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CNF Orchestration

REQ-341 (Guilin) native CNF path

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Native CNF Orchestration Path

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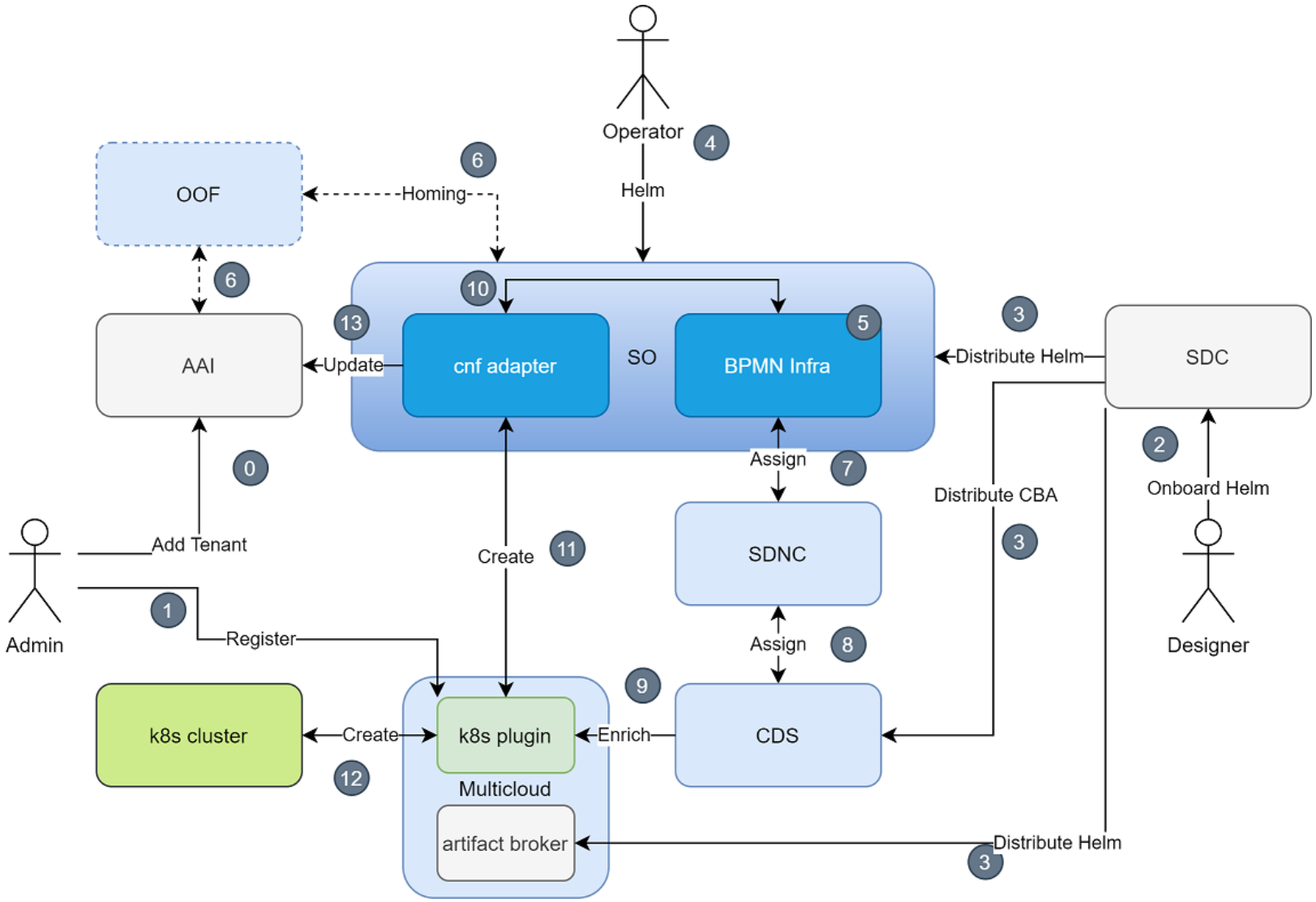

vFW CNF Use Case

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OPEN NETWORK AUTOMATION PLATFORM

