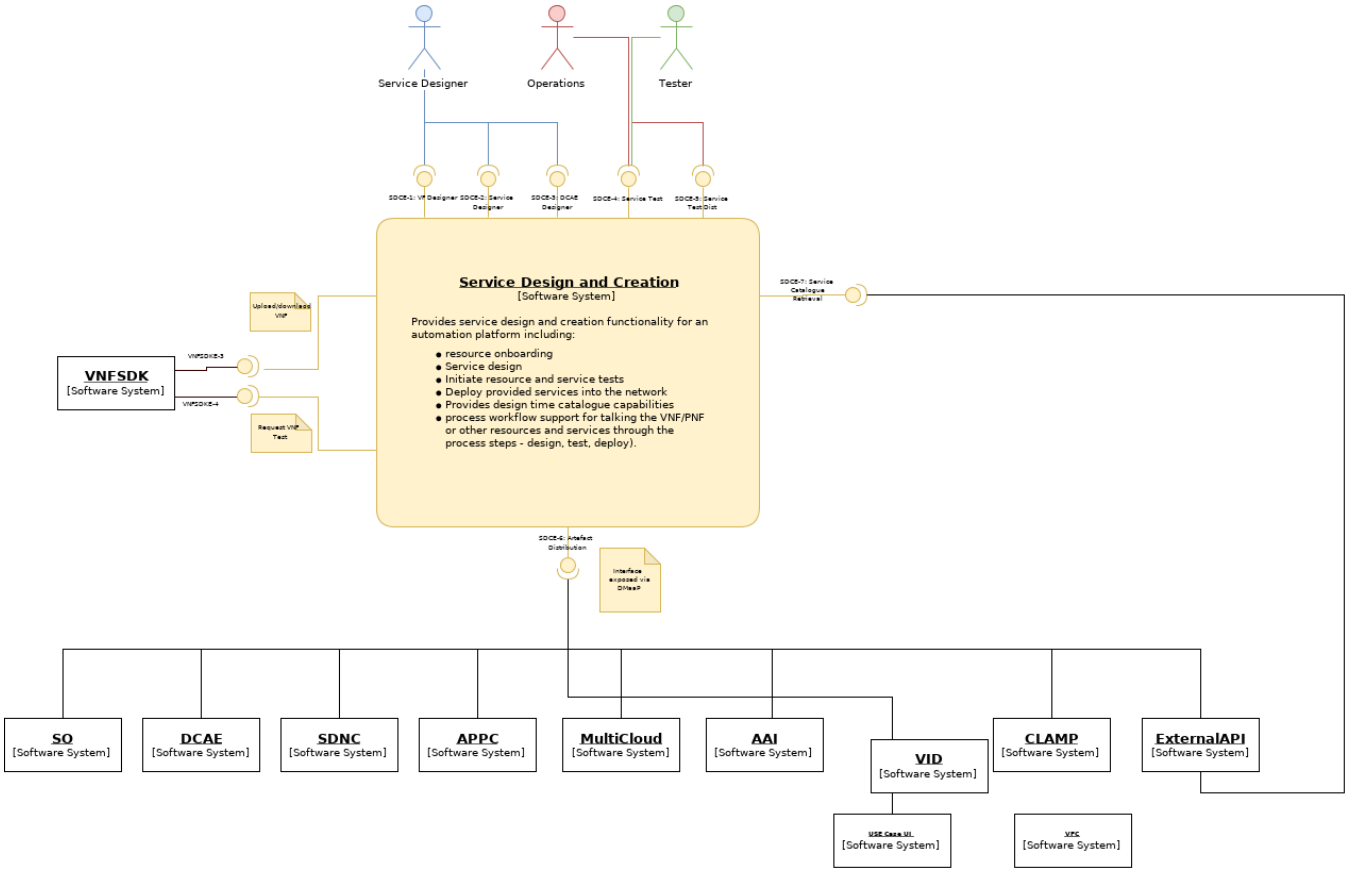
