

ETSI Catalog Management

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<<Note: this is a working draft. The contents will be added/deleted/corrected/updated as needed.>>

Use Case

- ONAP-ETSI Catalog Manager Use Case
 - ONAP-ETSI Catalog API Manager
 - ONAP-ETSI Catalog Database
- SO ETSI Catalog Management
 - SDC - SO SDC Controller - ONAP-ETSI Catalog Manager
- SOL003/SOL005 Adapter Interaction with ONAP-ETSI Catalog Manager

Feature Descriptions

Feature	Description
ONAP-ETSI Catalog Manager APIs	ONAP-ETSI Catalog Manager supports APIs for SO and SOL003/SOL005 Adapters
SO ETSI Catalog DB Support for NS, PNF and VNF packages	SO retrieves ETSI packages from SDC and stores the packages to ONAP-ETSI Catalog DB thru ONAP-ETSI Catalog APIs • ETSI package distribution support from SDC SO SDC Controller ONAP-ETSI Catalog Manager
ONAP-ETSI Catalog Manger - SOL003/SOL005 Adapters	SOL003/SOL005 Adapters use ONAP-ETSI Catalog Manager APIs to retrieve ETSI packages

Epic and User Story

Epic	User Story	Description	In Frankfurt?	JIRA
ONAP-ETSI Catalog Manager supports ETSI package APIs and storage		ONAP-ETSI Catalog Manager supports ETSI package APIs and storage for ETSI packages in runtime	Yes	VFC-1542 - Getting issue details... STATUS

	Provides APIs for SO to store ETSI packages to the ONAP-ETSI Database	Provides APIs for SO to store ETSI packages to the ONAP-ETSI Database • ETSI Catalog Manager APIs have been registered in MSB. • Access endpoint: http://{{MSB_HOST}}:/api/catalog/*** and http://{{MSB_HOST}}:/api/vnfpkgm/v1/*** • no authentication requirement for the Frankfurt  etsicatalog.swagger.json	Yes	VFC-1543 - Getting issue details... STATUS
	Supports the ONBOARDED_PACKAGE directory for the original vendor ETSI package extraction	Gets the vendor original SOL004 package from the ONBOARDED_PACKAGE directory.	Yes	VFC-1544 - Getting issue details... STATUS

	Provides APIs for the SOL003 /SOL005 Adapter to retrieve the original vendor VNF packages	Provides APIs for the SOL003 Adapter to retrieve the original vendor VNF packages	Yes	VFC-1545 - Getting issue details... STATUS
		 etsicatalog.swagger.json		
		 etsicatalog.swagg...notification.json		
	Provides APIs for the SOL005 Adapter to retrieve the original vendor NS/PNF packages	Provides APIs for the SOL005 Adapter to retrieve the original vendor NS/PNF packages	Yes	VFC-1546 - Getting issue details... STATUS
	Migrates VF-C catalog to Modeling ONAP-ETSI Catalog Manager as a common component	Migrates VF-C catalog to Modeling ONAP-ETSI Catalog Manager as a common component	Yes	VFC-1552 - Getting issue details... STATUS
SO Catalog Management		SDC - SO SDC Controller - ONAP-ETSI Catalog Manager • SDC supports SOL004/SOL007 package onboarding • SO SDC Controller invokes ETSI Catalog Manager if the incoming package is SOL004/SOL007-based • ETSI Catalog Manager queries SDC CSAR files for the given CSAR ID and stores the original vendor package into the ETSI Catalog Database		SO-2404 - Getting issue details... STATUS
	Enhances SO SDC Controller to query SOL004/SOL007 packages from SDC	Enhances SO SDC Controller to query SOL004/SOL007 packages from SDC • SO SDC Controller receives SDC notification for SOL004 packages • SO SDC Controller queries SDC for SOL004 CSAR files • SO SDC Controller receives SDC notification for SOL007 packages • SO SDC Controller queries SDC for SOL007 CSAR files	No	SO-2405 - Getting issue details... STATUS

	Enhances SO SDC Controller to invoke ONAP-ETSI Catalog APIs to store ETSI packages to the ONAP-ETSI Catalog DB	Enhances SO SDC Controller to invoke ONAP-ETSI Catalog APIs to stores ETSI packages to the ONAP-ETSI Catalog DB - SO stores ONBOARDED_PACKAGE zip/csar files in the ONAP-ETSI Catalog DB through ONAP-ETSI Catalog Manager APIs - SO parses the SDC CSAR/zip file to find out if the package contains the ONBOARDED_PACKAGE artifact folder. - If it contains the folder, SO invokes the ETSI Catalog Manager by passing the SDC csar id, on top of the existing procedure. - Otherwise, it is NON-ETSI package, and SO will follow the existing procedure only	Yes	SO-2406 - Getting issue details... STATUS
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SO ETSI Catalog DB Support for NS, VNF and PNF Packages