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vFirewall CNF Use Case

Source files

- Heat/Helm/CDS models: vFW_CNF_CDS Model
- Automation Scripts: vFW_CNF_CDS Automation

Description

This use case is a combination of vFW CDS Dublin and vFW EDGEX K8S use cases. The aim is to continue improving Kubernetes based Netw
vFW EDGEX K8S left and brings CDS support into picture like vFW CDS Dublin did for the old vFW Use case. Predecessor use case is also dc

This use case shows how to onboard helm packages and to instantiate them with help of ONAP. Following improvements were made in the vF

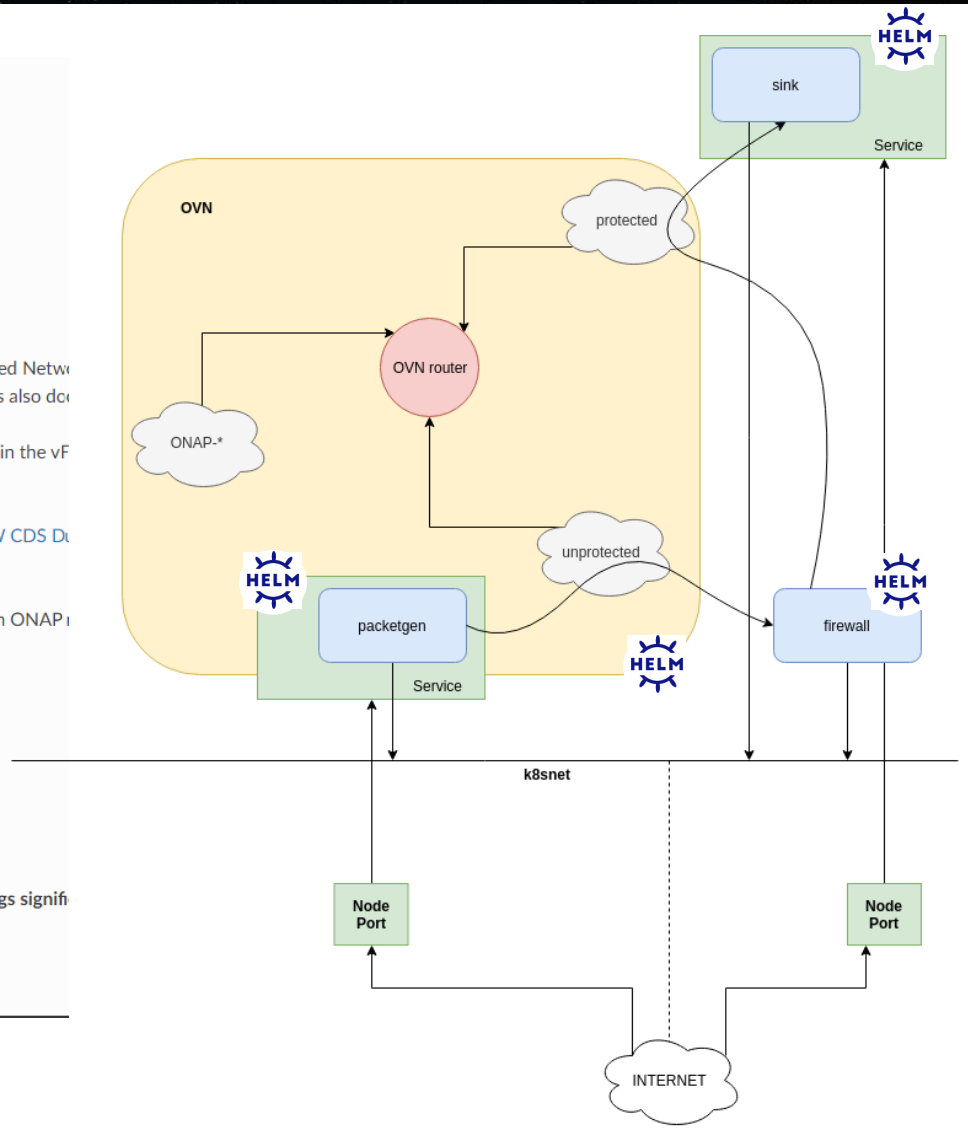
- vFW Kubernetes Helm charts support overrides (previously mostly hardcoded values)
- SDC accepts Onboarding Package with many helm packages what allows to keep decomposition of service instance similar to vFW CDS D
- Compared to vFW EDGEX K8S use case **MACRO** workflow in SO is used instead of VNF a'la carte workflow
- No VNF data preloading used, instead resource-assignment feature of CDS is used
- CDS is used to resolve instantiation time parameters (Helm overrides) * IP addresses with IPAM * Unique names for resources with ONAP
  profile as part of instantiation flow
- Combined all models (Heat, Helm, CBA) in to same git repo and a created single onboarding package vFW_CNF_CDS Model
- Use case does not contain Closed Loop part of the vFW demo.

