SDN-R Introduction and Dev Steps

Introduction

SDN-R is a specialization of the OpenDaylight controller, developed in the OpenDaylight project.

Technical bullets

- OSGi architecture, using the Apache Karaf runtime environment.
- OpenDaylight framework for Service Abstraction (MDSAL), NETCONF, YANG Tools
- Docker/Linux for feature bundling and provisioning

The development of SDN-R bases on ONAP elements CCSDK, SDNC, OOM and ONAP Documentation.

Each of this elements is represented by different gerrit repositories for the path of service delivery:

- CCSDK provides features (=single feature) and feature bundles (= meta feature or microservice)
- SDNC provides an image, prepared to run in the the ONAP service environment
- OOM provides scripts and configurations for deployment in the complex ONAP solution targeting Helm and Kubernetes as platform
- ONAP Documentation is providing user developer documentation, delivered via INTERNET

SDN-R is not listed. This is because it is defined by a specific configuration of the SDNC container, established during provisioning by OOM Scripts.

- SDN-R = SDNC containers + SDN-R configuration

One piece of SDN-R functionality is a microservice. The microservice is running in OSGi (Karaf) context using the Opendaylight platform and provided as a features and OSGi bundles.

Development steps

The general steps to provide this feature are descibed by the list below with examples in the following sections.
The development work is done in four onap gerrit repositories, following the ONAP prozesses and rules:

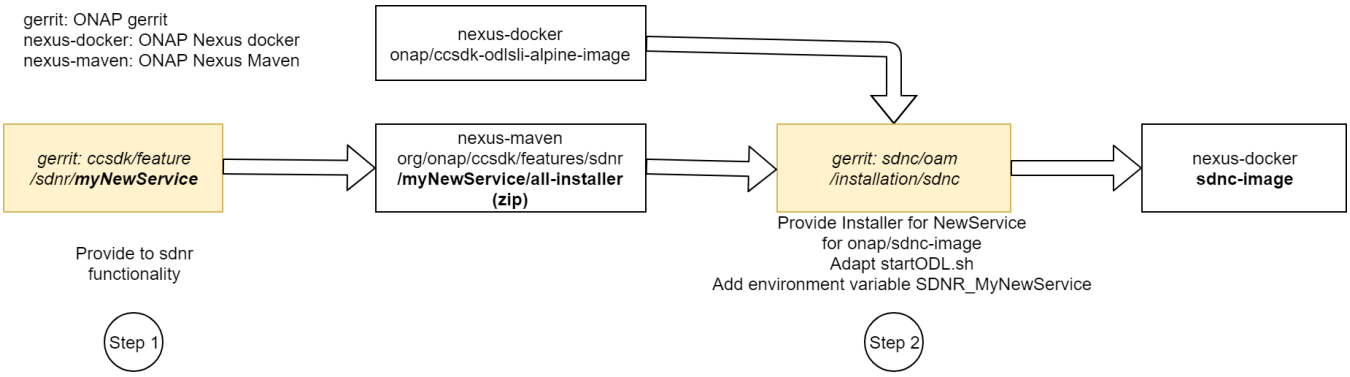
Step	gerrit-repo	Path in repo	Desciption
1	ccsdk/features	/sdnr	Provides the features as • Karaf feature (XML) • ZIP containing all bundles in MVN Repo format for Karaf Repo
2	sdnc/oam	/installer/sdnc	Project to create the SDNC image. • Add the new service to ODL as feature and provide it into repository • Add installer for new service
3	oom	/kubernetes/sdnc	Add functionality to configure and start your service. • Add installer for new Service

Details are in SDN-R Dev Steps and Repositories

Beside code the documentation has to be added and included into ONAP ReadTheDocs.

Development steps depicted

The steps 1 and 2 of the development and delivery to ONAP project are depicted here:



SDN-R Sandbox

For development purpose and local testing there is a further github repository available that can be used as sandbox with less strict access.

The sdnr sandbox is located here: https://github.com/onap-oof-pci-poc/ccsdk.

- This repository is a merge of the gerrit repositories *ccsdk/**feature*** and *ccsdk/**distribution*** using the bold marked elements as subdirectories in difference to the ONAP gerrit, but using the same directory structure below.
- There are further ReadTheDocs and OOM/HELM related information available in this repository.
- The github/ccsdk/*distributions* are designed to allow a simpler setup using docker on a development server.