

Continuation of HPA (Dublin)

Purpose:

Introduction

HPA feature (using OOF) ensures that the VNF instances are placed in cloud regions that have platform capabilities as expected by VNF workloads. For example, if a VNF workload requires XYZ vendor SRIOV-NIC and ABC vendor crypto accelerator, HPA feature of ONAP will ensure that the VNF is placed in a cloud region that have compute nodes with XYZ SRIOV-NIC card and ABC vendor Crypto accelerator card.

History:

Beijing release:

- Policy based HPA was introduced.

Casablanca release:

- Model driven HPA was introduced (TOSCA based). With this, both SO and VFC based use cases can leverage HPA based placement feature.
- Use cases:
 - vFW with HPA
 - vCPE-TOSCA with HPA

Dublin release:

Main focus is to harden HPA feature, make it easily deployable, create literature and create easy-to-replicate demos.

Also, fix any gaps and bugs that are discovered during hardening and testing.

Our aspiration is also to make existing use cases always leverage HPA functionality as part of integration testing.

Stretch goal: is to support multiple choices in specifying a feature requirement in policies.

Owner : [Alexander Vul](#)

Participating Companies: Intel, VMware

























Use Case Name








| Showcase VNF | Test Environment | Integration Team Liaison |
|-----------------|---------------------------------------|-------------------------------------------------------------|
| vFW, vDNS | Intel/Windriver Lab, VMware Lab (TBD) | Itohan Ukponmwan |
| vCPE with TOSCA | China Mobile Lab | Huang Haibin and Ruoyu Ying |

Dublin focus

- Ready with right setup Intel/WR lab
 - Have few compute nodes with right HW
 - Ensure to have SRIOV-NIC cards
 - Ensure to have crypto accelerator cards (QAT)
- Usage of CLI only - Work with the teams to avoid any curl commands, update of DB entries, kubectl exec & configuration files.
- Work on some of the gaps identified in Casablanca (Issues listed here: [HPA Hardening Issues](#))
- New vIPSEC sample VNF : Create a new sample VNF (IPSEC VNF) for them to leverage crypto accelerator cards.
 - Start with traditional Ubuntu with QAT driver installed.
- Create new test cases with various HPA features assigned to VNFs. Few example:
 - vFW with dedicated cores, SRIOV-NIC VF, Huge pages
 - vIPSEC with QAT
 - vIPSEC with AES-NI
- Work with Integration team to add the test cases in integration project.
- Work with demo repository owners to introduce new sample VNFs and add new HEAT/ENV files for existing use cases

HPA Automation JIRA Issues

| PROJECT | JIRA EPIC/ USER STORIES/ BUGS |
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| CLI | <div>  CLI-130 - Usage of CLI for all operations to execute vFW and vDNS use cases with HPA CLOSED </div> <div>  CLI-131 - Create, Update and Delete Cloud Complex Using CLI CLOSED </div> <div>  CLI-132 - Associate Cloud Region With a Cloud Complex CLOSED </div> <div>  CLI-133 - Trigger Multicloud Plugin Registration When a Cloud Region is Registered CLOSED </div> <div>  CLI-134 - Update subscription-create to use cloud parameters CLOSED </div> <div>  CLI-135 - Create CLI command to Create Vendor Licence Model when Onboarding CLOSED </div> <div>  CLI-136 - Create CLI Command to Create and Distribute VSP CLOSED </div> <div>  CLI-137 - Create CLI commands to use for service model during onboarding in Dublin CLOSED </div> <div>  CLI-138 - Create CLI command to upload tosca policy models CLOSED </div> <div>  CLI-139 - Create CLI command to output the resourceModuleName of a service model CLOSED </div> <div>  CLI-140 - Create CLI Command to Create, View, Update and Delete Policies in ONAP CLOSED </div> <div>  CLI-141 - Create CLI command to Create Service-instance with parameters to include customer location, homing solution and orchestrator CLOSED </div> <div>  CLI-142 - Create CLI command to create VNF from a service Instance CLOSED </div> <div>  CLI-143 - Create CLI command to put in Preload for VF module CLOSED </div> <div>  CLI-144 - Create CLI command to Create, Update, View and Delete VF module CLOSED </div> <div>  CLI-145 - Create CLI Commands to list Service Instances CLOSED </div> <div>  CLI-146 - Update cloud-create command to include more parameters CLOSED </div> <div> <input checked="" type="checkbox"/> CLI-149 - Create CLI command to Onboard, instantiate NS and VNF for VFC CLOSED </div> <div>  CLI-150 - Update Cloud-list command to printout other important parameters CLOSED </div> <div>  CLI-151 - Create CLI Command to list the flavors of a Cloud CLOSED </div> <div>  CLI-152 - Create CLI command to delete cloud using multicloud CLOSED </div> <div>  CLI-153 - Create CLI commands to add cloud regions to a customer subscription CLOSED </div> <div>  CLI-154 - Create CLI command to list vendor license models CLOSED </div> <div>  CLI-156 - Create CLI command to delete VLM CLOSED </div> <div>  CLI-158 - Create CLI commands to use for vf model in Dublin CLOSED </div> |

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| Optimization Framework | <div> OPTFRA-415 - Automation on policy model uploading CLOSED</div> |
| Integration | <div><div> INT-792 - Testing vFW & vDNS HPA use cases with CLI/GUI CLOSED</div><div> INT-794 - End-to-End automation test program to test vFW with various HPA features CLOSED</div><div> INT-795 - End-to-End automation test program to test vCPE with various HPA features CLOSED</div><div> INT-904 - Create End to End Automation Script for vFW with HPA CLOSED</div><div> INT-905 - Create End to End Automation for vDNS with HPA CLOSED</div><div> INT-793 - vIPSEC Sample VNFs CLOSED</div></div> |