All changes to related ONAP components and Use Case can be found in the following tickets:

- REQ-182
- REQ-341

**Since Guilin ONAP supports Helm packages as a native onboarding artifacts and SO natively orchestrates Helm packages what brings signifi
mechanisms for monitoring of the status of deployed CNF resources.**

The vFW CNF Use Case



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Setup

```
drwxr-xr-x 1 advnet advnet      512 Aug 30 20:58 .landscape
drwxrwxrwx 1 advnet advnet      512 Aug 30 21:08 .local
drwxr-xr-x 1 advnet advnet      512 Nov 25 16:49 .m2
-rw-rw-rw- 1 advnet advnet        0 Feb  1 16:41 .motd_shown
-rw-r--r-- 1 advnet advnet      807 Aug 30 20:58 .profile
drwx------ 1 advnet advnet      512 Nov  5 20:21 .putty
-rw------- 1 advnet advnet        7 Aug 31 14:41 .python_history
drwx------ 1 advnet advnet      512 Dec 10 16:24 .ssh
-rw-r--r-- 1 advnet advnet        0 Aug 30 21:05 .sudo_as_admin_successful
drwxr-xr-x 1 advnet advnet      512 Dec 29 16:53 .terraform.d
-rw------- 1 advnet advnet    12225 Sep  3 23:58 .viminfo
lrwxrwxrwx 1 advnet advnet       37 Nov 10 18:37 .virtualenvs -> /home/advnet/.local/share/virtualenvs
drwxr-xr-x 1 advnet advnet      512 Dec 14 22:42 .vscode-server
-rw-rw-rw- 1 advnet advnet      165 Oct 19 19:38 .wget-hsts
lrwxrwxrwx 1 advnet advnet       36 Nov 24 19:34 idea.sh -> /opt/idea-IC-202.7660.26/bin/idea.sh
-r-------- 1 advnet advnet     1671 Nov  5 20:21 key.pem
drwxr-xr-x 1 advnet advnet      512 Dec 29 17:02 onap-lab
-r-------- 1 advnet advnet     1460 Nov  5 20:14 openlab_private.ppk
drwxr-xr-x 1 advnet advnet      512 Jan 27 15:43 rc_channels
lrwxrwxrwx 1 advnet advnet       36 Nov 24 19:41 sources -> /mnt/c/Users/advnet/Desktop/SOURCES/
-rw-r--r-- 1 advnet advnet 33647270 Dec 17 22:28 terraform_0.14.3_linux_amd64.zip
advnet@DESKTOP-U7RF2A4:~/sources/demo/heat/vFW_CNF_CDS/automation$ ls -al ~/.virtualenvs
lrwxrwxrwx 1 advnet advnet 37 Nov 10 18:37 /home/advnet/.virtualenvs -> /home/advnet/.local/share/virtualenvs
advnet@DESKTOP-U7RF2A4:~/sources/demo/heat/vFW_CNF_CDS/automation$ ls -al ~/.virtualenvs/
total 0
drwxr-xr-x 1 advnet advnet 512 Feb  1 18:49 .
drwx------ 1 advnet advnet 512 Nov 24 19:49 ..
drwxr-xr-x 1 advnet advnet 512 Feb  1 18:49 automation-U4Kdld0a
drwxr-xr-x 1 advnet advnet 512 Dec 21 16:26 automation-tSVpANYx
drwxr-xr-x 1 advnet advnet 512 Nov 10 18:37 cnf-automation-zgHgbeRN
advnet@DESKTOP-U7RF2A4:~/sources/demo/heat/vFW_CNF_CDS/automation$ rm -r ~/.virtualenvs/automation-U4Kdld0a/
advnet@DESKTOP-U7RF2A4:~/sources/demo/heat/vFW_CNF_CDS/automation$ cd ~/sources
advnet@DESKTOP-U7RF2A4:~/sources$ cl
```

