



APPC - CDT tool and R3 Planning

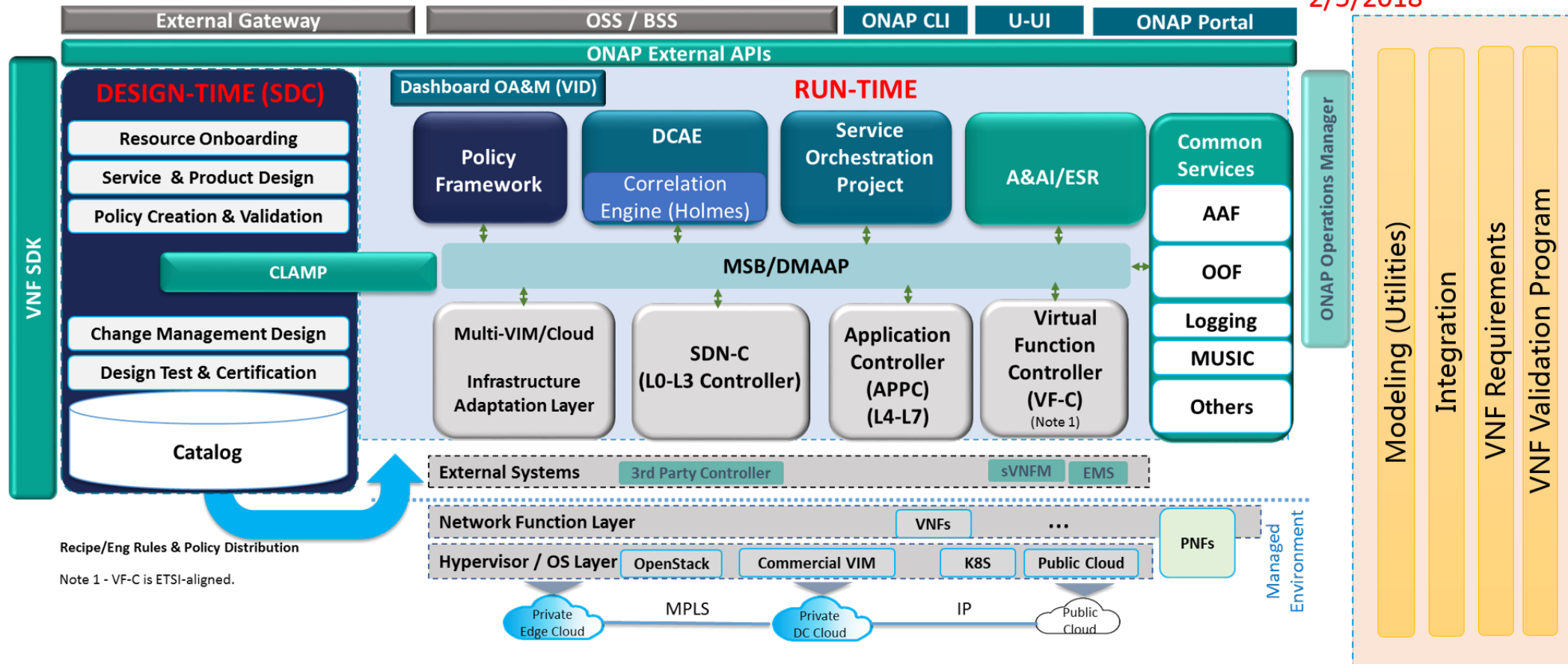
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Agenda

