## Get List of Existing Catalog Training per Type

### Functional Behavior

In order to receive information (IDs and additional metadata) of the SDC existing Catalog Training, the requester component has to call RESTful SDC GET API. This API actually expose the Catalog Training from the catalog. In order to receive more specific list (e.g. filtered by category), see “Get Filtered List of Existing Catalog Training” API

The API returns the latest minor version of each major version of the asset (e.g. if a service has several versions: 1.0, 2.0, 3.0, 3.1, 3.2, 3.3 – then the API response will include the versions 1.0, 2.0, 3.0, 3.3 without versions 3.1 and 3.2)

### Request (GET)

https://{serverRoot}/sdc/v1/catalog/{assetType}

the list can also be filtered with one or more criterias using query params (when specifying several criterias, a logical ‘AND’ will be added between them) :

https://{serverRoot}/sdc/v1/catalog/{assetType}?{filterKey}={filterValue}

|  |  |
| --- | --- |
| Name | Description |
| serverRoot | Server base URL : hostname+port+base path  Hostname shall contain the FQDN of the SDC iDNS LB |
| assetType | The requested asset type.  Valid values are: resources / services |
| filterKey | The filter keys supported are:  resourceType (only for resources), category, subCategory and distributionStatus |
| filterValue | The value to be set on the filter. The format of the value must be as described in the metadata object structure below.  Note that only exact match is supported  The filterValue must be url encoded |

#### Special Request Headers

| Header Name | Mandatory? | Description |
| --- | --- | --- |
| RequestID | N | According to the general ECOMP agreement the  "RequestID"  header with  the transaction UUID should be published  by ECOMP component calling an  exposed by  other  ECOMP component API in order to  make possible the  transaction traceability across ECOMP.  If it is not sent it will be automatically generated by SDC on request receipt. |
| InstanceID | Y | For  auditing  purpose  each  ECOMP component  calling  the  SDC API should identify  itself  by sending its  identity  (  e.g. Instar  name ...) in  "**InstanceID**" header . If this header with non-null value is not supplied the HTTP Request will be rejected with “400 Bad Syntax” response code. |
| Accept | N | Determines the format of the body of the response. Valid values are : “application/json” |
| Authorization | Y | The username and password are formed into one string as “username:password”. This string is then Base64 encoded to produce the encoded credential which is communicated in the header after the string “Authorization: Basic “. If the Authorization header is missing, then an HTTP “401 Unauthorized” with ‘WWW-Authenticate’ header specifying the type of required client authentication and realm token will be returned. “401” response should trigger the repeated HTTP request sending with “Authorization” header containing the client’s credentials.  If “Authorization” header is received , but the the client‘s authentication fails ( due to either unknown “username” or invalid “password” ) the “403 Forbidden” response code will be returned |

#### Request Body

N/A

### Response

#### Special Response Headers

|  |  |  |
| --- | --- | --- |
| Header Name | Mandatory? | Description |
| Content-Length | Y | Streamed CSAR payload size |
| Content-Type | Y | Determines the format of the response body.  Valid value is : “application/json” |

#### Response Body

Response body is sent as JSON object (Content-Type: application/json).

The json specifies an array of the Catalog Training exist for that type:

**resources** – array of resource metadata objects [0 … unbounded]

**services** – array of service metadata objects [0 … unbounded]

##### Resource Metadata object structure

| Parameter Name | Parameter Type | Mandatory? | Description |
| --- | --- | --- | --- |
| uuid | String | Y | Global Asset Version Identifier: UUID generated by SDC per each version of the asset.  Generated UUID is compliant with RFC 4122. It is a 128-bit value formatted into blocks of hexadecimal digits separated by a hyphen (“-“).  The Uuid can later be used to receive more detailed information about the specific resource (as explained in [6.3](#_Get_Specific_Model))  Ex.: AA97B177-9383-4934-8543-0F91A7A02836 |
| invariantUUID | String | Y | Global Asset Identifier: UUID generated by SDC per each asset. This UUID stays constant for all the asset’s versions  Generated UUID is compliant with RFC 4122. It is a 128-bit value formatted into blocks of hexadecimal digits separated by a hyphen (“-“).  Ex.: AA97B177-9383-4934-8543-0F91A7A02836 |
| name | String | Y | The name of the asset.  *Ex. “vMME”* |
| version | String | Y | The asset version in SDC catalog. Two dot (“.”) separated digit blocks.  The minor version of a asset is incremented every time a designer check-out the asset for an update.  The major version is incremented every time a tester certifies the asset.  *Ex. : “2.0”* |
| toscaModelURL | String | Y | Relative asset’s URL. Should be used in REST GET API to download the asset’s CSAR.  The full URL will be in the following format :  https://{**serverBaseURL**}/{**toscaModelPath**}  **serverBaseURL**  - Hostname ( SDC LB FQDN) + optional port  **toscaModelPath**- “toscaModelURL”  *Ex :* [*https://sdc.att.com/v1/catalog/resources/{uuid}/*](https://asdc.att.com/v1/catalog/resources/%7buniqueId%7d/)*toscaModel* |
| category | String | Y | Category of the asset. List of Categories at Appendix A  Ex. “Application L4+” |
| subcategory | String | Y | Sub-category of the asset. List of SubCategories at Appendix A  Ex. “Load Balancer” |
| resourceType | String | Y | The type of resource.  Resource Types :   * VF (Virtual Function) - A subsystem in a service, it can include one or more VFCs. This is what NFV spec refers as VNF. * VL (Virtual Link) - Describes the basic topology of the connectivity between one or more VFs (or VFCs in a VF). * CP (Connection Point) - Represents the virtual and/or physical interface of a VF (or VFC). * VFC (Virtual Function Component) – A subset of the VF (sometimes refered to as “building-block” of the VF). * TRAINING – new resourceType as from SDC 1702. TRAINING is a reusable monitoring template created by DCAE Designer. * PNF – Physical Network Function. the PNF is modeled in SDC as a resource (similar to VF) that may or may not contain CP / VL resources.   *Ex. “VF”* |
| lifecycleState | String | Y | The lifecycle state of the asset. Values are:  NOT\_CERTIFIED\_CHECKOUT  NOT\_CERTIFIED\_CHECKIN  READY\_FOR\_CERTIFICATION  CERTIFICATION\_IN\_PROGRESS  CERTIFIED |
| lastUpdaterUserId | String | Y | User ID of the SDC designer who was the last to update the asset for this major version. |

##### Service Metadata object structure

| Parameter Name | Parameter Type | Mandatory? | Description |
| --- | --- | --- | --- |
| uuid | String | Y | Global Asset Version Identifier: UUID generated by SDC per each version of the asset.  Generated UUID is compliant with RFC 4122. It is a 128-bit value formatted into blocks of hexadecimal digits separated by a hyphen (“-“).  Ex.: AA97B177-9383-4934-8543-0F91A7A02836 |
| invariantUUID | String | Y | Global Asset Identifier: UUID generated by SDC per each asset. This UUID is stays constant along all the asset’s versions  Generated UUID is compliant with RFC 4122. It is a 128-bit value formatted into blocks of hexadecimal digits separated by a hyphen (“-“).  Ex.: AA97B177-9383-4934-8543-0F91A7A02836 |
| name | String | Y | The name of the asset.  *Ex. “vMME”* |
| version | String | Y | The asset version in SDC catalog. Two dot (“.”) separated digit blocks.  The minor version of a asset is incremented every time a designer check-out the asset for an update.  The major version is incremented every time a tester certifies the asset.  *Ex. : “2.0”* |
| toscaModelURL | String | Y | Relative asset’s URL. Should be used in REST GET API to download the asset’s CSAR.  The full URL will be in the following format :  https://{**serverBaseURL**}/{**toscaModelPath**}  **serverBaseURL**  - Hostname ( SDC LB FQDN) + optional port  **toscaModelPath** - “toscaModelURL”  *Ex :* [*https://sdc.att.com/v1/catalog/services/{uuid}/*](https://asdc.att.com/v1/catalog/services/%7buniqueId%7d/)toscaModel |
| category | String | Y | Category of the asset. List of Categories at Appendix A  *Ex. “VoIP Call Control”* |
| lifecycleState | String | Y | The lifecycle state of the asset. Values are:  NOT\_CERTIFIED\_CHECKOUT  NOT\_CERTIFIED\_CHECKIN  READY\_FOR\_CERTIFICATION  CERTIFICATION\_IN\_PROGRESS  CERTIFIED |
| lastUpdaterUserId | String | Y | User ID of the SDC designer who was the last to update the asset for this major version. |
| distributionStatus | String | Y | Distribution status of the service. Values are:  DISTRIBUTION\_NOT\_APPROVED  DISTRIBUTION\_APPROVED  DISTRIBUTED  DISTRIBUTION\_REJECTED |

