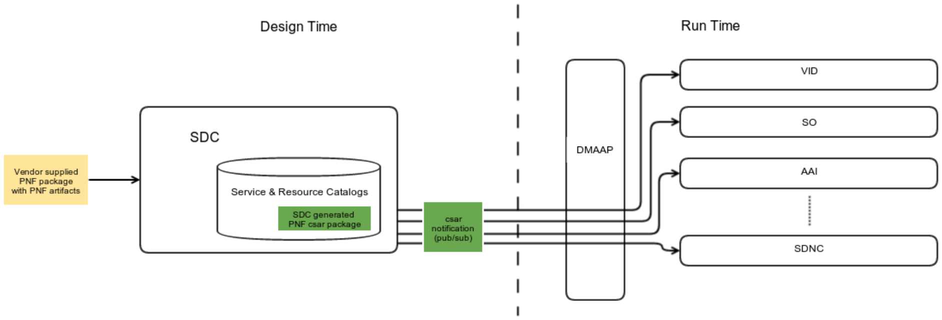
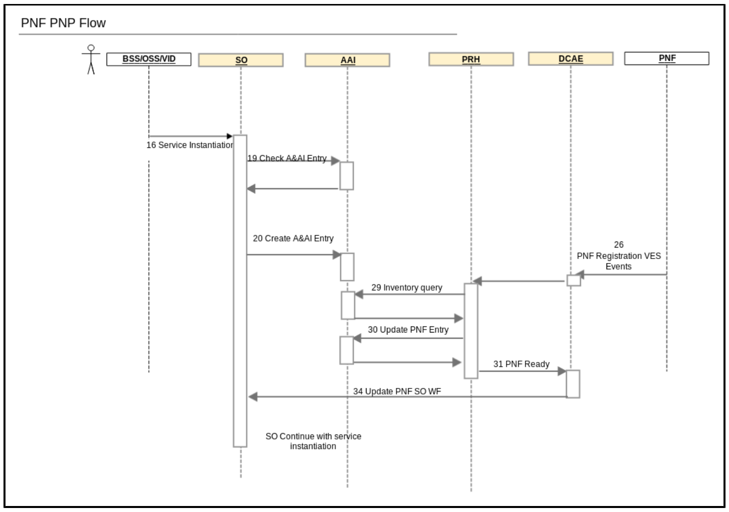
5G - E2E PNF Onboarding with PnP & Configuration with Netconf over TLS - Integration Test Cases

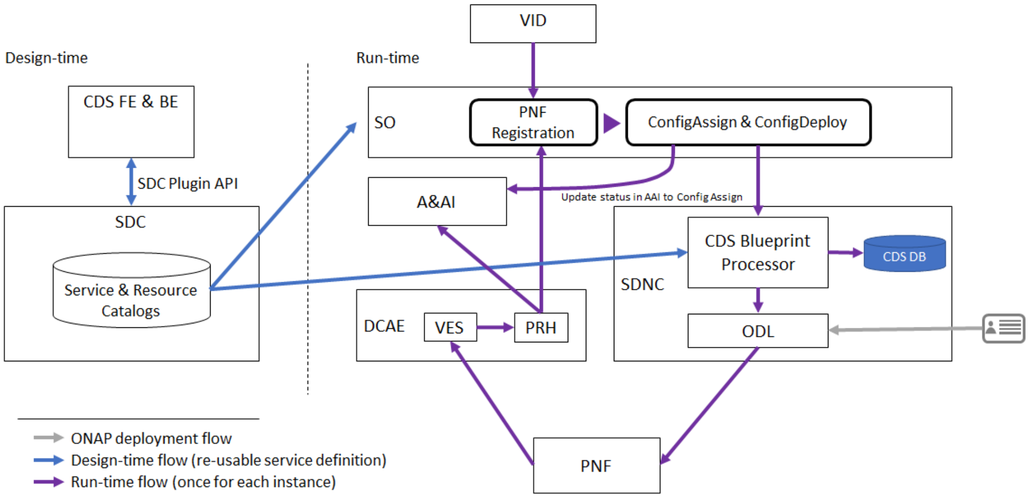
Overview:

The E2E integration test consists of three main parts:

- PNF Onboarding Test
- 5G - PNF Plug and Play
- 5G - Configuration with NETCONF


Design Time
Run Time
Vendor supplied PNF package with PNF artifacts
SDC
Service & Resource Catalogs
SDC generated PNF csar package
csar notification (pub/sub)
DMAAP
VID
SO
AAI
SDNC