For the ETSI package storage, SO does the following:

- SO (SDC Controller component) queries the package from SDC
- SO stores ETSI (including SDC AID DM) + vendor VNF package CSAR or ZIP
 - If the onboarding vendor package is a zip file with signature and certificate, SO stores the vendor VNF package as a zip format.
 - Not all VNFD needs to be transformed to the SDC AID DM - TBD
- For Non-ETSI models (Service + Non-ETSI Resource), SO will use the existing SO embedded Catalog DB

Instead of building ONAP-ETSI Catalog management in SO, SO will leverage the existing ONAP-ETSI Catalog Manager function.

- Use VF-C Catalog Microservices for the NS, VNF and PNF catalog support, <https://wiki.onap.org/pages/viewpage.action?pageId=63996543>
 - VFC Catalog Manager has been migrated as a common component, ETSI Catalog Manager Hereinafter, it is called as "ETSI Catalog Manager"**
 - ETSI Catalog Manager has been enhanced to handle the vendor package in the ONBOARDED_PACKAGE directory.**

1. ETSI Catalog DB Microservice

- Database: nfvcatalog (vfc-nfvo-catalog-createdb.sql // create db scripts) // vfc prefix should be generalized
- Database Table (vfc-nfvo-catalog-createobj.sql // create tables scripts) . // vfc prefix should be generalized
- Catalog_NSPackage
- Catalog_VNFPackage
- Catalog_PNFPackage
- Catalog_SoftwareImageModel

2. VF-C Catalog (API) Microservice / ETSI Catalog (API) Microservice

- vfc-catalog docker // vfc prefix should be generalized
- ETSI Catalog Manager REST APIs
 - ETSI Catalog Manager provides the following Package Management and Package Notification APIs:
 - Package Management:



- Package Management Notification:

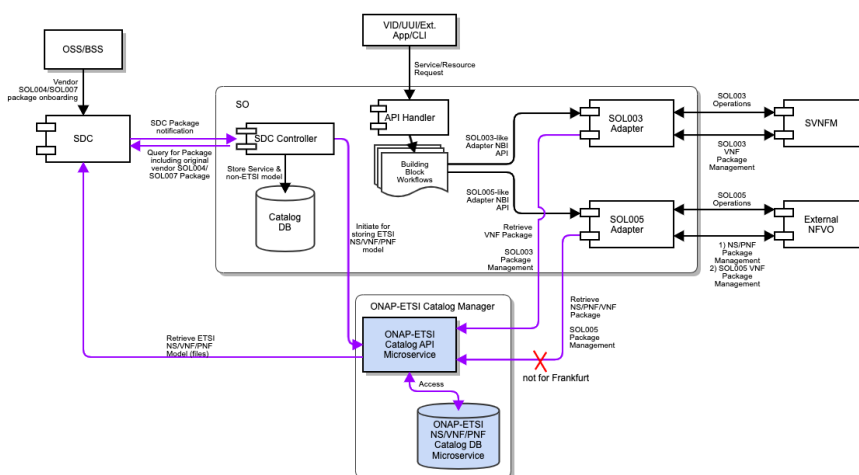


- API descriptions

NS Package Management	VNF Package Management	PNF Management
•GET /nspackages package info // query NS •POST /nspackages package distribute / create // NS •GET /nspackages/{csarId} package info // query NS •DELETE /nspackages/{csarId} // delete NS package	•GET /vnfpackages package info //query vnf •POST /vnfpackages distribute / create // vnf package •GET /vnfpackages/{csarId} package info // query vnf •DELETE /vnfpackages/{csarId} // delete vnf package •PUT /vnfpackages/{csarId}. // create/upload vnf package	•GET /pnf_descriptors •POST /pnf_descriptors •GET /pnf_descriptors/{pnfdInfold} •DELETE /pnf_descriptors/{pnfdInfold}
Model Parsing	Job Management (used for async LCM)	More...
•POST /parsersnd model // NS package •POST /parservnfd package model // VNF	•GET /jobs/{jobId} // Job Status •POST /jobs/{jobId} // Update Job Status	•

The following diagram depicts a possible ONAP-ETSI Catalog DB handling for NS, VNF and PNF Packages.