#### HTTP Response Codes

|  |  |  |
| --- | --- | --- |
| Response code | Service/Policy  Exception | Reason /Description |
| 200 | N/A | ECOMP component is authenticated and list of Catalog Training Metadata is returned. |
| 400 | POL5001 | Missing “InstanceID” HTTP header |
| 401 | POL5002 | ECOMP component should authenticate itself and to re-send again HTTP request with its credentials for Basic Authentication |
| 403 | POL5003 | ECOMP component is not authorized |
| 405 | POL4050 | Method Not Allowed : Invalid HTTP method type used ( PUT,DELETE,POST will be rejected) |
| 500 | POL5000 | The GET request failed either due to internal SDC problem. ECOMP Component should continue the attempts to get the needed information. |

## Create Resource (e.g. Training)

### Functional Behavior

When creating a resource it is very important to specify the correct resource type. Some resource types have special behavior in SDC. (TRAINING is considered as a special resource in SDC. The creation of it is done by creating the resource and specifying the type “TRAINING”. This resource is created and managed by the DCAE Designer)

The mandatory input fields are described below. Once created, SDC enrich the resource metadata

### Request (GET)

The creation of the resource is done using HTTP POST request with the following url:

https://{serverRoot}/sdc/v1/catalog/resources

|  |  |
| --- | --- |
| Name | Description |
| serverRoot | Server base URL : hostname+port+base path  Hostname shall contain the FQDN of the SDC iDNS LB |

### Request Headers

|  |  |  |
| --- | --- | --- |
| Header Name | Mandatory? | Description |
| Content-Type | Y | Valid value is : application/json |
| USER\_ID | Y | The ID of the user performing the operation. This user must also have Designer role in SDC |
| RequestID | N | According to the general ECOMP agreement the  "RequestID"  header with  the transaction UUID should be published  by ECOMP component calling an  exposed by  other  ECOMP component API in order to  make possible the  transaction traceability across ECOMP.  If it is not sent it will be automatically generated by SDC on request receipt. |
| InstanceID |  | For  auditing  purpose  each  component  calling  the  SDC API should identify  itself  by sending its  identity  (  e.g. Instar  name ...) in  "**InstanceID**" header . If this header with non-null value is not supplied the HTTP Request will be rejected with '400 Bad Syntax’ response code. |
| Accept | N | Determines the format of the body of the response. Valid values are : “application/octet-stream” |
| Authorization | Y | The username and password are formed into one string as “username: password”. This string is then Base64 encoded to produce the encoded credential which is communicated in the header after the string “Authorization: Basic “. If the Authorization header is missing, then an HTTP “401 Unauthorized” with ‘WWW-Authenticate’ header specifying the type of required client authentication and realm token will be returned. “401” response should trigger the repeated HTTP request sending with “Authorization” header containing the client’s credentials.  If “Authorization” header is received , but the client‘s authentication fails ( due to either unknown “username” or invalid “password” ) the “403 Forbidden” response code will be returned |
|  |  |  |