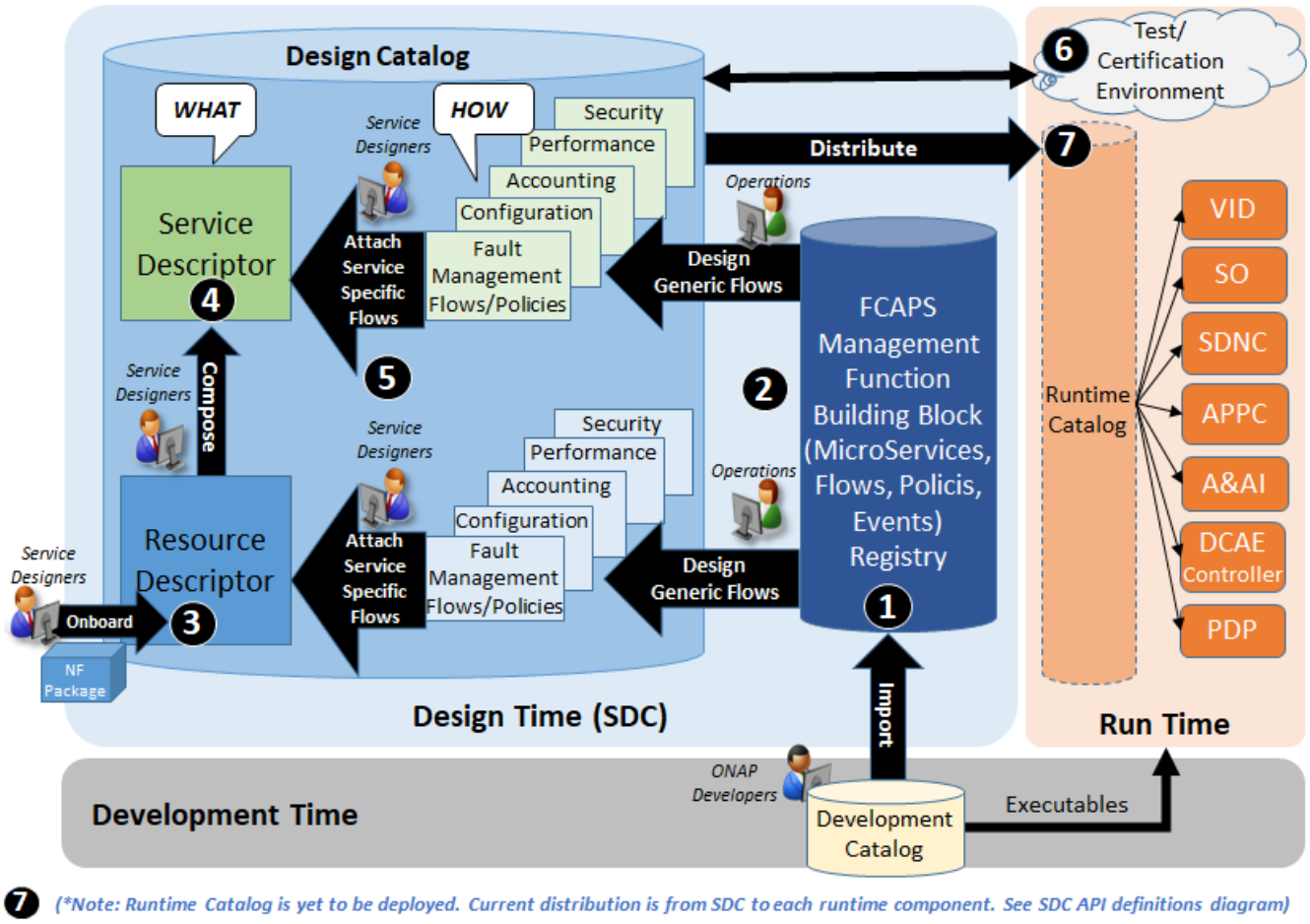
ARC SDC Component Description - Dublin