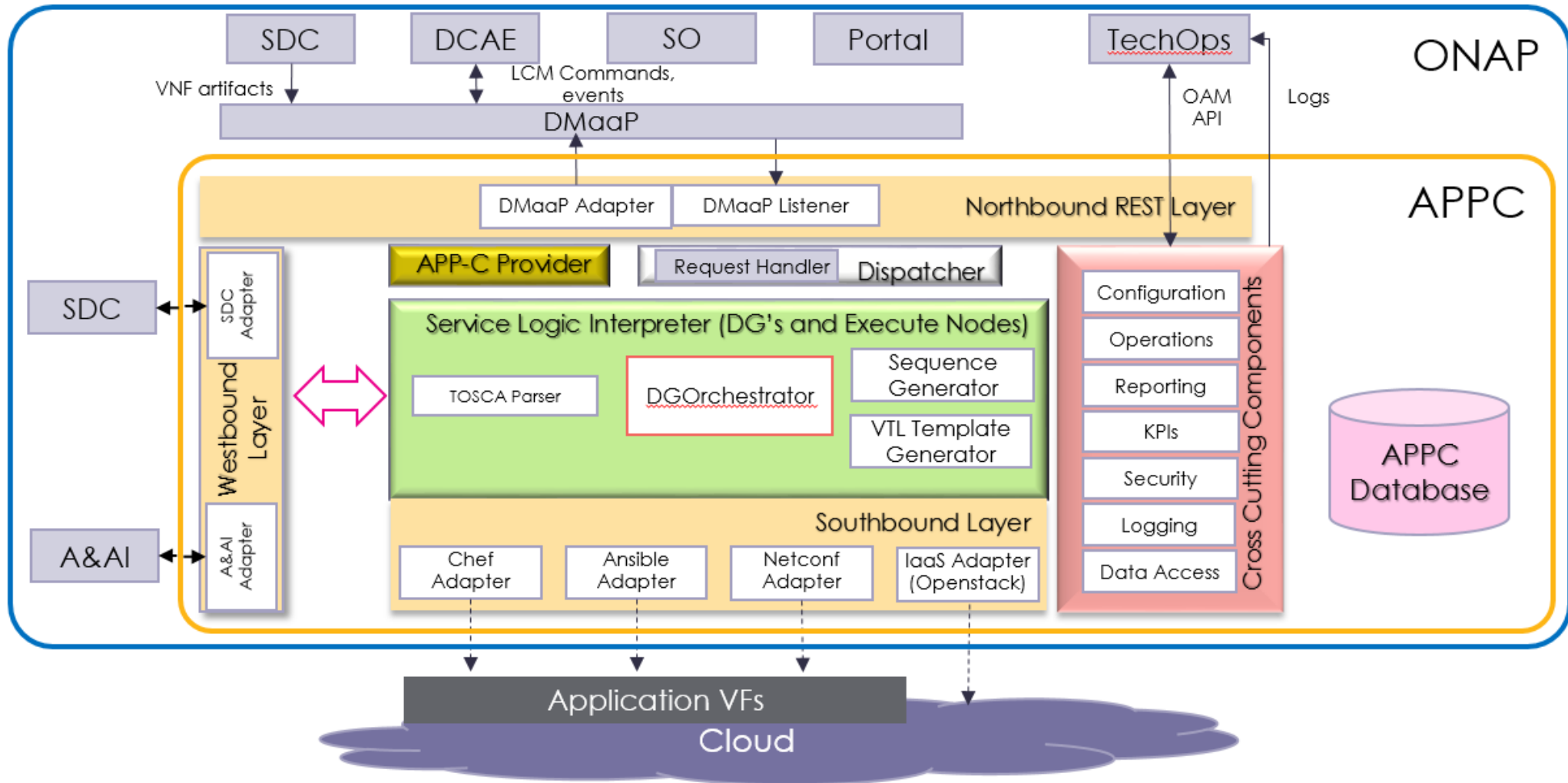
- APPC recap
- APPC - CDT (Configuration Design Tools)
- APPC - Casablanca Pre-Planning

APPC in R2 Architecture

Version 2.0.1
2/5/2018



APPC – Architecture Overview



APPC Commands Supported (R2)

Configuration

Configure ConfigModify ConfigBackup ConfigRestore ConfigScaleOut

OpenStack Commands

*Evacuate Migrate Rebuild Restart Snapshot Start Stop AttachVolume
DetachVolume*

Health and Diagnostic

HealthCheck

Change Management Workflows (Such As Software Upgrade)

*QuiesceTraffic ResumeTraffic StartApplication StopApplication UpgradeSoftware
UpgradePrecheck UpgradePostcheck UpgradeBackup UpgradeBackout*

Other

Audit Sync CheckLock Lock Unlock

APPC - LCM API Definition (Northbound Interface)

