



# Unified Assurance and Analytics Data Import and Export Guide

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# CHAPTER 1

## Overview

This document describes the mechanisms provided by BPUAA to import/export and manipulate data objects in batch mode. The currently supported mechanism is provided via Comma Separated Values (CSV) files.

# Introduction to Import Export Guide

BPUAA scans the directory **/opt/ciena/bpuaa/import** on host repeatedly for new or changed CSV files and imports them into the application. The import consists of parsing the files and applying the changes to the database.

The export process in BPUAA can be initiated by placing an export request CSV file in the BPUAA import directory. After processing request file, exported data files will be available in container directory at **/bp2/data/export/** location. The object types to be exported can be specified in the request file. The detailed format of this file is mentioned in the next chapter.

BPUAA maintains a file format for each type of object being imported/exported. The file formats are similar and share some common attributes such as object identification. The data content of the file, however, is specific to each object type.

Currently, new records can be added and existing records can be changed via this mechanism. There is no ability to delete records at this time.

To segregate on the basis of successful import, 2 directories are present in **uaa-core container** under **/bp2/data/import/** -

**errored:** The files which are errored for any reason are moved to **/bp2/data/import/errored/** directory under uaa-core.

**archived:** The files which are successfully imported are moved to **/bp2/data/import/archived/** directory under uaa-core.

## Logging

The `IMPORT_EXPORT_STATUS` logger logs the status of every row in summary and detail, formed in separate files.



For now this logging is supported only for Service, EVCs, Network Connections, EndPoints, Flow-points and Node objects.

The log for each individual file imported in the system is created in `/bp2/log/import-export.log` directory.



**For example:** service.csv file is the file imported in the system, the log files with service-summary.log and service-detailed.log are created in the above mentioned directory.

## Enable Logging

By default summary logs are enabled with logger level **ERROR**. The objects which fail or are partially successful while importing are logged into the summary log files with the error message and description as why the import failed or partially successful.

When logger level is set to **INFO**, the summary file will additionally have details of successfully imported objects along with failed and partially successful objects.

To enable detailed log files, we need to set log level as **TRACE**. This file will have detailed info of the successful, partially successful and failed objects imported.

Follow the given steps to change the log level -

1. Log in to host 0 (preferably) as with the user id which has permission to login to the container.
2. Execute the following command -

```
sudo solman
```

**Note:** sudo is not required to be used if executing as root user.

3. Execute the following command to get the uaa-core leader instance -

```
api clusters uaa-core get
```

```
(Cmd) api clusters uaa-core get
{'group': 'uaa-core',
 'kind': '#cluster',
 'leader': 2,
 'name': 'uaa-core',
 'peers': {'0': {'ip': '172.16.2.2'},
           '1': {'ip': '172.16.0.3'},
           '2': {'ip': '172.16.1.2'}},
 'rank': [2, 1, 0]}
(Cmd) enter_container uaa-core_21.06.15_2
```

Figure 1-1 uaa-core instance example

- Based on the uaa-core instance rank, execute the following command to enter the leader instance -  
`enter_container uaa-core_21.10.xx_x`  
**Example:** `enter_container uaa-core_21.10.15_2`
- Execute the following commands to edit **log4j2.xml** logger file -  
`cd /bp2/app/apache-openejb/conf/`  
`vi log4j2.xml`
- Based on the need, change **IMPORT\_EXPORT\_STATUS** parameter from **ERROR** (default) to **INFO** or **TRACE**.
- Save the file and close.
- Repeat step 1 to 7 on all hosts.

**D** If the import filename is same, the logging will append the data in the file. The maximum file size limit is set to 10 MB. Once the 10MB size is reached, the next data will roll over into new file with same name such as log\_file01, log\_file02 and so on.

