PNF/VNF PREONBOARDING / ONBOARDING in R6 Frankfurt

R6 Frankfurt CANDIDATE ENHANCEMENTS	IMPACT
REQ (Requirements) Epic	The main Epic REQ Jira ticket for enhancements for POB/OB in R6 is ⚡ **REQ-135** - Preonboarding and Onboarding enhancements in R6 Frankfurt `DONE`
Modelling	Definition of Platform Info & Data model continues Introduce/Refine PNF S/W version (get it review & approved)
Resource Data Model	Onboarding PNFD to Platform PNFD mapping development & enhancement
VNF-SDK (PNF-SDK)	Package Validation enhancements notable Package security (option 2 per artifact), SOL004 alignment, License Model Check.
PNF Onboarding Package	Further carry-over development from R4/Dublin for PNF onboarding process.
VNF Onboarding	VNF onboarding, same procedure, same function, but testing/integration was not completed in R4/Dublin.
VNFD Mapping to Platform Model	Additional validation of security package. VNFD Modeling transformation (PNFD was completed in R4)
PNF Software version onboarding	The PNF S/W version needs to be onboarded (and defined) for usage in the PNF S/W Upgrade use case.
Documentation /	VNF requirements document / Read the docs. DOCS project VNF-RQTS project requirements update.
ETSI & SOL Alignment	ETSI Alignment Support ETSI Catalog Management

DEVELOPMENT IMPACTS

PROJECT	PTL	User Story / Epic	Requirement
A&AI	James Forsyth		
AAF	Jonathan Gathman		
APPC	Takamune Cho		
CLAMP	Gervais-Martial Ngueko		
CC-SDK	Dan Timoney		
DCAE	Vijay Venkatesh Kumar		
DMaaP	Mandar Sawant		
External API	Matthieu Geerebaert		
MODELING	Hui Deng	Epic 1: VNF onboarding Epic 2: VNFD Model mapping Epic 3: S/W Version in Package	E1b: VNFD transforming (modeling team discussions) E2: VNFD (onboarded) to Platform Model (modeling team discussions) E3: S/W Version (under discussion in resource info modeling team)

Multi-VIM / Cloud	Bin Yang		
OOF	Shankaranarayanan Puzhavakath Narayanan		
POLICY	Pamela Dragosh		
PORTAL	Manoop Talasila		
SDN-C	Dan Timoney		
SDC	Ofir Sonsino	Epic 1: VNF onboarding	E1a: Alignment to SOL 001.
			E1b: VNFD transforming (modeling team discussions)
			E1c: Enhance security for xNF package artifacts.
		Epic 2: VNFD Model mapping	E2: VNFD (onboarded) to Platform Model (modeling team discussions)
		Epic 3: S/W Version in Package	E3: S/W Version (under discussion in resource info modeling team)
SO	Seshu Kumar Mudiganti		
VID	Ittay Stern		
VNFRQTS	Steven Wright		
VNF-SDK	Weitao Gao	Epic 4: VNF-SDK Enhancements	E4a: Enhance security for xNF package artifacts bug fixing (Option 1 done in R5)
			E4b: PNF descriptor requirements alignment
			E4c: Integration Testing work Morgan Richomme
CDS	Yuriy Malakov		

List of PTLs:**Approved Projects**

The "Base" PNF Pre-onboarding/Onboarding Wiki

The base page was created for R4/Dublin ONAP release and can be found here:

5G - PNF Pre-Onboarding & Onboarding

Modeling work to support PNF pre-onboarding/onboarding - INTERNAL MODELING

Definition of Platform Information & Data model continues. Modeling S/C. Extend internal Modeling.

Resource Data Model (PNFD to Platform Model) - MAPPING

Onboarding PNFD to Platform PNFD mapping development & enhancement

PNF Onboarding Package Carry-over and enhancements

Further carry-over development from R4/Dublin for PNF onboarding process.

VNF Onboarding

VNF onboarding, same procedure, same function, but testing/integration was not completed in R4/Dublin.

Data types, normatives, TOSCA definitions. Updated types to 2.5.1.