- ❖ Common API For All LCM Commands
- ❖ VNF Agnostic
- ❖ DMaaP message bus support using APP-C provided client library
- ❖ Synchronous and asynchronous responses
- ❖ API call contains:
 - Request / Sub-request id
 - Action (single)
 - Action identifier(s) [vnf-id, vserver-id, vnfc-name]
 - Payload field [contains all instance specific parameter data in name / value for]

```
{
  "input": {
    "common-header": {
      "timestamp": "2016-08-03T08:50:18.97Z",
      "api-ver": "3.00",
      "originator-id": "SO",
      "request-id": "123456abcd"
    },
    "action": "Configure",
    "action-identifiers": {
      "vnf-id": "ibcx0001"
    },
    "payload": {
      "request-parameters": {
        "vnf-host-ip-address": "135.21.166.39",
        "vnfc-type": "vSBC-mmc"
      },
      "configuration-parameters": {
        "serv1_gateway_ip_address": "192.168.30.44"
      }
    }
  }
}
```

APPC Self Service Approach

- VNF owners onboard new VNF's using self-service
- APPC provides a Design Tool environment for:
 - Defining the VNF and actions supported
 - Creating the action-specific templates and parameter definitions
 - Testing the actions on a test VNF instance in Stage/ETE environment
- APPC team provides a self-service guide

APPC Use of Templates

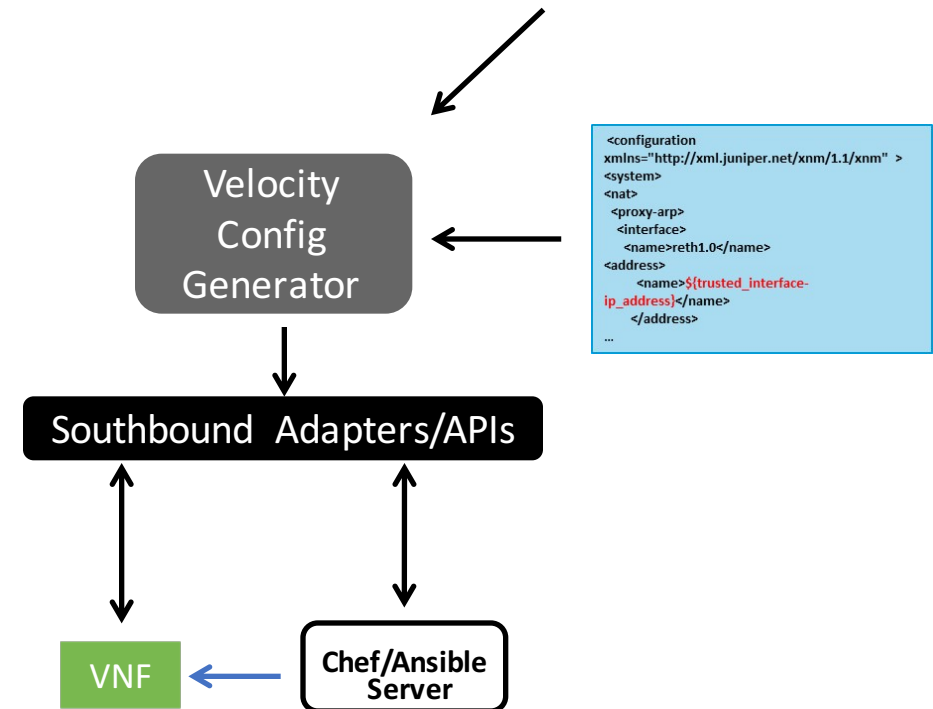
- ❖ APPC receives all instance specific parameter names/values via a GUI using spreadsheet input
- ❖ The configuration parameters are stored in MySQL as a data block
- ❖ The template and parameters are sent to the Velocity Template Generator to generate the request data block
- ❖ The request is downloaded to the VNF