If the import filename is different than the one which was previously imported, the log directory will have both the files added in it.

```
2021-08-04 08:12:14 : Importing file service.csv
SERVICE|
STATUS | MODIFICATION TYPE | (name),(xid),id | Message
SUCCESS | CREATE | service_1, xid1, f181a6fd-e548-4e66-b05f-3de6b4db7bd9 |
PARTIAL_SUCCESS | CREATE | service_2, xid2, 82f16c7f-a7d9-4528-beb2-4fc9f057d451 | customer:(cust1) - Objects not found in uaa system.
PARTIAL_SUCCESS | CREATE | service_3, xid3, 2e668f96-704a-43c6-a5c5-dce418c24618 | segments:(seg1, seg2) - Objects not found in uaa system.
2021-08-04 08:12:15 : Loaded File :service.csv with 3 objects.
-----
2021-08-04 08:15:04 : Importing file service.csv
SUCCESS | MODIFY | service_1, xid1, f181a6fd-e548-4e66-b05f-3de6b4db7bd9 | No difference found
PARTIAL_SUCCESS | MODIFY | service_2, xid2, 82f16c7f-a7d9-4528-beb2-4fc9f057d451 | customer:(cust1) - Objects not found in uaa system.
PARTIAL_SUCCESS | MODIFY | service_3, xid3, 2e668f96-704a-43c6-a5c5-dce418c24618 | segments:(seg1, seg2) - Objects not found in uaa system.
2021-08-04 08:15:05 : Loaded File :service.csv with 3 objects.
-----
```

Figure 1-2 Log Sample

## Sync custom log files to S3

A python script to sync the files from a directory in UAA containers to the S3 storage based on the instructions read from the conf file. This facilitates the availability of files synced to S3 in any of the uaa-containers

Steps to use -

Update the config file as per the instructions mentioned in the sections below

Add the cron entry as per the required frequency

### Config File

**Path of the Config file:** /bp2/data/conf/scripts/

**Config File Name:** s3CustomFileConfig.json

A config file example below -

```
✓
{
  "meta": {
    "description": "Config file used to sync the import export summary
and detail logs to s3 bucket",
    "producer": "uaa-core"
  },
  "conf": [
    {
      "file_expiry_hours": "48",
      "source": {
        "container": "uaa-core",
        "sourceDirectory": "/bp2/log/importExportLogs/"
      },
      "destination": {
        "bucket": "bpuaa",
        "path": "custom-files/import/importExportLogs/"
      },
      "additionalArguments": {
        "include": "*.log"
      }
    }
  ]
}
```

## JSON attributes usage

**Conf** is an array that can contain multiple configurations to sync the files from different locations

Example conf array object

```
✓
{
  "file_expiry_hours": "48",
  "source": {
    "container": "uaa-core",
    "sourceDirectory": "/bp2/log/importExportLogs/"
  },
  "destination": {
```



```
✓
    "bucket": "bpuaa",
    "path": "custom-files/import/importExportLogs/"
  },
  "additionalArguments": {
    "include": "*.log"
  }
}
```

The above conf objects can be added as required based on requirement to sync the files from different sources to S3.

## File Expiry

The "file\_expiry\_hours" can be used to specify the files expiry time in hours. The file is considered as expired if the file's modification time is more than the specified hours.

### Source json object

```
✓
"source": {
  "container": "uaa-core",
  "sourceDirectory": "/bp2/log/importExportLogs/"
}
```

The source object is used to specify the source information.

**container** is for descriptive purpose

**sourceDirectory** is to specify the absolute path of the directory to be synced

**D** The "/" at the end of the sourceDirectory path copies all the contents of the directory. If the source directory path is mentioned without the end "/" the folder itself is copied or synced.

### Destination json object

```
✓
"destination": {
  "bucket": "uaa-core",
  "path": "custom-files/import/importExportLogs"
}
```

The destination object refers to the location in the S3

bucket object should specify the bucket name to be used in the S3. This can be an existing bucket name or a new name

path object should specify the path to a directory after the bucket name.

## additionalArguments json object

```
✓ "additionalArguments": {  
    "include": "*.log"  
}
```

This object can specify the following additional options to S3

**include:** file pattern can be provided to include only the files of provided pattern.

**D** The files excluded by the exclude pattern are included if the file matches the pattern provided in the include pattern.

