Controller Design Studio Initiative

Background

- For the ONAP Beijing release, the APPC project delivered the CDT design tool to support the APPC model driven design approach.
- For the next ONAP releases Casablanca, we are proposing to develop a common design tool to support both SDNC and Generic L4-7 NFs (APPC, VFC) Controller integrated with SDC.
- This common design tool, also called "**Controller Design Studio**", will be built with associated data dictionary and an Ingredient Resource Resolution Microservice
- The common design tool models shall be backwards compatible to the current use cases supported in Amsterdam and Beijing release by Generic L4-7 NF (APP-C specific).

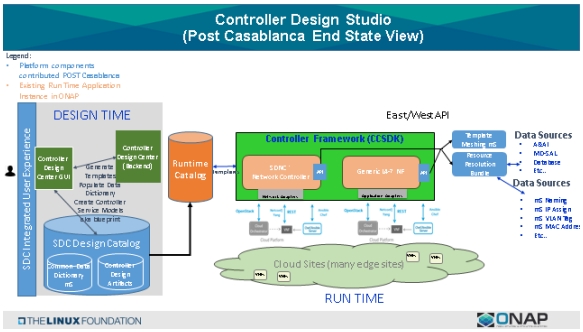
Introduction

The system is designed to be self service, which means that users, not just programmers, can reconfigure the software system as needed to meet customer requirements. To accomplish this goal, the system is built around models that provide for real-time changes in how the system operates. Users merely need to change a model to change how a service operates.

Self service is a completely new way of delivering services. It removes the dependence on code releases and the delays they cause and puts the control of services into the hands of the service providers. They can change a model and its parameters and create a new service without writing a single line of code. This makes SERVICE PROVIDER(S) more responsive to its customers and able to deliver products that more closely match the needs of its customers.

Architecture

The Controller Design Studio is composed of two major components: the GUI (or frontend) and the Run Time (or backend). The GUI handles direct user input and allows for displaying both design time and run time activities. For design time, it allows for the creation of controller blueprint, from selecting the DGs to be included, to incorporating the artifact templates, to adding necessary components. For run time, it allows the user to direct the system to resolve the unresolved elements of the controller blueprint and download the resulting configuration into a VNF. At a more basic level, it allows for creation of data dictionaries, capabilities catalogs, and controller blueprint, the basic elements that are used to generate a configuration. The essential function of the Controller Design Studio is to create and populate a controller blueprint, create a configuration file from this Controller blueprint, and download this configuration file (configlet) to a VNF/PNF.



Detailed Architecture PowerPoint Package:

Controller Design Studio.pptx

Proposed Work Items

Design Time

Feature		Description	JIRA	Owner	Wiki Page	Notes
Controller Design Studio GUI	1	Refactor and move the APP-C CDT to CCSDK for "Controller Design Studio" mS.	CCSDK-334 - Getting issue details... STATUS	AT&T		All Controller Design Studio will be maintained in the APP-C repo[appc/cdt]] for Casablanca Release. **JIRA can be canceled.**
	2	CDS Controller Blueprint Creation and Management including artifact model, component model, connectivity model, and dg modeling in "Controller Design Studio" mS.	APPC-1129 - Getting issue details... STATUS	AT&T		[appc/cdt]] - Srikanth V APPC-1133 - Getting issue details... STATUS APPC-1152 - Getting issue details... STATUS APPC-1153 - Getting issue details... STATUS APPC-1154 - Getting issue details... STATUS APPC-1155 - Getting issue details... STATUS APPC-1156 - Getting issue details... STATUS APPC-1177 - Getting issue details... STATUS APPC-1179 - Getting issue details... STATUS
	3	CDS Catalog Creation and Management in "Controller Design Studio" mS.				
	4	CDS Data Dictionary Creation and Management in "Controller Design Studio" mS.				
	5	CDT enhance existing screen to support data dictionary panel layout and data dictionary reference model creation for existing APP-C Models.	APPC-1131 - Getting issue details... STATUS	AT&T Tech M IBM Bell Canada Erickson		[appc/cdt]] **In Progress** **Girish - Tech M**

6	Controller Design Time Studio app extension with SDC integration.	CCSDK-338 - Getting issue details... STATUS	AT&T Tech M IBM Bell Canada		**Deferred to the next ONAP release**
7	CDS Backend mS Support	CCSDK-458 - Getting issue details... STATUS CCSDK-410 - Getting issue details... STATUS CCSDK-415 - Getting issue details... STATUS CCSDK-416 - Getting issue details... STATUS	AT&T		ccsdk/apps Brinda CCSDK-467 - Getting issue details... STATUS CCSDK-468 - Getting issue details... STATUS CCSDK-469 - Getting issue details... STATUS CCSDK-483 - Getting issue details... STATUS CCSDK-487 - Getting issue details... STATUS CCSDK-488 - Getting issue details... STATUS CCSDK-491 - Getting issue details... STATUS CCSDK-429 - Getting issue details... STATUS CCSDK-431 - Getting issue details... STATUS CCSDK-432 - Getting issue details... STATUS CCSDK-484 - Getting issue details... STATUS

