



SDNC Roadmap

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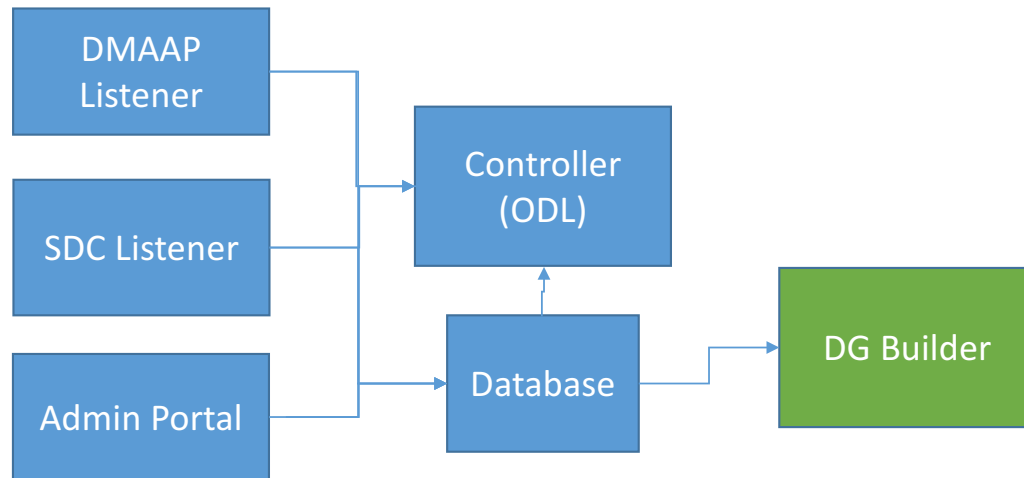
SDNC Project Scope

- CCSDK vs SDNC
 - The Common Controller SDK (CCSDK) is a set of libraries and tools used to create controllers.
 - Based on OpenDaylight
 - Provides infrastructure needed to create, compile and execute directed graphs
 - Used in Amsterdam by APPC and SDNC
 - SDN Controller (SDNC) is the network controller for ONAP
 - Assigns resources and controls layer 1-3
 - Based on Common Controller SDK (CCSDK)

SDNC Amsterdam Release Scope

- Release goal was to establish base SDN controller platform, based on CCSDK
 - Features include:
 - Resource assignment
 - Automated assignments from local inventory pool
 - Assignments from preloaded data
 - Interface to third party SDN controller to create overlay and underlay networks
 - Southbound REST interface based on JSON templates
 - Interface to VPP based VNFs via Honeycomb

SDNC Amsterdam container architecture



SDNC Amsterdam Release : Incoming APIs

- Incoming APIs:
 - SDC interface:
 - Consumes TOSCA models, based on SDC TOSCA parser
 - DMAAP interface:
 - Subscribes to DHCP event
 - SO (REST) interface:
 - Supports 2 sets of APIs:
 - VNF-API
 - API for handling assignments for VNFs, using preloaded data
 - GENERIC-RESOURCE-API
 - API for handling generic resource assignments
 - Supports automated assignments
 - Intended as replacement for VNF-API, but first feature gaps must be resolved
 - Does not currently support preloads