## Configure the crontab

1. Create a file with .cron extension in the uaa-containers data folder

Full path: **/bp2/data/conf/cron**

2. Add required cron job entries to the file

```
✓ File: uploadFilesToS3.cron  
  
# scheduling the script to run every minute  
  
*/1 * * * * [ -f /dev/shm/is_leader ] && python3  
/bp2/scripts/fileServerScripts/UploadCustomFilesToS3.py
```

3. Execute the `setCron.py` script to configure the cron from the .cron files created

```
python3 setCron.py
```

**D** The expired files deletion happens every day at 02:01:00  
The cron job is to be setup in all the uaa-core containers

## File Design

Generally, each CSV file consists of two parts -

- the header, and
- the body

### Header

The header consists of the two first lines of the file. Each of these lines has a specific meaning -

- The first line contains an object type string which tells what type of record is being imported or exported.

- The second line contains a comma separated list of column names. The column names provide a mapping that instructs where to assign the values in the body section. The valid column names are specific to the object type that is defined in the first line.

The list of supported object type and column name strings is defined in the file format reference.

### Body

The body consists of one or more rows of comma separated values. Each row represents one object instance or row in the database and consists of the data for the object. The order of the data is defined by the second line in the header section

## Object Identification

In order to modify existing objects, a way of identifying those objects is needed. There are a number of ways of identifying an object in the CSV files. Every type of object provides at least the following mechanisms -

1. By `id` - The id is the unique database key for the object in BPUAA. This is a 40 character UUID string that is guaranteed to be unique.
2. By `external id` - The external id is a variable character string which is meant to contain the identifier of the object that is maintained by some external system. BPUAA does not place any uniqueness restrictions on the values of this string. Therefore it is up to the external system to either guarantee the uniqueness of the string or provide a mechanism to deal with duplicate external id values.
3. By `name` - The name is the object name and is not guaranteed to be unique.
4. By object type specific mechanisms.



For example, looking up an interface by MAC address. The list of specific mechanisms is described in the file format reference BPUAA will lookup objects in the precedence defined above.

## Object References

Objects may contain references to other objects. The references are made by using the same id, external id, name or object specific mechanisms as described in the object identification section. This means that one or more columns can be specified to hold various identification values.

At a minimum a column is needed to specify the type of object the reference is for and one or more identification columns. The type of object is the object type string defined in the reference sections. The identification columns are named by using the reference name and oring ("|") the identification column name.



For example -

A subnetwork reference made by name:

```
parent, parent|name
```

```
subnetwork, My Subnetwork
```

A service reference made by external id and name:

```
service, service|xid, service|name
```

```
service, cktid1, Circuit number 1
```

## Quoted Values

String values can be encapsulated with quotation marks to preserve embedded commas in the text. The quotation marks must be the first and last characters next to the comma used for separation.



For example -

the following is parsed into three columns:

```
foo, "this is text, too", bar
```

**End of Chapter #1.**

# CHAPTER 2

## File Format References

BP metafile supports importing and modification of the following type of objects.

# File Formats and Attributes

BPUAA supports importing and modification of objects mentioned in the following section.

 During export, the same object types and column names are adhered to.


## Subnetworks

Object type string: `subnetwork`

Specific object look-up methods: `NONE`

Column Name (UI)	Column Name	Data Type	Valid Values	Description
ID	<code>id</code>	String	40 char UUID	Unique database key of object
Subnetwork Name	<code>name</code>	String	255 characters	Free form field name of the service type
External ID	<code>xid</code>	Strsubnetworking	255 characters	External object identifier
Latitude	<code>latitude</code>	String	255 characters	Latitude in decimal format
Longitude	<code>longitude</code>	String	255 characters	Longitude in decimal format
Parent	<code>parent</code>	Object reference	subnetwork	Subnetwork that contains this subnetwork
domain	<code>administrativeDomain</code>			

Supported Columns - Subnetworks

 The latitude and longitudes are expressed as floating point values whose range should be given from (-90.0 to +90.0) degrees and (-180.0 to +180.0) respectively.

