ONAP EMCO Integration

PoC Introduction & Demo on How To Use

Seshu Kumar (Huawei)
Shashikanth (Huawei)
Irshad (Huawei)
Rama Subba Reddy (Huawei)
Mukesh (L&T)
Phani (China Soft)

14.06.2022
Anti-Trust Policy Notice

• Linux Foundation meetings involve participation by industry competitors, and it is the intention of the Linux Foundation to conduct all of its activities in accordance with applicable antitrust and competition laws. It is therefore extremely important that attendees adhere to meeting agendas, and be aware of, and not participate in, any activities that are prohibited under applicable US state, federal or foreign antitrust and competition laws.

• Examples of types of actions that are prohibited at Linux Foundation meetings and in connection with Linux Foundation activities are described in the Linux Foundation Antitrust Policy available at http://www.linuxfoundation.org/antitrustpolicy. If you have questions about these matters, please contact your company counsel, or if you are a member of the Linux Foundation, feel free to contact Andrew Updegrove of the firm of Gesmer Updegrove LLP, which provides legal counsel to the Linux Foundation.
PoC - Key Considerations

• Keep the changes minimal on ONAP side
  • No new component is needed on ONAP
  • Leverage the existing models, building blocks
  • Existing flows are kept intact

• Leverage the Plug and Play on SO
  • Model driven approach
  • Changes can be used for other integrations like the ETSi, NSSMF,…

• No changes on the EMCO
  • Treated as a blackbox

• Minimal deployment footprint
  • Entire setup is Deployed over a laptop

• Extendable architecture
  • App details are persisted as direct urls
  • Closed loop friendly development
ONAP EMCO Integration

1. Service design
2. OnBoard service design
3. Portal send service instantiation request to orchestrator
4. Service orchestrator send request to EMCO using macro flow
5. Emco deploy applications to Edge cluster
6. Monitor deployed service along with resource information
Modeling Mapping

ONAP Model

- Service
- VNF
- VFM

EMCO Model

- Project
- Composite App
- App
## Flow Mapping

<table>
<thead>
<tr>
<th>Macro flow seq</th>
<th>Emco API used</th>
</tr>
</thead>
<tbody>
<tr>
<td>AssignServiceInstanceBB</td>
<td></td>
</tr>
<tr>
<td>AssignVnfBB</td>
<td></td>
</tr>
<tr>
<td>AssignVfModuleBB</td>
<td></td>
</tr>
<tr>
<td>ControllerExecutionBB [vnf, config-assign]</td>
<td>CBA (Future)</td>
</tr>
<tr>
<td>isHelm CreateVfModuleBB</td>
<td>request</td>
</tr>
<tr>
<td>ActivateVfModuleBB</td>
<td>state change in aai</td>
</tr>
<tr>
<td>ControllerExecutionBB [vnf, config-deploy]</td>
<td></td>
</tr>
<tr>
<td>ActivateVnfBB</td>
<td>Aai state change</td>
</tr>
<tr>
<td>ActivateServiceInstanceBB</td>
<td></td>
</tr>
</tbody>
</table>
BPMN: Macroflow Workflow

Assign VNF

1. Create VNF in AAI
2. Call Homing
   - Is EMCO?
3. Call CNF adapter
   - Call EMCO to create Project, Composite App, Composite Profile etc...

Assign VF

1. SDNC Assign
2. Call CNF adapter
   - Is EMCO?
3. update heatstackID in AAI
   - Call EMCO to Add application Helm chart
   - Add app deployment intent

Activate VNF

1. SDNC Activate
2. Call CNF adapter
   - Is EMCO?
3. Update AAI
   - Call EMCO to Approve and Instantiate application
Future Steps – Kohn++

• CDS integration in the usecase
  • Helm enrichment
  • CNF Upgrade

• Intent driven
  • Deployment
  • OOF to enrich the Homing and placement?

• Leverage the EMCO features through the functional flow

• 5G super blueprint

• Control Loop flows