SDC: Service Design and Creation:

1 SDC High Level Component Definition and Architecteral Relationships



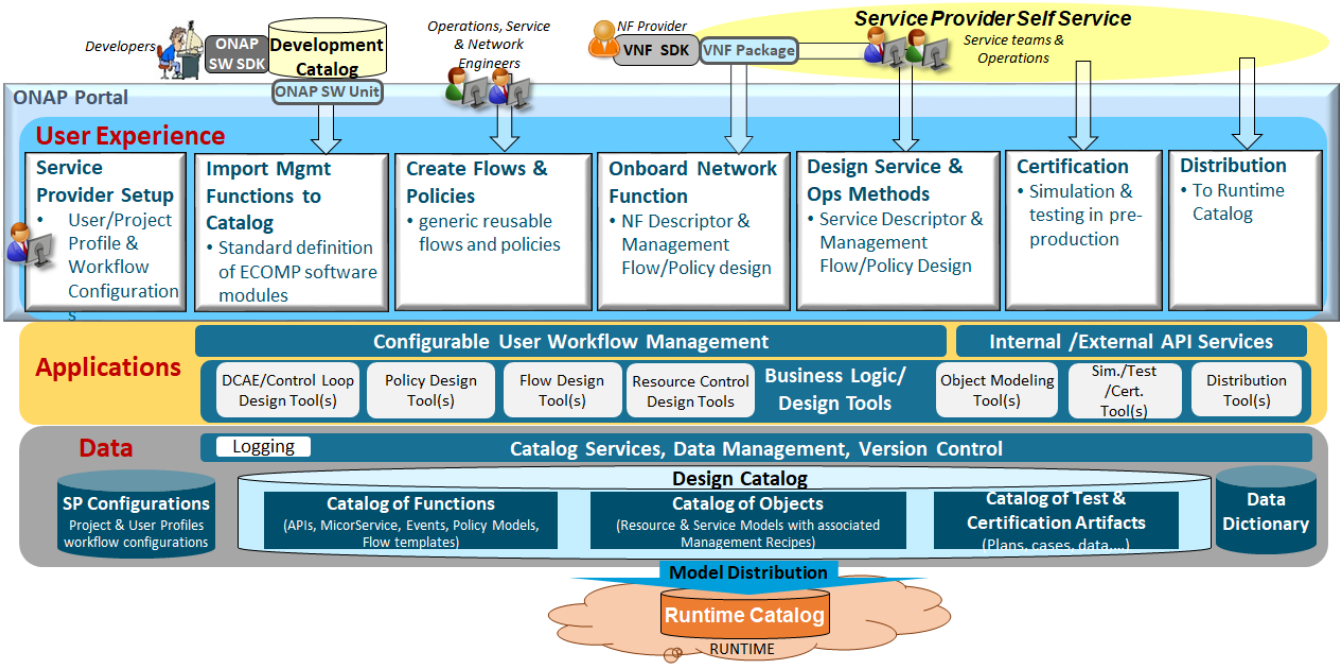
2. SDC Component Description:



SDC is the Centralized ONAP Design Time Platform

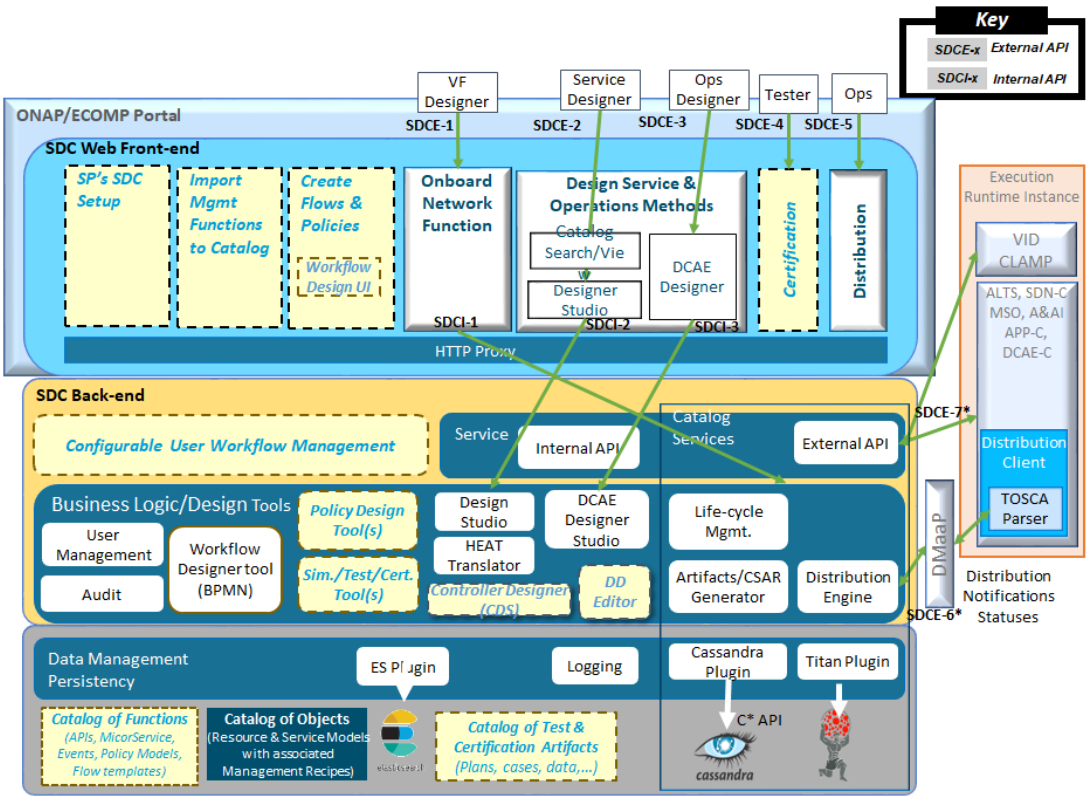
- SDC Provides Service Provider a seamless design time user experience
  - Allow SP to configure for its design environment including user roles and design workflows
  - Import generic ONAP management functions (MS, Flows, Policies) from ONAP developed software and SP's adaptations (1) (2)
  - Onboard & Design resource level network functions (VNF, PNF) (3)
  - Compose Service models with resources (4)
  - Design Service Provider specific Management Flows and Policies for the Resource or Service Model (5)
- SDC integrates multi design tools into one platform
  - Provide ONAP development a "Pluggable framework" for easy design tools integration
- SDC Provides a common Catalog for designed objects
  - Support robust catalog cataloging capabilities for storage and management of ONAP standard compliant data models
- Provide linkage & management of SP's Test/validation process & artifacts for certification of the designed models (6)
- Distributes models to runtime for execution (7)

3 SDC Target Functional Architecture



SDC provides 3 functionally distinct layers with modular software, integrated with internal APIs

4. SDC Current Release API definitions



SDC provides the following interfaces:

Interface Name	Interface DefinitionD
SDCE-1	VNF is on-boarded thru VNF Onboarding GUI

SDCI-1	VNF is stored in Design CatalogVNF is stored in Design Catalo
SDCE-2	Service designer creates a service model from Design Catalog items
SDCI-2	Designer Studio stores and retrieves Design Catalog items
SDCE-3	Ops designer creates monitoring templates with mS data flows
SDCI-3	DCAE Designer Studio stores and retrieves monitoring flow with mS elements
SDCE-4	Service tester certifies service models for distribution
SDCE-5	Service tester distributes service models
SDCE-6	Distribution Engine publishes service notification to DMaaP. ONAP components subscribe to service notification from DMaaP
SDCE-7	ONAP components retrieve service models from the Design Catalog

Note: xxxI interface is a SDC internal interface. xxxxE interface is a SDCE external interface

The current API documents can be found at:

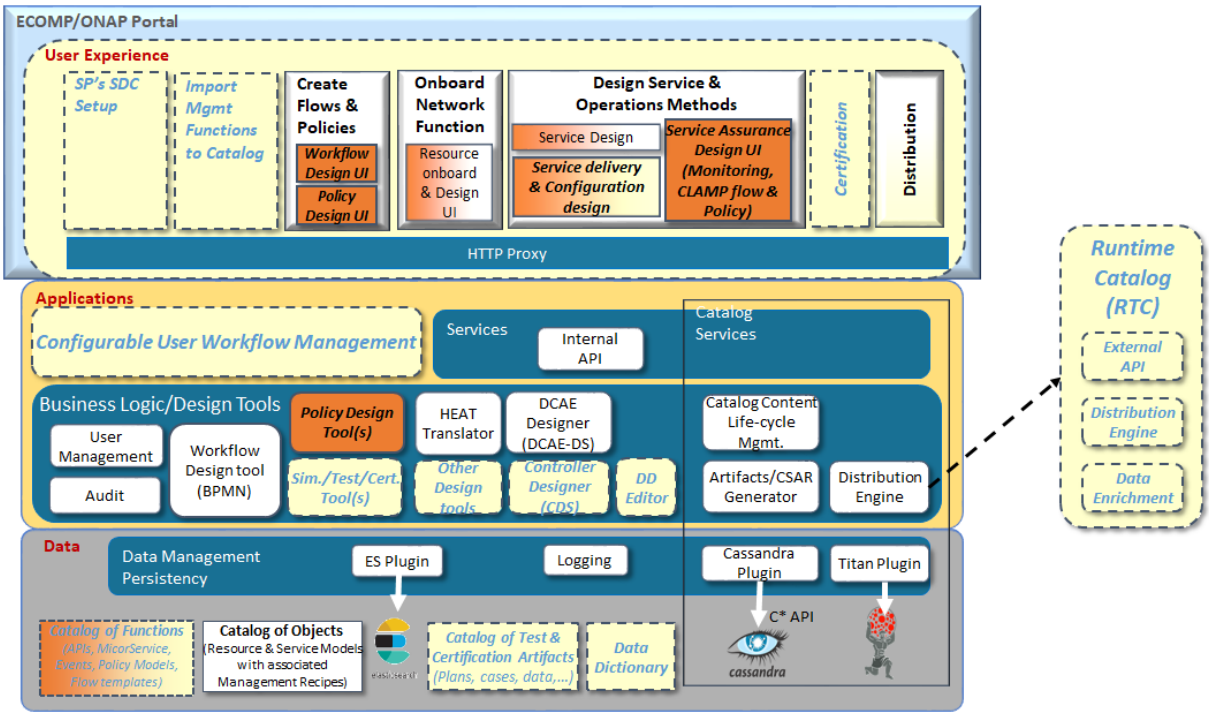
- https://onap.readthedocs.io/en/latest/submodules/sdc.git/docs/consumedapis.html
- https://onap.readthedocs.io/en/latest/submodules/sdc.git/docs/offeredapis.html

SDC consumes the following interfaces:

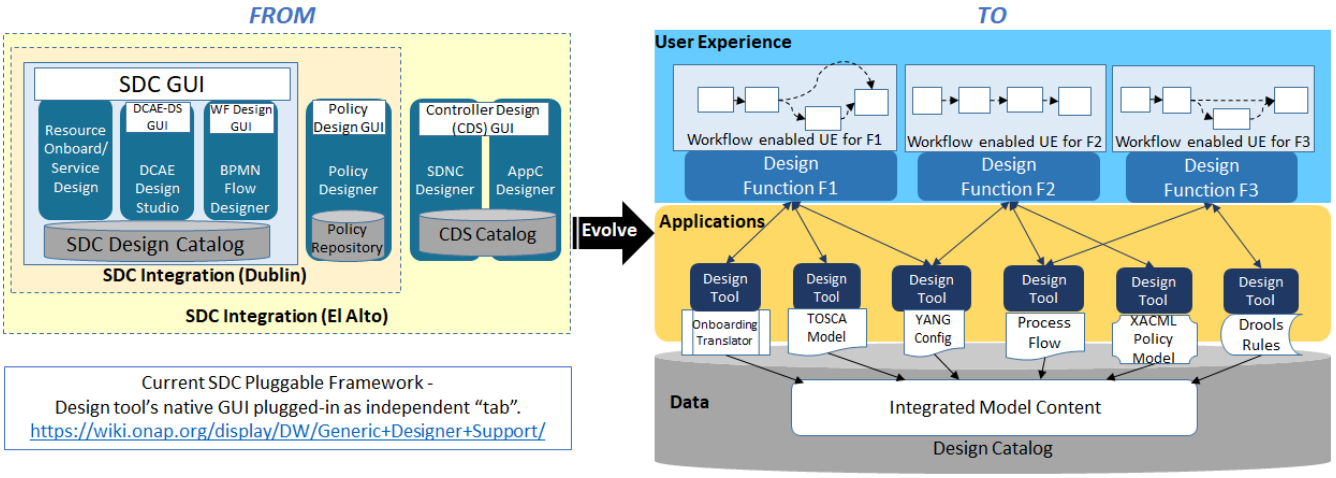
Interface	PurposePu
VNFSDKE-3	Upload VNF/PNF packagess for test purpose, and retrieve VNF/PNFs packages from the marketplace.Se
VNFSDKE-4VN	Request VNF/PNF validation tests and obtain the result