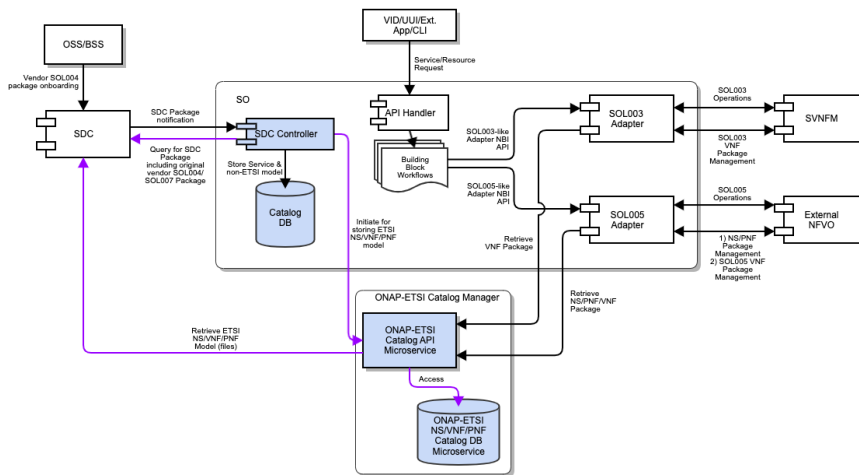
- SDC Stores Service models/templates into the existing SO Catalog DB, and ETSI model will be stored in the ONAP-ETSI Catalog Manager database.
- Note: SO and other ONAP run-time components could leverage the ONAP-ETSI Catalog Manager function, as a common service.
- Note: in the Frankfurt release, SOL005 Adapter does not support ETSI package management. It is supposed to support the NS package management in Guilin.



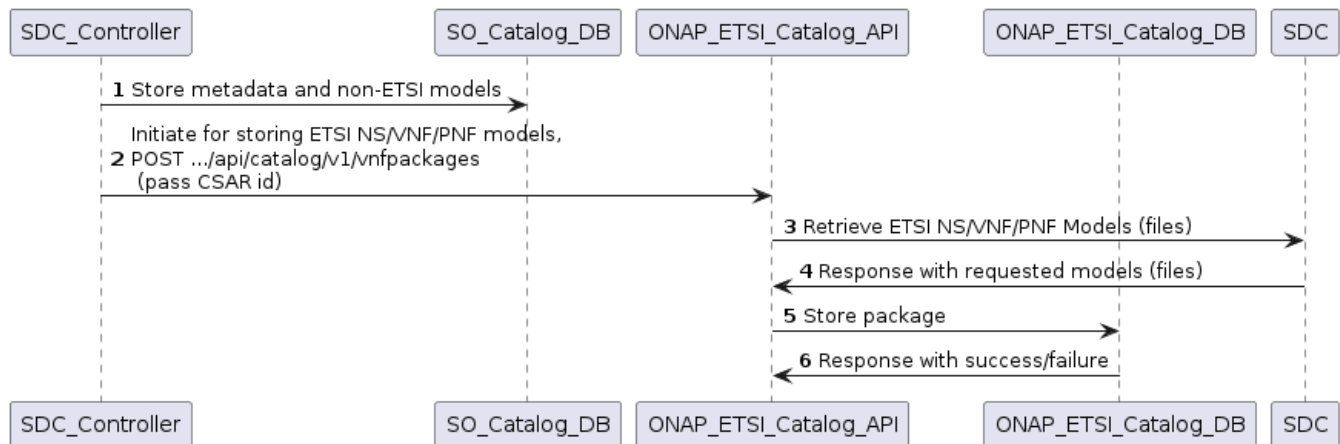
- ONAP-ETSI Catalog Manager Interfaces:
 - Supports its NBI for create and update ONAP-ETSI catalog. SDC Controller will use the NBI.
 - Retrieves model artifact files from SDC
 - Stores the data to the ONAP-ETSI Catalog DB.
 - For now, both SDC AID DM and original vendor package will be stored
 - Supports its Query operations for SOL003/SOL005 Adapters
 - The Catalog Manager will provide the original vendor packages to SOL003/SOL005 Adapters

SO Package Management (SDC - SO SDC Controller - ONAP-ETSI Catalog Manager)

