ONAP CM Casablanca Functional Requirements

4th June 2018 (CM Team)

Change Management Functionalities

- Flexible workflow design and orchestration

- Traffic migration building block

- 5G RAN PNF Software upgrade

- Basic change scheduler

(1) Flexible workflow design and orchestration

- **Flexible workflow designer and orchestrator**
  - Impacted components: SDC, SO, VID (Nice to Have)
  - Contributors: Development [AT&T, Amdocs], Integration [Huawei, Orange]
  - Functionalities
    - Catalog in SDC for meta-data about the Activities/building blocks – Beijing completed by Amdocs
    - Designer/editor in SDC for creating workflow
    - TOSCA parser enhancements
    - Include activities/BBs in SDC Activity Spec Catalog (Manually Use Activity Spec API)
    - Convert small set of already existing building blocks/activities to be workflow designer ready
    - Service Model Distribution that includes workflow deployment in SO
    - Execute workflow in SO (initiation via API)
    - Rainy day handling for unsuccessful workflow steps (At Error Abort/Continue options)
  - Nice to Have's:
    - Move workflow out of service model to independent artifact
    - Distribution of workflow to SO – preferably with workflow as independent artifact
    - SO auto-Push Activities to SDC using Activity Spec API
    - User interface (VID) to select workflow and input parameters for execution

(2) Traffic migration building block

- Impacted components: SDNC, APPC, VFC, SO, VNFSDK
- Contributors: AT&T, Orange, Intel
- Functionalities
  - Common API definition for traffic migration (e.g., source, destination, traffic distribution weights)
  - Demonstration across different VNF types – vGW/vCPE, vFW, vVOLTE
  - Assessment on commonalities/differences across VNF types – e.g., IP based redirection, DNS based or load balancer
  - Incorporate recipe for traffic migration as part of in-place software upgrade workflow – quiesece/resume traffic are already part of the SO workflow
  - Develop recipe (using Ansible, NETCONF or REST) for traffic migration depending on the protocol used to communicate with the VNF

(3) 5G RAN PNF Software Upgrade

- Impacted components: APPC, SO, SDC, A&AI, Ansible/EM
- Contributors: AT&T, China Mobile, Huawei
- Functionalities
  - Ideally: integration/test use case
  - Existing in-place software upgrade Beijing use case to demonstrate application to 5G RAN PNFs
  - Health check (pre/post)
  - Software download, installation and activation
  - Roll-back for unsuccessful execution
  - Manual processing / intervention for failures/roll-back issues
- Dependency – incorporating PNF

(4) CM scheduler

- Impacted components: OOF, VID

- Contributors: AT&T

- Functionalities
  - Schedule a VNF instance at specific time to execute the change management workflow [generic scheduler within OOF – can apply to control loop/instantiation/other applications]
  - Use Beijing vGW in-place software upgrade workflow to demo execution at a specific time