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Onboard

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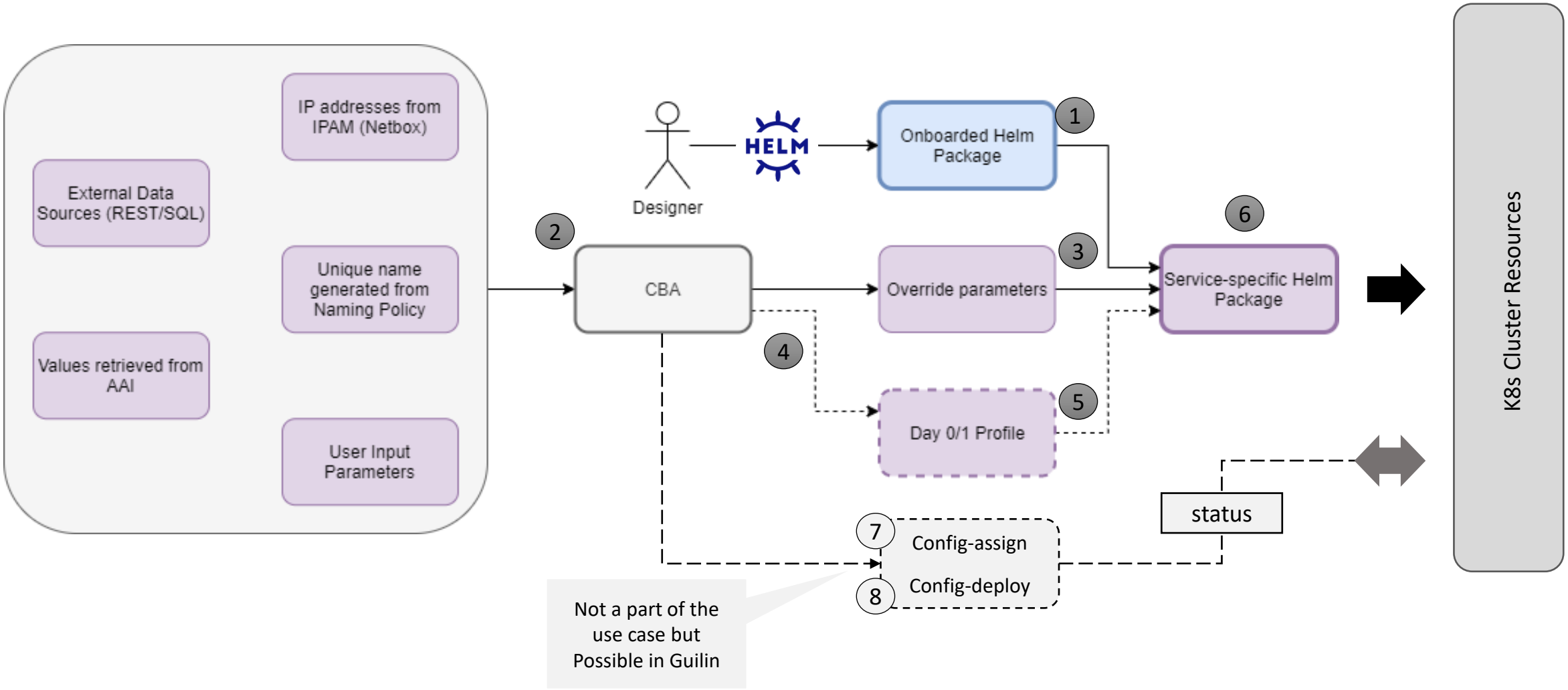
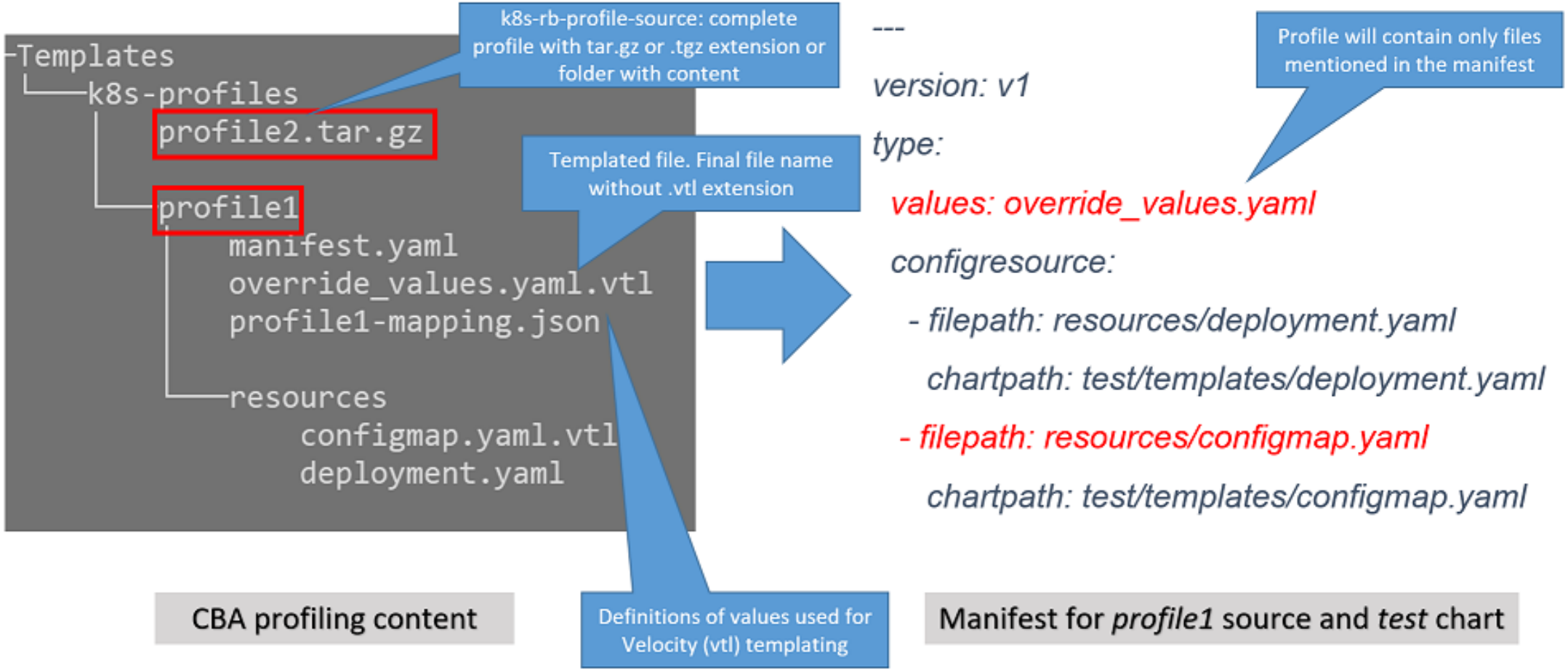
Create