- SO SDC Controller module (ASDCController and ToscaResourceInstall) needs to be updated for handling SOL004 packages including SOL001 VNFD and PNFD.
- Service-level catalog and other non-ETSI catalog (SDC AID DM) will be stored in SO Catalog DB.
- VNF/PNF/NS-level catalog handling would be simplified:
 - By using the ONAP-ETSI Catalog Manager, ETSI VNF/PNF/NS-level catalogs (i.e., original vendor packages) will be stored in ONAP-ETSI Catalog DB
 - SO itself does not need to manage ETSI-based VNF LCM; i.e., delegates the LCM to VNFM through the SOL003 VNFM Adapter
- In Frankfurt, VNF and NS package management will be supported.
- The following diagram depicts the component interactions for VNF Package store for ONAP runtime.



- Interfaces between SDC Controller and ONAP-ETSI Catalog Manager



- ONAP-ETSI Catalog Manager POST API will be used to store the VNF packages
 - POST /api/catalog/v1/vnfpackages // passing csarId, vimIds and labVimId

POST

/api/catalog/v1/vnfpackages

🔒

On distribute Nf package

Parameters

Cancel

Name	Description
data ★ required Edit Value Model (body) <pre>{ "csarId": "string", "vimIds": ["string"], "labVimId": "string" }</pre>	