### Request Body

The body of the upload request must be in a json format that specifies the metadata

|  |  |  |  |
| --- | --- | --- | --- |
| Field Name | Type | Mandatory? | Description |
| name | String | Y | The name of the resource  ***Format:*** Allowed characters: Alphanumeric (a-zA-Z0-9), space (' '), underscore ('\_'), dash ('-'), dot ('.')  Max-length: 1024 |
| description | String | Y | Short description of the resource Valid UTF-8 ( invalid UTF-8 characters should be removed)  Only English characters (a-zA-Z) are allowed  Max-length: 1024 |
| resourceType | String | Y | " Training” |
| category | String | Y | TRAINING category is “Training”. See Appendix A for full list of Service and resource categories |
| subcategory | String | Y | TRAINING subcategory is “Training”. See Appendix A for full list of service and resources categories |
| vendorName | String | Y | ***Format:*** Supported characters - Use any character in the extended character set (128–255), except for the following reserved characters:   * < (less than) * > (greater than) * : (colon) * " (double quote) * / (forward slash) * \ (backslash) * | (vertical bar or pipe) * ? (question mark) * \* (asterisk)   Characters whose integer representations are in the range from 1 through 31, except for alternate data streams where these characters are allowed  Max length: 25 |
| vendorRelease | String | Y | ***Format :*** Supported characters - Use any character in the extended character set (128–255), except for the following reserved characters:   * < (less than) * > (greater than) * : (colon) * " (double quote) * / (forward slash) * \ (backslash) * | (vertical bar or pipe) * ? (question mark) * \* (asterisk)   Characters whose integer representations are in the range from 1 through 31, except for alternate data streams where these characters are allowed  Max length: 25 |
| tags | String [] | Y | List of strings. The tags are used for search options.   * Should be at least one tag equal to “Training Name”. * Tag format is the same as defined for “Training Name” * SDC will remove duplicate tags * Max length:   + 50 for single tag   + 1024 for the whole text field |
| icon | String | Y | ***Format :***  Allowed characters [a-zA-Z0-9] , dash(‘-‘),underscore (‘\_’)  Max length: 25 |
| contactId | String | Y | The user ID of user responsible for this Training.  ***Format:*** [a-zA-Z]{2}[0-9]{3}[a-zA-Z0-9]{1} (6 characters now, may be expanded up to 8 characters in the future).  Convert Upper case character to lower case.  Max length: 6 |

### Response

#### Special Response Headers

|  |  |  |
| --- | --- | --- |
| Header Name | Mandatory? | Description |
| Content-Type | Y | Determines the format of the response body.  Valid value is : “application/json” |
| Content-Length | Y | Length of the response body |

#### Response Body

Response body is sent as JSON object (Content-Type: application/json).

The json includes the additional information added by business logic to the newly created TRAINING

| Parameter Name | Parameter Type | Mandatory? | Description |
| --- | --- | --- | --- |
| uuid | String | Y | UUID generated by SDC per each major version of the asset.  Generated UUID is compliant with RFC 4122. It is a 128-bit value formatted into blocks of hexadecimal digits separated by a hyphen (“-“).  The Uuid can later be used to receive more detailed information about the specific Training |
| invariantUUID | String | Y | UUID generated by SDC per each asset. This UUID stays constant for all the asset’s versions  Generated UUID is compliant with RFC 4122. It is a 128-bit value formatted into blocks of hexadecimal digits separated by a hyphen (“-“). |
| name | String | Y | The name of the asset. |
| version | String | Y | The asset version in SDC catalog. Two dot (“.”) separated digit blocks.  The minor version of a asset is incremented every time a designer check-out the asset for an update.  The major version is incremented every time a tester certifies the asset.  *Ex. : “2.0”* |
| category | String | Y | Category of the asset. List of Categories |
| subcategory | String | Y | Sub-category of the asset. List of Training |
| resourceType | String | Y | The type of resource.  *Ex. “*Training*”* |
| lifecycleState | String | Y | The lifecycle state of the asset. Values are:  NOT\_CERTIFIED\_CHECKOUT  NOT\_CERTIFIED\_CHECKIN  CERTIFIED |
| lastUpdaterUserId | String | Y | User ID of the SDC designer who was the last to update the asset for this major version. |