Helm Package Day 0/1



Helm Enrichment



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Delete

advnet@DESKTOP-U7RF2A4: ~/ | ubuntu@localhost: ~ | advnet@DESK

advnet@DESKTOP-U7RF2A4: ~/sources/demo/heat/vFW_CNF_CDS/automation

2021-02-02 00:33:02,379 DEBUG 103:onap_service.py(2406) - [No 9d-1344cb78e084 orchestration request status] url used: http://so.api.simpledemo.onap.org:30277/onap/so/infra/orchestrationRequests/v7/5f8f3816-70af-466c-9e9d-1344cb78e084
2021-02-02 00:33:02,379 DEBUG 104:onap_service.py(2406) - [None][Check 5f8f3816-70af-466c-9e9d-1344cb78e084 orchestration request status] data sent: None
2021-02-02 00:33:02,379 DEBUG 106:onap_service.py(2406) - [None][Check 5f8f3816-70af-466c-9e9d-1344cb78e084 orchestration request status] response: {"request":{"requestId":"5f8f3816-70af-466c-9e9d-1344cb78e084","startTime":"Mon, 01 Feb 2021 23:31:15 GMT","finishTime":"Mon, 01 Feb 2021 23:32:57 GMT","requestScope":"service","requestType":"createInstance","requestDetails":{"modelInfo":{"modelInvariantId":"7bf1b6ce-cbc8-4049-ac3a-3a5852dbce60","modelType":"service","modelName":"vfw_k8s_demo_CNF","modelVersion":"1.0","modelVersionId":"531458ed-af55-416e-ba9e-51aaaf431006","modelUuid":"531458ed-af55-416e-ba9e-51aaaf431006","modelInvariantUuid":"7bf1b6ce-cbc8-4049-ac3a-3a5852dbce60"},"requestInfo":{"productFamilyId":"1234","source":"VID","instanceName":"INSTANCE_vfw_k8s_demo_CNF-1","suppressRollback":false,"requestorId":"demo"},"subscriberInfo":{"globalSubscriberId":"customer_cnf"},"cloudConfiguration":{"tenantId":"26e51750-62ba-4043-a5c9-0cbff96d031d","tenantName":"k8s-tenant-1","cloudOwner":"k8sCloudOwner","lcpCloudRegionId":"k8s-region-1"},"requestParameters":{"subscriptionServiceType":"vfw_k8s_demo_CNF","userParams":[{"Homing_Solution":"none"},{"service":{"instanceParams":[],"instanceName":"INSTANCE_vfw_k8s_demo_CNF-1","resources":{"vnfs":[{"modelInfo":{"modelName":"VF_vfw_k8s_demo_CNF","modelVersionId":"36f9027e-c7cb-47bc-abba-370228ace5e1","modelInvariantUuid":"2d3d9e16-9a58-4cf3-aecf-b49813ad55a5","modelVersion":"1.0","modelCustomizationId":"f80271e5-27c6-400d-ac57-5e9b62dc1c14","modelInstanceName":"VF_vfw_k8s_demo_CNF"},"cloudConfiguration":{"tenantId":"26e51750-62ba-4043-a5c9-0cbff96d031d","cloudOwner":"k8sCloudOwner","lcpCloudRegionId":"k8s-region-1"},"platform":{"platformName":"test"},"lineOfBusiness":{"lineOfBusinessName":"LOB-Demonstration"},"productFamilyId":"1234","instanceName":"VF_vfw_k8s_demo_CNF","instanceParams":[{"sdnc_model_name":"vFW_CNF_CDS","sdnc_model_version":"7.0.0","sdnc_artifact_name":"vnf"}],"vfModules":[{"modelInfo":{"modelName":"VfVfwK8sDemoCnf..base_template_dummy_ignore..module-0","modelVersionId":"b475dd5b-a80e-4f36-8082-555c8d948317","modelInvariantUuid":"20cba095-94c1-4621-8751-6cf9940a2b4a","modelVersion":"1","modelCustomizationId":"d8facee6-91c5-4767-8aa3-74fb4d092dfc"},"instanceName":"vf_vfw_k8s_demo_cnf0..VfVfwK8sDemoCnf..base_template_dummy_ignore..module-0","instanceParams":[{}]},{"modelInfo":{"modelName":"VfVfwK8sDemoCnf..helm_base_template..module-4","modelVersionId":"22d853b2-b7f9-4d40-b5d1-e7c48f4