5. Dublin Functional View

The SDC dublin view is:



6 SDC Architecture Evolution (optional item)

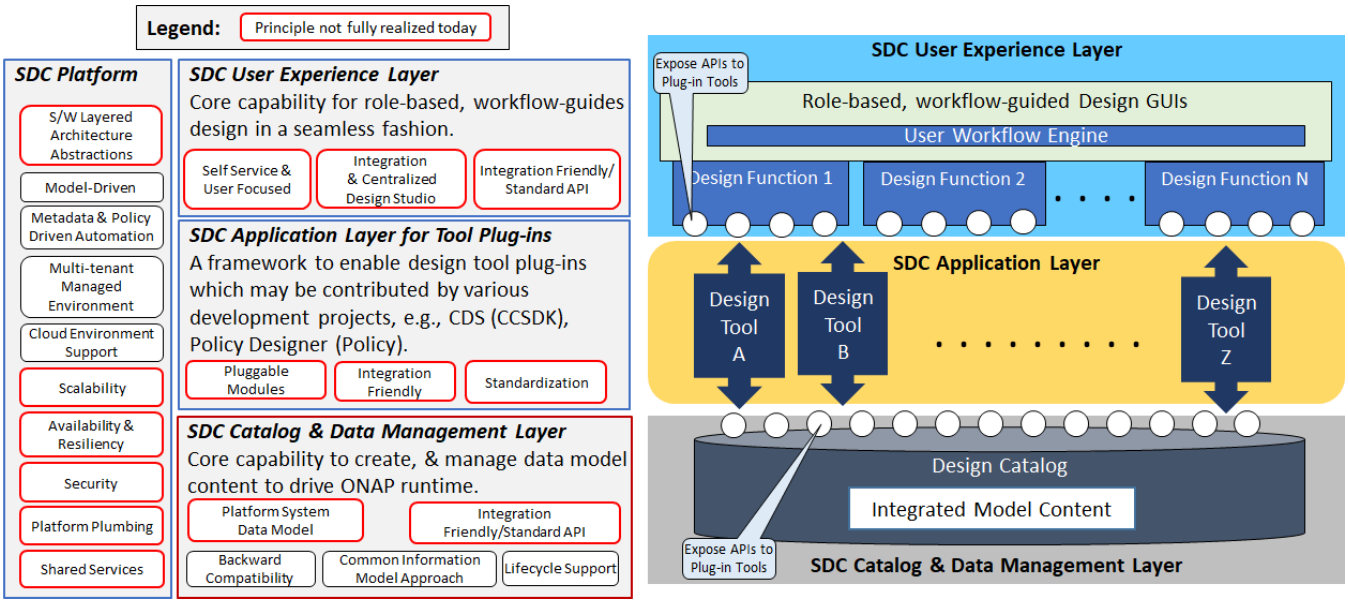


Current SDC Pluggable Framework -
Design tool's native GUI plugged-in as independent "tab".
https://wiki.onap.org/display/DW/Generic+Designer+Support/