	8	Policy Manager Naming Policy support for vFW Use case		AT&T		Support the vFW naming policy model and policy instance as part of PM deployment POLICY-983 - Getting issue details... STATUS

Run Time

Feature		Description	JIRA	Contributors	Wiki Page	NOTEs
Instantiation	1	Generic Resource API integration with netbox ip management capability for assign	CCSDK-339 - Getting issue details... STATUS	Bell Canada		**Alexis/Marc - Implementation Complete for all the Self Service sub dg and integration with netbox capability. Target Completion Date (9/07) - Delivered** **Ajay/Pat** - Push the latest Sub DG to ONAP and Refactor naming Gen Sub D to call the naming mS Rest API directly. CCSDK-481 - Getting issue details... STATUS CCSDK-482 - Getting issue details... STATUS
	2	Generic Resource API integration with netbox ip management capability for unassign	CCSDK-340 - Getting issue details... STATUS	Bell Canada		**Alexis/Marc -** Implementatic Completed for all the Self Service sub dg and integration with netbox capability. **Target Completion Date (9/07) - Delivered**

3	netbox ip management REST API support in ONAP	CCSDK-341 - Getting issue details... STATUS	Bell Canada		**Alexis/Marc -** Implementatic Completed for all the Netbo Client with Helm chart , pre- provisioning script and DB Creation. **Create a helm chart for us case:** CCSDK-366 **- Getting issue details...** STATUS **pre-provisioning scripts (Targeted for 8/17):** CCSDK-460 **- Getting issue details...** STATUS **Netbox Client** – (Reserve t IP) - **Target for 8/17** CCSDK-462 **- Getting issue details...** STATUS **IPAM DB Creation: Target for 8/17** CCSDK-463 **- Getting issue details...** STATUS
4	Policy driven naming mS in ONAP	CCSDK-342 - Getting issue details... STATUS	AT&T		[ccsdk/apps] Biju T: 7/20 for draft code submission and including dr template. (Preference with policy to boot with the artifac 8/17 – Submitted the Code
5	Resource Resolution using data dictionary mS in ONAP	CCSDK-411 - Getting issue details... STATUS CCSDK-412 - Getting issue details... STATUS CCSDK-412 - Getting issue details... STATUS	AT&T		[ccsdk/apps] - Dan T contributed the fist batch of code in draft version. Kapil S/Brinda S In Progress CCSDK-490 - Getting issue details... STATUS

	6	Template meshing mS in ONAP	CCSDK-344 - Getting issue details... STATUS	AT&T		[ccsdk/apps] - Dan T contributed the fist batch of code in draft version. Kapil S/Brinda S In Progress • **Design Time (Draft Code Submitted and API testing in progress.)** • **Runtime (requires discussion)**
	7	Controller Design Time Studio app extension with SDC integration ingest and store the artifact in the controller persona (SDN-C)	CCSDK-345 - Getting issue details... STATUS	AT&T Tech M IBM Bell Canada		**Deferred to the next ONAP release**
	8	Controller Design Time Studio app extension with SDC integration ingest and store the artifact in the controller persona (APP-C)	CCSDK-349 - Getting issue details... STATUS	AT&T Tech M IBM Bell Canada		**Deferred to the next ONAP release**
	9	Heat and SDC Tosca Update for VFW to include SDNC Controller Blueprint Model Information.	CCSDK-380 - Getting issue details... STATUS	Bell Canada		CCSDK-493 - Getting issue details... STATUS
Post Instantiation	1	APP-C Integration with resource resolution REST API based on data dictionary.	APPC-1077 - Getting issue details... STATUS	AT&T Tech M **IBM** Bell Canada Erickson		scale out use case. (include the discussion with Scott) **Krill** Swagger API for calling the RA API for data and artifact collection. **Brinda/Kapil to provide this information.** **Taka is the PTL for APP-C. Need to review the design with Taka before code contribution.** **In Progress.**

	2	CDS Contribution for Configuration Generation, Preview and Deployment.	CCSDK-346 - Getting issue details... STATUS	AT&T		Kapil S/Brinda S **Deferred to Dublin Releas**

Artifact

Instantiation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  ]
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},
{
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```

```
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      ]
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  ]
}
```


Controller Design Studio Functionality Demo:

Unknown macro: 'widget'

Unknown macro: 'widget'

Unknown macro: 'widget'