✓ **Example 1** - To import a subnetwork under “the world”

```
subnetwork, , , , ,
name,parent,parent|name,latitude,longitude
PCS,subnetwork,the world,10,40
```

✓ **Example 2** - To import a subnetwork under a different subnetwork

```
subnetwork, , , , ,
name,parent,parent|name,latitude,longitude
PCS1,subnetwork,PCS,11,41
```

## Network Elements

Object type string: `network-element`

Specific object look-up methods: `NONE`

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Connection type	<code>connection-type</code>	Enumeration	DIRECT, GATEWAY, SUBTENDED, MANAGER, PASSIVE, DORMANT, DEPENDENT, NONE	How BPUAA is connecting to the device
Craft-Url	<code>craft</code>	String	255 characters	Fully formed URL of craft or EMS
ID	<code>id</code>	String	40 char UUID	Unique database key of object
Latitude	<code>latitude</code>	String	255 characters	Latitude in decimal format
Location	<code>location</code>	String	255 characters	Free format user defined field
Longitude	<code>longitude</code>	String	255 characters	Longitude in decimal format
Office	<code>office</code>	String	255 characters	Free format user defined field
Parent	<code>parent</code>	Object reference	subnetwork	Subnetwork that contains this device
Password	<code>password</code>	String	255 characters	The password used when connecting to the network element
Primary gateway	<code>primary-gateway</code>	Object reference	network-element	Reference to the primary gateway network element
Primary IP*	<code>primary-ip</code>	String	255 characters	Primary IP address string <b>Note:</b> The IP address cannot be <b>NULL</b> . If left NULL it may cause errors on incoming traps.
Primary port	<code>primary-port</code>	Integer	32 bit unsigned	Primary IP port



Column Name (UI)	Column Name	Data Type	Valid Values	Description
Plug-in	profile	String	255 characters	Plug-in being used to manage device (usually also means type of device)
Protocol	protocol	Enumeration	ASCII, SNMP, SNMPv1, SNMPv2c, SNMPv3, NONE, TL1, NETCONF	Protocol used to communicate with device
Secondary gateway	secondary-gateway	Object reference	network-element	Reference to the secondary gateway network element
Secondary IP	secondary-ip	String	255 characters	Secondary IP address string (optional)
Secondary port	secondary-port	Integer	32 bit unsigned	Secondary IP port (optional)
Userid	userid	String	255 characters	The login name used to connect to the network element
External ID	xid	String	255 characters	External object identifier
Product name	product-name	String	255 characters	Product name of the network element
Product version	product-version	String	255 characters	Product version of the network element
Max. no. of concurrent subtended nodes	subtended-node	Integer	11 int	Maximum number of concurrent subtended nodes that BPUAA could connect through this gateway node.
Pm Profile	pm-profile	String	255 characters	Pm Profile of the network element
Time zone	timeZone	String	255 characters	Time zone of the network element
Description	description	String	255 characters	Description of the network element
Override name from device	override-name-from-device	Boolean	true, false	If enabled, override node name from device
CORBA Connection Type	corba-connection-type	Enumeration	URL, IOR	CORBA Connection Type

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Naming Service URL	corba-naming-service-url	String	255 characters	Naming Service URL to connect to CORBA agent
Notification Service URL	corba-notification-service-url	String	255 characters	Notification Service URL to connect to CORBA agent
Naming Service IOR	corba-naming-service-ior	String	255 characters	Naming Service IOR to connect to CORBA agent
Notification Service IOR	corba-notification-service-ior	String	255 characters	Notification Service IOR to connect to CORBA agent
Name	name	String	255 characters	Network element name
network-element-template-id		String	255 characters	Value can be Name/Id of the node template
application-monitors-template-id		String	255 characters	Value can be ** Name/Id of the application monitoring template
node-action-template-id		String	255 characters	
Alternate name	alternate-name	String	255 characters	DNS name for node name
Previous hop	previous-hop	String	255 characters	Network element
Previous hop name	previous-hop name	String	255 characters	Network element name
Parent node	parent-node	String	255 characters	Network element
Parent node name	parent-node name	String	255 characters	Parent name of the network element
User Name	username	String	255 characters	
Security Level	security-level	Enumeration	NOAUTH_NOPRIV, AUTH_NOPRIV, AUTH_PRIV	
Authentication Protocol	auth-protocol	Enumeration	MD5, SHA	
Authentication Password	auth-password	String	255 characters	