VID
Design-time
Run-time
CDS FE & BE
SO
PNF Registration
ConfigAssign & ConfigDeploy
SDC Plugin API
A&AI
Update status in AAI to Config Assign
SDC
CDS Blueprint Processor
CDS DB
Service & Resource Catalogs
SDNC
DCAE
VES
PRH
ODL
PNF
ONAP deployment flow
Design-time flow (re-usable service definition)
Run-time flow (once for each instance)

Deployment:

Test environment requirements for the test cases:

- xNF simulator for test cases: PNF Simulator with TLS & YANG support.
- SO with Config-Assign and Configure steps implemented in workflows.
- CDS Blueprint processor enhanced so that it can send mount, configure and un-mount rest request to SDNC.
- SDNC enhanced with ODL flourine SR2 and also capable to import client and trusted certificate and private key at deployment time.

This environment can be set up by following the steps below.

1. Repo : Yet to update
2. RUN : Yet to update

Use Case preconditions:

- xNF simulator.

High Level End-to-End feature integration Test cases :

#	Test Case	Description	Reference	Tester
1	Create and distribute service which contains PNF	Verify distribution and ingestion of PNF service csar to VID, AAI & SO.	5G - PNF Onboarding Test Cases and Status : PNF-OB-5	Andy Walshe
2	Waiting for PNFReady	Verification if PNF PnP functionality within SO is waiting for *PNFReady* to be published by PRH.	5G - PNF PnP -WaitingforPNFReady	Rahul Tyagi Eric Moore
3	PNF registration accepted	Verification if PNF resource registration is done properly	5G : Configuration with NETCONF - E2E test case for Netconf over TLS	Rahul Tyagi Eric Moore
4	Send Configuration with NETCONF over TLS	Verify the configuration is sent to the PNF with NETCONF	5G : Configuration with NETCONF - Success Flow	Rahul Tyagi Eric Moore

Detailed Description End-to-End Feature Integration Testcases :

<table>
<tr><th>Test Case ID</th><th>NETCONF_CONFIGURATION_TLS_E2E</th></tr>
<tr><td>Test Case Name</td><td><b>E2E test case for NETCONF over TLS</b></td></tr>
<tr><td>Description</td><td>Ensure that PNF_READY notification is received by SO from PRH then SO sends CONFIG-ASSIGN, CONFIGURE request to SS-API, to configure the xNF</td></tr>
<tr><td>Release</td><td>Dublin</td></tr>
<tr><td>Pre-conditions</td><td>1. SO should be waiting for PNF_READY notification after registration process and fully configured as per registration process.
2. Blueprint archive should be configured for correct blueprint.
3. SDNC should be installed successfully with keystore preconfigured with certificates of PNF-SIM.
Certificates for PNF simulator can be picked up from here. Copy these certs in /dockerdatanfs/sdnc/certs and install sdnc.
4. PNF-SIM should be running with TLS support.

Install pnf simulator from here using ./simulator.sh start. It will start simulator in TLS/SSH mode at 6503/830 port. Send VES message by changing config/config.json.</td></tr>
<tr><td>Testing Steps</td><td><table>
<tr><th>Steps</th><th>Expected Result</th></tr>
<tr><td>1. Send PNF_READY to SO(This step will trigger a run to SS-API, BP component, SDNC and PNF simulator)
2. SO sends CONFIG-ASSIGN request to CDS.
3. SO receives the response from CDS for CONFIG-ASSIGN as success.
4. SO sends CONFIG-DEPLOY async request to CDS.
5. CDS sends patch(includes mount, configure and unmount request) to SDNC.
6. SDNC sends mount request to PNF-SIM using TLS connection.
7. CDS send connection status to SDNC for PNF-SIM.
8. SDNC sends configuration request to PNF-SIM.
9. SDNC sends unmount request to PNF-SIM.
10. Verify received configuration is correct on PNF-SIM (Manual verification).</td><td>Get response should give correct result for configuration on PNF-SIM</td></tr>
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<tr><td>Conclusion (Pass /Fail)</td><td>PASSED</td></tr>
<tr><td>Testing Lab</td><td>Ericsson Lab, Windriver Lab</td></tr>
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Information:

Next Step(s):