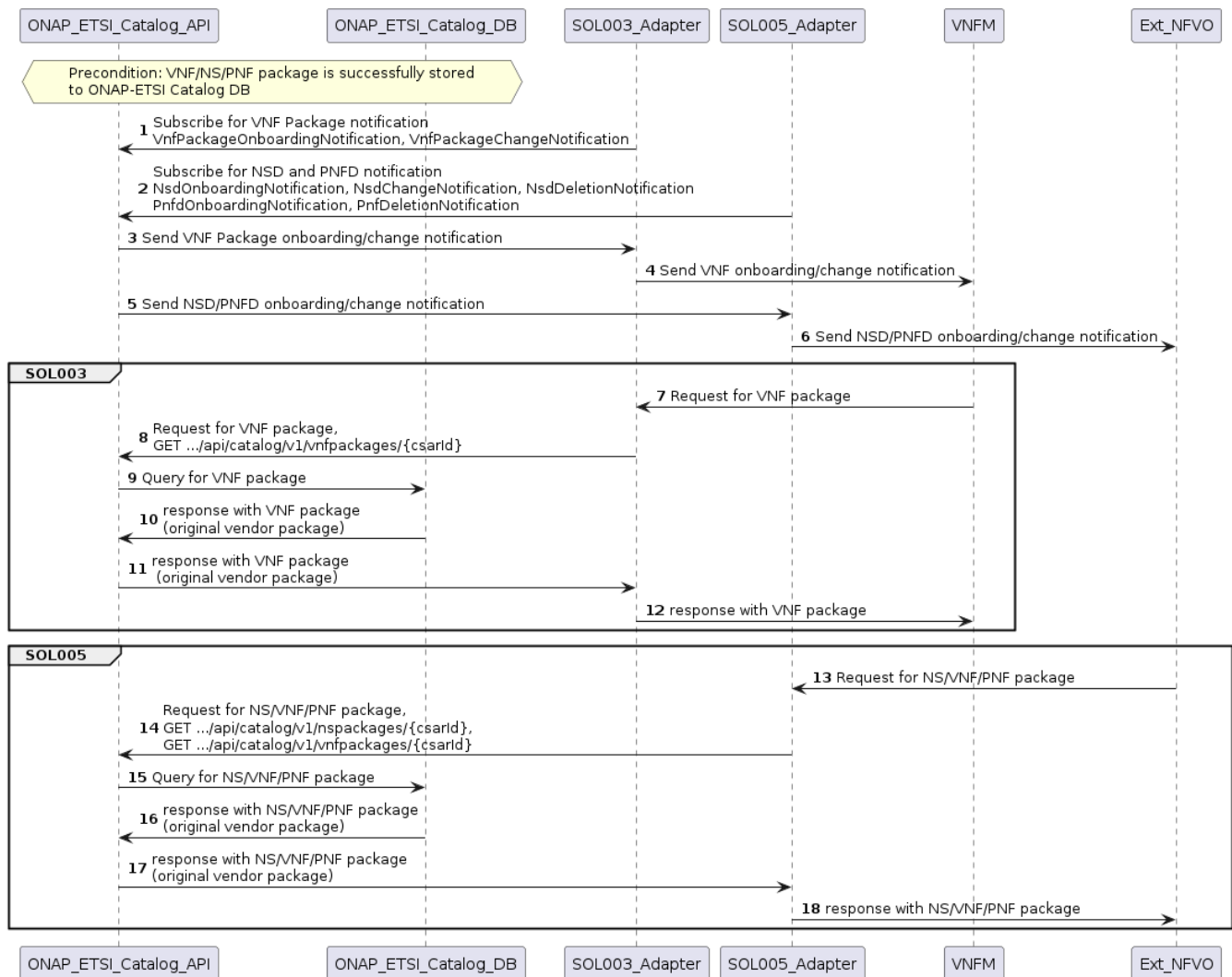
- Operation Requirements

API Action	Actor	Method	Endpoint URI	Description
Store ETSI package	SDC Controller	POST	/api/catalog/v1/vnfpackages	Invoke the ONAP-ETSI Catalog to store SOL004 VNF packages to ONAP-ETSI Catalog DB

SO Catalog Modelling

- The service database table has TOSCA_CSAR_ARTIFACT_UUID column. We continue to use this column to link the TOSCA CSAR.
- The TOSCA_CSAR database has a logical relationship with Catalog_NSPackage, Catalog_PNFPackage and Catalog_VNFPackage.
 - When a record is entered in the TOSCA_CSAR,
 - if the CSAR artifact type is NS, add a NS package into Catalog_NSPackage
 - if the CSAR artifact type is VNF, add a VNF package into Catalog_VNFPackage
 - if the CSAR artifact type is PNF, add a PNF package into Catalog_NSPackage
- For the SOL004 VNF onboarding into SO,
 - SO does not populate data into the VF-Module database table if the VF-Module is not populated in the modeling.
 - It depends on the SOL001 VNFD mapping to SDC AID DM whether it populates VF-Modules or not.
 - SO does not populate data into the HEAT-Template database table
 - Heat-Template is part of the VNF package
 - SO invokes the ONAP-ETSI Catalog Manager APIs with the CSAR UUID.
 - ToscaResourceInstaller (InstallTheVfResource, InstallThePNFResource) will be modified to invoke the ONAP-ETSI Catalog Manager.
 - Note: the NS use case needs to be defined since SDC does not support SOL007 (NS Package) yet.
 - The ONAP-ETSI Catalog Manager receives VNF packages and stores them into the ONAP-ETSI Catalog Database Catalog_VNFPackage
 - It stores the VNF package as a whole and its APIs can extract the VNFD, artifacts, softwareImage, etc.
- SO Catalog models and relationships are as follows:
 - Note: the relationship between TOSCA_CSAR and Catalog_NSPackage/Catalog_VNFPackage/Catalog_PNFPackage is "logical" since the Catalog_***Package and Catalog_Softwareimage will be resided in the ONAP-ETSI Catalog DB.
 - Based on the CSAR UUID, the ONAP-ETSI Catalog Manager gets all the artifacts and files from SDC to fulfill the Catalog_***Package and Catalog_Softwareimage.

[illegible]



- ONAP-ETSI Catalog Manager provides RESTful services to Adapters:
 - ETSI package management for the Adapters.
 - GET /api/catalog/v1/vnfpackages/{csarId}

```

"csarId": "string",
"packageInfo": {
  "vnfdId": "string",
  "vnfPackageId": "string",
  "vnfdProvider": "string",
  "vnfdVersion": "string",
  "vnfVersion": "string",
  "csarName": "string",
  "vnfdModel": "string",
  "downloadUrl": "string"
},
"imageInfo": [
  {
    "index": "string",
    "fileName": "string",
    "imageId": "string",
    "vimId": "string",
    "vimUser": "string",
    "tenant": "string",
    "status": "string"
  }
]
}

```

- Need to pass artifacts (images) to VIM thru the Adapter
- Get the original vendor VNF package
- Retrieving VNFD for SOL003 Adapter
- Retrieving NSD/VNFD for SOL005 Adapter
 - GET /nspackages/{csarId} // query NS package info
 - More SOL005 Adapter requirements are being collected.

Operation Requirements

API Action	Actor	Method	Endpoint URI	Description
Query ETSI VNF package	SOL003 Adapter	GET	/api/catalog/v1/vnfpackages/{csarId}	Invoke a SOL004 VNF package from ONAP-ETSI Catalog
Query ETSI NS Package	SOL005 Adapter	GET	/nspackages/{csarId}	Query NS Package info from the ONAP-ETSI Catalog