*Configurator GUI
(Interim Solution)*



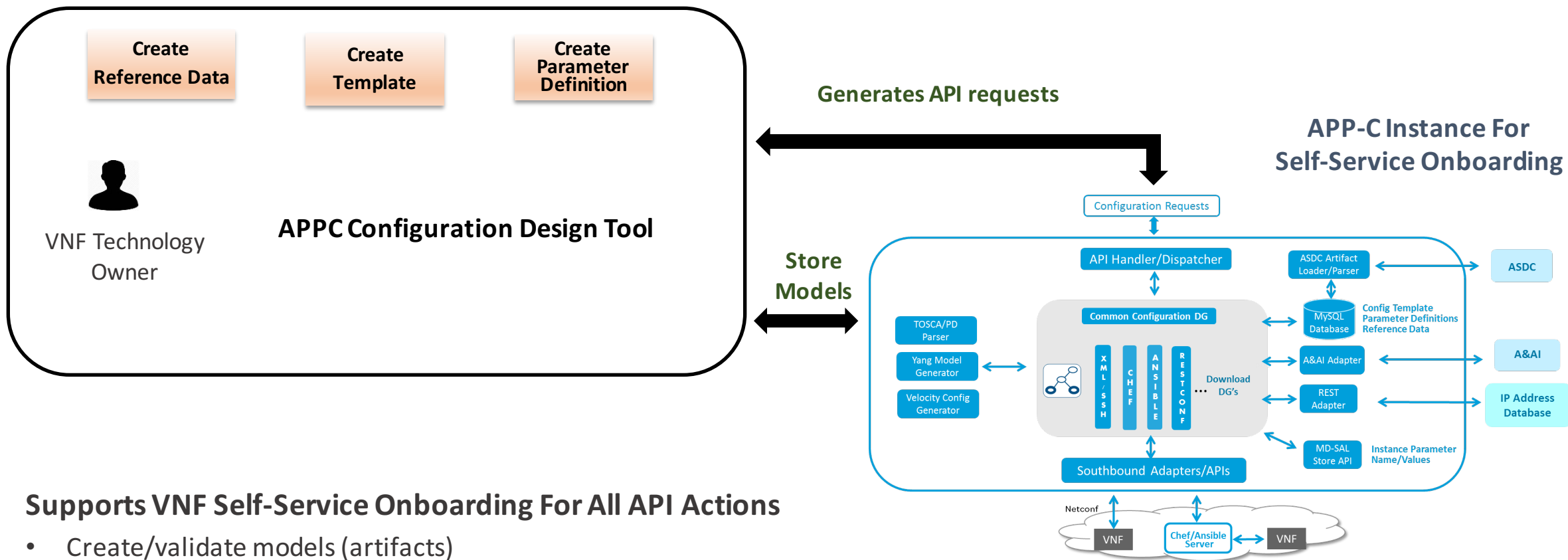
Instance Specific Parameter Names

Parameter Name	Parameter Value
node0_host_name	
node0_backup_router_address	
node0_fxp0_0_address	
node1_host_name	
node1_backup_router_address	
node1_fxp0_0_address	



```
<configuration
xmlns="http://xml.juniper.net/xnm/1.1/xnm" >
<system>
<nat>
<proxy-arp>
<interface>
<name>reth1.0</name>
<address>
<name>${trusted_interface-
ip_address}</name>
</address>
...
```


APPC Self-Service Design Tool – Architecture



Supports VNF Self-Service Onboarding For All API Actions

- Create/validate models (artifacts)
- Store/retrieve artifacts in APPC self-service onboarding instance

APP-C Templates

```
<configuration xmlns="http://xml.juniper.net/xnm/1.1/xnm" >
<system>
<nat>
  <proxy-arp>
    <interface>
      <name>reth1.0</name>
    <address>
      <name>${trusted_interface-ip_address}</name>
```

```
{
{"Id": "102-49d2-j239",
"PlaybookName": "comx/latest/ansible/upgrade/site.yml",
"EnvParameters":{
"snmp1_server_address": "${address1}",
"snmp2_server_address": "${address2}",
...
},
"NodeList": [${node1}, ${node2}, ${node3}],
"Timeout": 600}
}
```

VTL Templates

Templates + Name/Value Data:

- ❖ The template contains the payload that is delivered to the VNF or Chef/Ansible server for many actions
- ❖ The template is a combination of static parameters and instance specific / changeable parameters
- ❖ The template contains imbedded commands needed to insert instance specific or changeable values at run time (i.e., name/value pair data)
- ❖ Other programming constructs can be added as needed (e.g., variable lists, ...)

APPC CDT tools

- CDT tools: angular cli/node.js based
- CDT Repo: <https://gerrit.onap.org/r/#/admin/projects/appc/cdt>
- CDT Document:
<http://onap.readthedocs.io/en/latest/submodules/appc.git/docs/index.html>
- DEMO

Casablanca R3 Planning

Level*	Item	Collaborator
likely	Maria DB with galera	CCSDK
likely	Test coverage cont' > 50%	contributors
likely	S3P cont'	contributors
possible	Geo Redundancy	OOM, INT
possible	AutoScaleOut usecase cont'	Usecase, AT&T
reach	5G usecase	Usecase, Nokia
far reach	Generic Application Controller	Architecture, VFC, TSC

*four levels: likely, possible, reach, far reach

APPC Q&A

Thank You

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