#### HTTP Response Codes

|  |  |  |
| --- | --- | --- |
| Response code | Service/Policy  Exception | Reason /Description |
| 200 | N/A | ECOMP component is authenticated and list of Catalog Assets Metadata is returned. |
| 400 | POL5001 | Missing “InstanceID” HTTP header |
| 401 | POL5002 | ECOMP component should authenticate itself and to re-send again HTTP request with its credentials for Basic Authentication |
| 403 | POL5003 | ECOMP component is not authorized |
| 404 | SVC4063 | Error: Requested '%1' resource was not found. |
| 405 | POL4050 | Method Not Allowed : Invalid HTTP method type used ( PUT,DELETE,POST will be rejected) |
| 500 | POL5000 | The request failed either due to internal SDC problem. ECOMP Component should continue the attempts to get the needed information. |
| 400 | SVC4050 | The name provided for the newly created resource is already in use for another resource in SDC |
| 400 | SVC4126 | Invalid field format. One of the provided fields does not comply with the field rules |
| 400 | SVC4500 | Missing request body. The post request did not contain the expected body. |
| 400 | SVC4062 | The resource name is missing in the request body |
| 400 | SVC4064 | Create TRAINING request: TRAINING description has wrong format |
| 400 | SVC4065 | Create TRAINING request: TRAINING description has wrong format (exceeds limit) |
| 400 | SVC4066 | Create TRAINING request: TRAINING tags exceeds character limit |
| 400 | SVC4067 | Create TRAINING request: TRAINING vendor name exceeds character limit |
| 400 | SVC4068 | Create TRAINING request: TRAINING vendor release exceeds character limit |
| 400 | SVC4069 | Create TRAINING request: TRAINING ATT Contact has wrong format |
| 400 | SVC4070 | Create TRAINING request: TRAINING name has wrong format |
| 400 | SVC4071 | Create TRAINING request: TRAINING vendor name has wrong format |
| 400 | SVC4072 | Create TRAINING request: TRAINING vendor release has wrong format |
| 400 | SVC4073 | Create TRAINING request: TRAINING name exceeds character limit |

## Delete Training

### Functional Behavior

In order to upload the Trainingof the asset, the requestor has to call RESTful SDC DELETE API

### Request (DELETE)

The relativeArtifactURL has the following format:

Trainingof the asset:

/sdc/v1/catalog/{assetType}/{uuid}/trainings/{artifactUUID}

Training of component Instance on the asset:

/sdc/v1/catalog/{assetType}/{uuid}/resourceInstances/{resourceInstanceNormalizedName}/ trainings/{ trainingUUID}

Important notes:

* Only a user that is listed in SDC with role “DESIGNER” can upload artifacts to an asset. The user ID of this user must be provided in the header as described below.
* if the asset lifecycleState is not “NOT\_CERTIFIED\_CHECKOUT”, SDC will create a new version of the asset (incrementing the minor version) with lifecycleState of “NOT\_CERTIFIED\_CHECKOUT”. The Training will be uploaded to this new version. Since the asset has new version, the uuid is also changed and the asset’s uuid used for uploading the Trainingis not the asset’s uuid that should be used for downloading the artifact.
* If the asset’s lifecycleState is “NOT\_CERTIFIED\_CHECKOUT”, then only the “lastUpdater” is authorized to upload artifacts to this asset.
* The version of the Trainingwill be incremented and new uuid will be generated

|  |  |
| --- | --- |
| Name | Description |
| serverRoot | Server base URL : hostname+port+base path  Hostname shall contain the FQDN of the SDC iDNS LB |
| assetType | The requested asset type.  Valid values are: resources / services |
| Uuid | The uuid of the asset as published in the metadata |
| artifactUUID | The uuid of the Trainingas published in the asset detailed metadata or in the response of the upload / update operation |
| resourceInstanceNormalizedName | The component instance name (as publishedin the response of the detailed query (6.2)) normalized with following rules:  1. Remove any space (“ “), dash(“-“) and dot(“.”) from the resource instance name  2. Lower case all letters  For resource name “My Monitoring.template\_example”, normalizedName will be: “mymonitoringtemplateexample” |