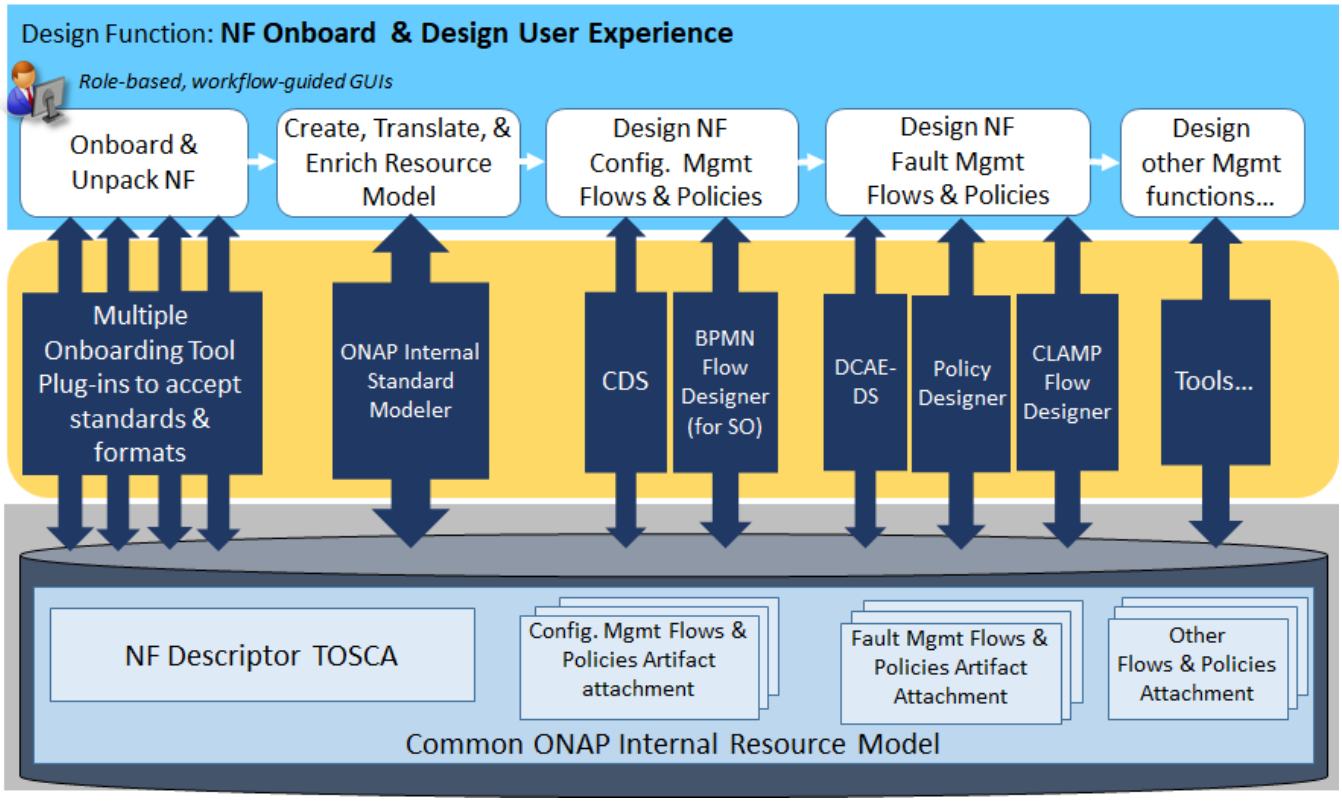
The goals of the SDC evolution are:

- Seamless Design Time user experience based on user's roles and design workflow
- Pluggable Framework to integrate multiple external developed design tools into SDC
- One consolidated Design Catalog with common models in SDC to drive ONAP runtime

7 SDC Overall ONAP Architecture Principle Compliance



8 The SDC near term focus on architecture deficincies are (optional):



User experience:

- Workflow Congfigurator to define service provide specific design workflow
- Workflow guided, role-based user experience
- Function-based (rather than tool based) GUI

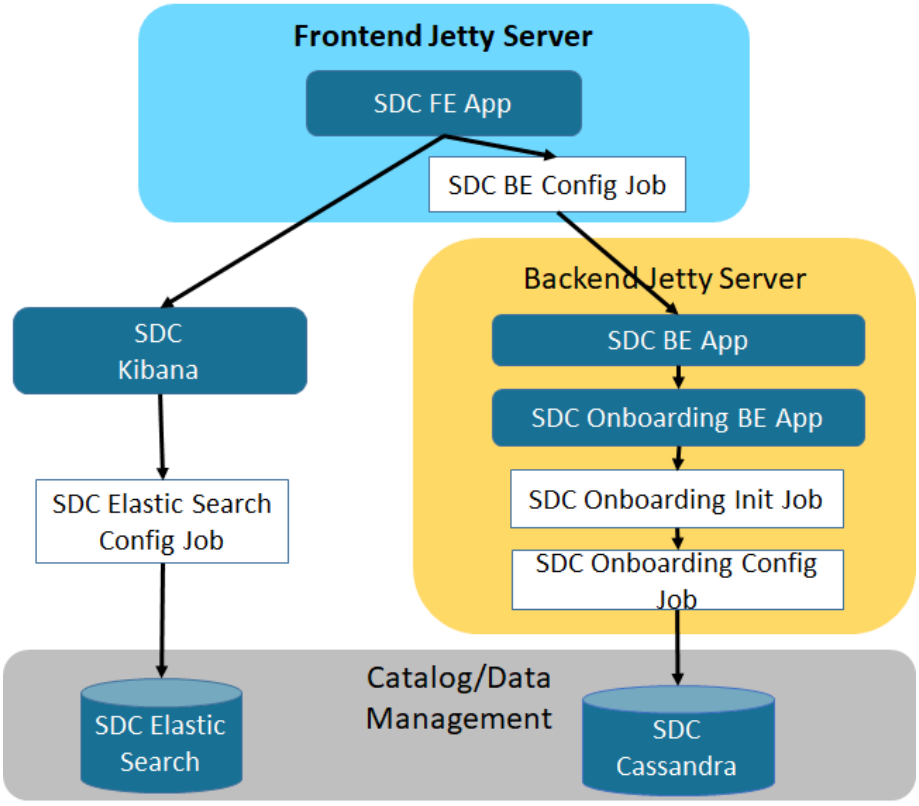
Application Layer for Tool Plug-ins

- Provide Plug-in Framework for design tools
- Support standard-based VNF package onboarding tool plug-ins
- Provide Data Mapping/Translation/Enrichment to ONAP Standard Internal Model
- Provide tools to support Service Provider's test & validation environment/process for model certification
- Nert term tasks: Integrate Policy Designer, CLAMP designer, CDS

Catalogue & Data Management

- Support common data model as defined by the modelling team
- Model Data Lifecycle Management
- Runtime Distribution Version Management

9 SDC - Current System Deployment Architecture



User Experience layer (Frontend Jetty Server)

- supplies the static content of web pages, and all resources that required by the GUI
- serves as a proxy for the REST API requests coming from the GUI
- Every request originating from the GUI is passed to the Jetty front-end server before it is executed.

Application Layer (Backend Jetty Server)

- Containers all the application logic for the SDC.

Catalog/Data Management Layer

- Elastic Search is used to index the auditing data received from different operations in the SDC.
- This information can then be analyzed with Kibana. The Kibana server enables statistical analysis of the operations done, according to the business logic.
- Cassandra is used to store audit data, artifacts and data model objects.

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	PNG File image2019-2-27_20-6-11.png	Feb 27, 2019 by Stephen Terrill
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	File SDC System Context View draw.io diagram	May 28, 2019 by Stephen Terrill
	PNG File SDC System Context View.png SDC System Context View exported to image	May 28, 2019 by Stephen Terrill
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