OSM MR Hackfest – Hack 5a
End-to-end VNF Package Onboarding in OSM

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Introduction to the VNF Onboarding Task Force & Resources
To achieve completely onboarded VNFs, with unique packages that fulfill the NFV vision by providing value to CSPs.

1. Instantiate Network Services/Slices, making VNFs manageable ("Day 0")
2. Initialize VNFs so they provide the expected service ("Day 1")
3. Operate the service: monitoring, reconfigurations and (closed-loop) actions ("Day 2")
The **OSM VNF Onboarding Guidelines** (live, online documentation)

Onboarding Requirements

Each lifecycle stage targets specific configurations in the VNF. These are: management setup during instantiation (Day-0), service initialization right after instantiation (Day-1) and re-configuration during runtime (Day-2).

In order to provide a VNF with as many capabilities for each lifecycle stage as possible, the following specific requirements should be addressed.

**Day-0 requirements**

During the Day-0 stage, the VNF is instantiated and the management access is established so that the VNF can be configured at a later stage. The main requirements to achieve this are:

**Description of each VNF component**

The main function of every VNF component (VDU) should be clearly described in order to ease the understanding of the VNF. For example:

<table>
<thead>
<tr>
<th>VDU</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>vLB</td>
<td>External frontend and load balancer</td>
</tr>
<tr>
<td>uMgmt</td>
<td>Universal VNF Manager (EM)</td>
</tr>
<tr>
<td>sBE</td>
<td>Service Backend of the platform</td>
</tr>
</tbody>
</table>

**Defining NFVI requirements**

These requirements refer to properties like the number of vCPUs, RAM GBs and disk GBs per component, as well as any other resource that the
Resources: Onboarding Examples

• An onboarding example is available as a walkthrough video and document:

  https://www.youtube.com/watch?v=hZzwwy9wNRE

  https://osm.etsi.org/docs/vnf-onboarding-guidelines/06-walkthrough.html#
“Onboarding Labs” are available to VNF providers that want to onboard their packages on OSM with community support.
Upcoming: OSM VNF Repositories

OSM VNF Repositories (Feature 8178)

- Will let OSM operators add a VNF package to the OSM local catalogue, from an existing, remote repository.
- OSM client would be used for achieving any interaction with remote repositories, which would have a predefined structure.
- Uploading images to the VIM would also occur automatically.
- Feature: https://osm.etsi.org/gerrit/#/c/osm/Features/+/8178/6/osm-repositories.md
Hands-on: Building an Evolved Packet Core VNF package from scratch
Hands-on: Building an EPC VNF package

We will follow this guide.

Important considerations:

- Use Visual Studio or similar tool to quickly modify text files.

- The EPA section won’t be used this time, to match VIM available resources for Hackfest.

- For charms, the traditional “reactive framework” will be used (migration to Python Operators Framework is pending)