### Request Headers

|  |  |  |
| --- | --- | --- |
| Header Name | Mandatory? | Description |
| USER\_ID | Y | The user ID of the DCAE Designer. This user must also have Designer role in SDC |
| RequestID | N | According to the general ECOMP agreement the  "RequestID"  header with  the transaction UUID should be published  by ECOMP component calling an  exposed by  other  ECOMP component API in order to  make possible the  transaction traceability across ECOMP.  If it is not sent it will be automatically generated by SDC on request receipt. |
| InstanceID |  | For  auditing  purpose  each  component  calling  the  SDC API should identify  itself  by sending its  identity  (  e.g. Instar  name ...) in  "**InstanceID**" header . If this header with non-null value is not supplied the HTTP Request will be rejected with '400 Bad Syntax’ response code. |
| Accept | N | Determines the format of the body of the response. Valid values are : “application/octet-stream” |
| Authorization | Y | The username and password are formed into one string as “username: password”. This string is then Base64 encoded to produce the encoded credential which is communicated in the header after the string “Authorization: Basic “. If the Authorization header is missing, then an HTTP “401 Unauthorized” with ‘WWW-Authenticate’ header specifying the type of required client authentication and realm token will be returned. “401” response should trigger the repeated HTTP request sending with “Authorization” header containing the client’s credentials.  If “Authorization” header is received , but the client‘s authentication fails ( due to either unknown “username” or invalid “password” ) the “403 Forbidden” response code will be returned |
|  |  |  |

### Response

#### Special Response Headers

|  |  |  |
| --- | --- | --- |
| Header Name | Mandatory? | Description |
| Content-Type | Y | Determines the format of the response body.  Valid value is : “application/json” |
| Content-Length | Y | Length of the response body |

#### Response Body

Response body is sent as JSON object (Content-Type: application/json).

| Parameter Name | Parameter Type | Mandatory? | Description |
| --- | --- | --- | --- |
| trainingtUUID | String | Y | The deleted training uuid. |

#### 

#### Response Examples

#### HTTP Response Codes

|  |  |  |
| --- | --- | --- |
| Response code | Service/Policy  Exception | Reason /Description |
| 200 | N/A | ECOMP component is authenticated and list of training Metadata is returned. |
| 400 | POL5001 | Missing “InstanceID” HTTP header |
| 401 | POL5002 | ECOMP component should authenticate itself and to re-send again HTTP request with its credentials for Basic Authentication |
| 403 | POL5003 | ECOMP component is not authorized |
| 404 | SVC4063 | Error: Requested '%1' resource was not found. |
| 405 | POL4050 | Method Not Allowed : Invalid HTTP method type used ( PUT,DELETE,POST will be rejected) |
| 500 | POL5000 | The request failed either due to internal SDC problem. ECOMP Component should continue the attempts to get the needed information. |
| 400 | SVC4122 | Invalid trainingType was defined as input |
| 400 | SVC4124 | Trainingtype (mandatory field) is missing in request |
| 400 | SVC4127 | Invalid MD5 header |
| 400 | SVC4128 | Trainingname is missing in input |
| 403 | SVC4086 | Asset is being edited by different user. Only one user can checkout and edit an asset on given time. The asset will be available for checkout after the other user will checkin the asset |
| 409 | SVC4301 | Restricted Operation – the user provided does not have role of Designer or the asset is being used by another designer |
|  |  |  |