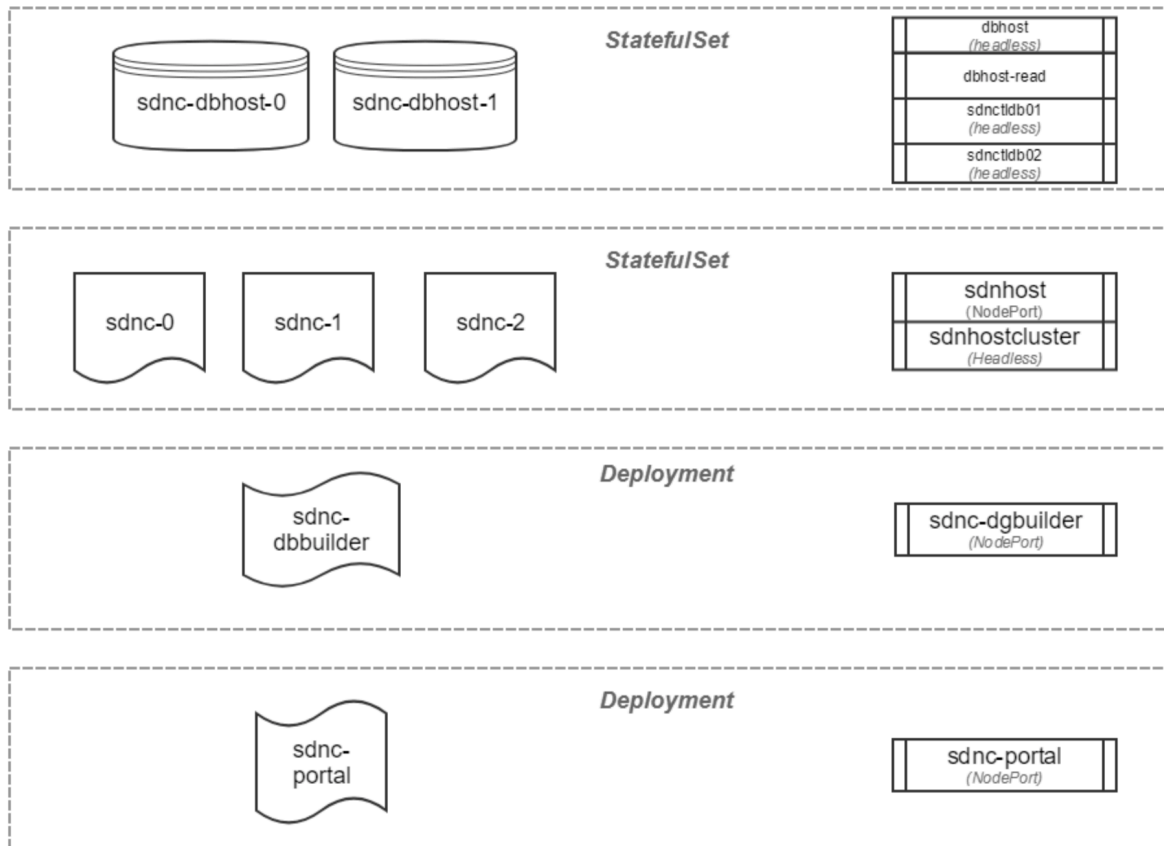
SDNC Amsterdam Release : Outgoing APIs

- Outgoing APIs:
 - A&AI
 - VNF, VF data read/write
 - Third party SDN controllers
 - REST API adaptor
 - VPP Honeycomb VNFs
 - REST API adaptor

SDNC Beijing Release Highlights

- Primary goal of Beijing release is platform hardening (S3P)
 - Improve resiliency by introducing clustering based on Kubernetes
 - Greater focus on:
 - Scalability
 - Security
 - Stability
 - Performance
- New subproject SDN-R for wireless networks

SDNC Clustering on Kubernetes



SDNC Beijing Release : Incoming APIs

- Incoming APIs:
 - SDC interface:
 - More or less same as Amsterdam, except newer version of SDC client library
 - DMAAP interface:
 - TBD, but safe to assume there will be additional events identified
 - SO (REST) interface:
 - Plan to deprecate VNF-API in favor of GENERIC-RESOURCE-API
 - Will expose functionality of GENERIC-RESOURCE-API as microservices

SDNC Amsterdam Release : Outgoing APIs

- Outgoing APIs:
 - A&AI
 - Enhance to support Beijing version of A&AI interface/model
 - Third party SDN controllers
 - Add new netconf adaptor, to support interface to netconf based devices
 - Usability/programmability enhancements for REST API based interfaces
 - Make it simpler to support new interfaces without need to hand-code JSON templates

SDNC Future Directions

- Configuration management
 - Support for saving and rolling back to known good state on device
 - Support for adding new types of devices / controllers easily, without need for custom Java development
- Directed Graph technology improvements
 - Current building blocks are fairly low level
 - Add ability to create higher level building blocks, suitable for use by service experts with little programming knowledge
- Other ideas?
 - Interface from Domain Controller, to update A&AI