(Jira Ticket opened in R4 but didn't have time to finish it)

Integration Project

#8: PNF PACKAGE TESTING (Test Only)	Enhancement of Package Testing. A item to make sure that integration testing is performed and that VNF-SDK supports the functions as will be described in the Requirements work. Testing the package against the requirements (a user can enter a requirement#) VNF-RQTS project. It would be ideal if the PNF Package used by the VNF-SDK work is shared by the rest of the PNF pre-onboarding/onboarding development & integration. In R6 (Integration Project) - use VNF-SDC in automated test Suite in Integration proj. Automated PNF PnP executes the whole process, onboarding the description, creating the svc model; distributed odel. want to add additional test executing validation of VNF-SDK before real-onboarding. validation of package, then use package for onboarding. **ASSOCIATED DEVELOPMENT**: to be done (new Jira ticket pending in Integration project)

VNF-SDK enhancements

Checking Content

#6: PACKAGE SECURITY (finished in R5 maybe some bug fixing in R6)	Driven from SOL004: Option 1 (Supported in R4 Dublin): TOSCA.meta (exists) Meta-directory based, XML based approach. Option 2 (NOT support in R4 Dublin): CSAR without TOSCA.meta. Manifest (.mf) file that has everything (so the TOSCA.meta is redundant). Yaml-based approach. The Public Key a key to open the package. SOL004 Option 1, 2 and use key to open the package - X.509 certificates public key, private key to sign the package and private key correspond to the private key of the package also delivered with the package. a package, a signature, and public key certificate delivered together. There may be more than one signature. Option 1 there is a digest for every file. All of those digests are listed in the manifest file. The manifest file is signed, one signature on the manifest. One signature and one key/pair & 1 certificate. Still optional to sign other files. The signature is a file beside. myimage.iso myimage.xyz but the same file/directory. Every file signed should have a signature files. CSAR file signed in a .sm file, package signature. The public key is signed can be signed by a root certificate. An X.509 certificate is a digital certificate that uses the widely accepted international X.509 public key infrastructure (PKI) standard to verify that a public key belongs to the user, computer or service identity contained within the certificate. (investigate) if VNF-SDK would like to use AAF as the CA. Can AAF perform the CA functions. To open the package need: (1) Public Key (to open the manifest file) (2) file input (3) certificate input. create a hash, the hash is verified against the signature. SHA-256 R5 (El Alto). Implemented Option 1 per artifact security (R4 had only Option 2 per package security). Had to fix a bug. No more is needed in R6. OPEN 25 Feb 2020 - only Bug Fixes were done no new functionality, post-poned to Rx	
#7: PNF DESCRIPTOR	The descriptor. There is validation of the VNFD. PNF Descriptor: TOSCA descriptor, and validate the node type. Validation of TOSCA PNFD. Following TOSCA rules. Components required are there. (NEEDS INVESTIGATION) *VNFSDK check the VNFD based on VNF requirements.* In R6: Req (from Victor Gao) - discrepancies in Req. Req for VNFs. Added new Req for PNF. some need to be refactored. To make sure PNF stuff is validated in better way. PNFD validation. **ASSOCIATED DEVELOPMENT**: 📑 ~~VNFSDK-341~~ - Basic PNFD validation based on SOL001 `CLOSED` (closed)	R4 H I GH
#F1: CREATE PACKAGE FUNCTION FOR PNF	The create package function creates the metadata files, and CSAR files. This needs to be modified to support SOL004. (NEEDS INVESTIGATION) [Low Priority] - Likely to be pushed to **R7 Guilin** **OPEN: 25 Feb 2020 Post-poned to R7**	R 7 L O W P RI

#F2: TOSCA Metafile License Content Check	SDC license model check. Potential ARTIFACTS: Vendor license model & agreement, features. VNF can have >1 features, entitlement pool, license key pools, actual keys. [Low Priority] - Licensing Management Use Case is introduced in R6, so License content check will for POB/OB will happen in NEXT release **R7 Guilin** (at earliest) OPEN: 25 Feb 2020 Post-Poned to R7	R7 L O W P RI

Additional Resources / Links:

ONAP R6+ Onboarding VNF/PNF package format, non-MANO artifacts set definition

INTEGRATION & TESTING

This section discusses the Testing & Integration for R6 PnP

1. **WHO IS TESTING** - what company, team, and people will be doing the testing & responsibilities for testing.
2. **TEST ENVIRONMENT** - which does the lab & test environment.
3. **RESOURCES NEEDED** - what resources are needed.
4. **WHO IS CONTRIBUTING RESOURCES** - what resources will be provided and by whom/what company.
5. **NETWORK CONNECTIVITY** - Connectivity requirements
6. **INTEGRATION LEAD DEFINITION** - ONAP "Use Case/Requirement" Integration Lead

PNF PnP Integration Test Cases for Preonboarding/Onboarding. These can be navigated to from the Integration team page hierarchy.

5G - PNF E2E Pre-Onboarding & Onboarding Integration Test Cases

Testing Status

Dublin 5G - PNF PnP - Test Status