5 - Automate a scale-up operation by deploying additional gNB RF SIM.
- Task 6 - Automate an upgrade of AMF.
Tasks at Hand

- **✅ Task 1** - Test OAI deployment according to the tutorial.
- **✅ Task 2** - Implement charms for OAI network functions.
- **⏳ Task 3** - Implement deployment descriptors for OAI network functions.
- **🛑 Task 4** — Automate a configuration parameter change.
- **⏳ Task 5** — Automate a scale-up operation by deploying additional gNB RF SIM.
- **🛑 Task 6** — Automate an upgrade of AMF.
Task 1

- We were able to install helm charts, and script the deployment of the OAI 5G Core functions through Step 4.0, as seen here.
Task 1 (continued)

- We were also able to confirm the SMF and SPGWU connectivity, as part of Step 4.1.
Task 2

- We were able to clone the repository.
Task 2 (continued)

- We were then able to build from the git files.
Task 2 (continued)

- We were then able to deploy the packaged charms.
Task 2 (continued)

- We were then able to witness the successful deployment.
Task 3

- We were able to build and upload an NS, VNF.
Task 3 (continued)

- We were able to validate the packages, but not instantiate.

```
ubuntu@hackfest-team-9:~$ osm package-validate ubuntu_cloudinit_ns
Base directory: ubuntu_cloudinit_ns
1 Descriptors found to validate

<table>
<thead>
<tr>
<th>TYPE</th>
<th>PATH</th>
<th>VALID</th>
<th>ERROR</th>
</tr>
</thead>
<tbody>
<tr>
<td>etsi_nfv_nsd</td>
<td>ubuntu_cloudinit_ns/ubuntu_cloudinit_nsd.yaml</td>
<td>OK</td>
<td>-</td>
</tr>
</tbody>
</table>

ubuntu@hackfest-team-9:~$ osm package-validate ubuntu_cloudinit_vnf
Base directory: ubuntu_cloudinit_vnf
1 Descriptors found to validate

<table>
<thead>
<tr>
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<td>ubuntu_cloudinit_vnf/ubuntu_cloudinit_vnfd.yaml</td>
<td>OK</td>
<td>-</td>
</tr>
</tbody>
</table>
```
Task 4 & Task 6

- We had some last-minute, fatal, performance issues on two tasks.
Task 5

- We were able to define scaling on gNB, but not trigger scaling.
Lessons Learned

- Communication – We had some trouble early on with the asynchronous communication and the diverse time zones of our participants.

- Documentation – We lost out on recording a lot of our documentation for the tasks we completed, thus missing out on screenshots that we would have otherwise had for our presentation.

- Known Bugs – Multiple teams ran into known bugs that hampered our progress.

- Unknown Bugs – Multiple teams ran into unknown bugs and code issues that caused us to re-pull a few git repos during our progress.

- Server Performance – We lost our ability to take additional screenshots due to some performance issues with our server instances on the last day.
Thank you to all the mentors!
Thank you to the teams and team members!