b5d87","modelInvariantUuid":"3fe5180e-9ecb-4ce8-b9bf-420b3520f778","modelVersion":"1","modelCustomizationId":"8e49fcd9-00b0-4560-849d-706d8fc31226"},"instanceName":"vf_vfw_k8s_demo_cnf0..VfVfwK8sDemoCnf..helm_base_template..module-4","instanceParams":[{"k8s-rb-profile-name":"vfw-cnf-cds-base-profile","k8s-rb-profile-namespace":"vfirewall","sdnc_model_name":"vFW_CNF_CDS","sdnc_model_version":"7.0.0","vf_module_label":"helm_base_template"}]},{"modelInfo":{"modelName":"VfVfwK8sDemoCnf..helm_vfw..module-3","modelVersionId":"f62b679a-b441-4cdb-bcaa-a458f86285e4","modelInvariantUuid":"97b8dbe0-75aa-404d-9fd1-8ba668967f58","modelVersion":"1","modelCustomizationId":"ebc1d88d-aaac-4ca9-a333-b3cfe4066679"},"instanceName":"vf_vfw_k8s_demo_cnf0..VfVfwK8sDemoCnf..helm_vfw..module-3","instanceParams":[{"k8s-rb-profile-name":"vfw-cnf-cds-base-profile","k8s-rb-profile-namespace":"vfirewall","sdnc_model_name":"vFW_CNF_CDS","sdnc_model_version":"7.0.0","vf_module_label":"helm_vfw"}]},{"modelInfo":{"modelName":"VfVfwK8sDemoCnf..helm_vpkg..module-2","modelVersionId":"a9c92192-1179-468f-98ca-d5faedd64949","modelInvariantUuid":"d7d5e188-11cc-46f5-b0aa-90e185239efe","modelVersion":"1","modelCustomizationId":"70b691d3-bfd4-443b-9980-f776b8273fe3"},"instanceName":"vf_vfw_k8s_demo_cnf0..VfVfwK8sDemoCnf..helm_vpkg..module-2","instanceParams":[{"k8s-rb-profile-name":"vfw-cnf-cds-base-profile","k8s-rb-profile-namespace":"vfirewall","sdnc_model_name":"vFW_CNF_CDS","sdnc_model_version":"7.0.0","vf_module_label":"helm_vpkg"}]},{"modelInfo":{"modelName":"VfVfwK8sDemoCnf..helm_vsn..module-1","modelVersionId":"b57c0731-90b3-4d6e-821c-a16273b87549","modelInvariantUuid":"d0caff64-b778-42d8-9081-1ba58777e897","modelVersion":"1","modelCustomizationId":"6b85c1c3-e6d4-4666-bebb-4870bcb73b98"},"instanceName":"vf_vfw_k8s_demo_cnf0..VfVfwK8sDemoCnf..helm_vsn..module-1","instanceParams":[{"k8s-rb-profile-name":"vfw-cnf-cds-base-profile","k8s-rb-profile-namespace":"vfirewall","sdnc_model_name":"vFW_CNF_CDS","sdnc_model_version":"7.0.0","vf_module_label":"helm_vsn"}]}]}]}],"modelInfo":{"modelVersion":"1.0","modelVersionId":"531458ed-af55-416e-ba9e-51aaaf431006","modelInvariantId":"7bf1b6ce-cbc8-4049-ac3a-3a5852dbce60","modelName":"vfw_k8s_demo_CNF","modelType":"service"}}}],"aLaCarte":false},"project":{"projectName":"Project-Demonstration"},"owningEntity":{"owningEntityId":"52c6b9ed-4138-4e1b-b62f-846ec788f6f3","owningEntityName":"OE-Demonstration"}},"instanceReferences":{"serviceInstanceId":"e0c4aa19-fcea-4095-ad14-b37077d60afb","serviceInstanceName":"INSTANCE_vfw_k8s_demo_CNF-1","vnfInstanceId":"2295d9e9-955d-4b9c-9c8f-99b3767d5355"},"requestStatus":{"requestState":"COMPLETE","statusMessage":"STATUS: Macro-Service-createInstance request was executed correctly. FLOW STATUS: Successfully completed all Building Blocks","percentProgress":100,"timestamp":"Mon, 01 Feb 2021 23:32:57 GMT"}}}

2021-02-02 00:33:02,380 INFO 217:instantiate.py(2406) - Orchestration status is: COMPLETE

advnet@DESKTOP-U7RF2A4:~/sources/demo/heat/vFW_CNF_CDS/automation$

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