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Privacy Protocol	privacy-protocol	Enumeration	Des, Des3, Aes128, Aes192, Aes256	
Privacy Password	privacy-password	String	255 characters	
	cnf-ip-address	String		Custom Node field. <b>Note:</b> While importing a custom node field, make sure to prefix the custom node field name by "cnf_".
	cnf-mac-address	String		Custom Node field. <b>Note:</b> While importing a custom node field, make sure to prefix the custom node field name by "cnf_".
sub-tendedNodeExternalId	subtended-node-external-id	String	255 characters	
	site	Object Reference	site	site that contains this network element
Session Type	session	Enumeration	TELNET,SSH	Session Type
SSH Userid	SSHuserid	String	255 char	The SSH login name used to connect to the network element
SSH Password	SSHpassword	String	255 char	The SSH password used when connecting to the network element

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Operational State	connection-state	Enumeration	"UNKNOWN, UNSUPPORTED, UNMANAGED, DISCONNECTING, DISCONNECTED, DISCOVERING, CONNECTING, CONNECTED, AUTHENTICATING, VERIFYING, SYNCHRONIZING, SYNCHRONIZED, UNLICENSED, NONE, R4.0 SYNCHRONIZING_INVENTORY, SYNCHRONIZING_PERFORMANCE, SITE_UNREACHABLE, SYNCHRONIZE_PROPERTIES;	Operational State
Vendor Name	vendor-name	String	255 char	

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Device Type	device-type	Enumeration	" UNKNOWN, SWITCH, ROUTER, DCS, ADM, DWDM, DSLAM, MSPP, MSSP, MSTP, AMPLIFIER, MANAGER, AGENT, DLC, OSTP, SERVER, SSU, OAC, ESP, FIREWALL, SBC, SAN, OLT, ONU, MUX, MSAP, VPN, LOAD_BALANCER, VIDEO_PROCESSOR, PACKETSHAPER, UPS, CMTS, DTV_RECEIVER, BLC, RECTIFIER, POWER_EQUIPMENT, ACCESS_POINT, SERVICE_CONTROLLER, IP_PBX, COLLABORATION_SERVER, DEMARCATION_DEVICE, MICROWAVE_RADIO, GATEWAY, MODEM, VIDEO_PLATFORM, SWITCH_ROUTER, HVAC, CRAC, HVAC_CRAC, MANAGED_NODE, CABLE_MODEM, MTA, CLOUD_HOST, VIRTUAL_MACHINE, RPD"	
Provisioned State	provisioned-state	Enumeration	" UNMANAGED; // 0 MANAGED; // 1"	
Last Alarm Synchronization Time	last-synchronization-timestamp	Long		Time when alarms were last synchronized successfully
Chat Required	chat-required	Boolean	true, false	If a chat session is required to activate the TL1 session or not

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Enable availability state	avail-abilitystate-required	Boolean	true, false	If a Availability State needs to be calculated or not
Chat Userid	chat-userid	String	255 char	The login name used during the chat session
Chat Password	chat-password	String	255 char	The login password used during the chat session
CR/LF Required	crlf-required	Boolean	true, false	If TL1 commands must be terminated with a carriage return and a line feed or not
Device plug-in	device-profile	String	255 char	deviceProfileId
Last Inventory Synchronization Time	last-inventory-synchronization-timestamp	Long		Time when inventory were last synchronized successfully
Subtended Node External Id	subtended-node-external-id	String	40 char UUID	If the subtendedNodeExternalId property is set in alarm object and the same will be propagated to be //used in NetworkElement's subtendedNodeExternalId. This is used in case of Subtended nodes that send traps // which have neId but don't have neName.
MAC Address	mac-address	String	255 char	baseBridgeId
Node Template Id	network-element-template-id	String	40 char UUID	The NE template object used to configure this NE
Application Monitoring Template Id	application-monitors-template-id	String	40 char UUID	The application monitors template object used to configure this NE
Engine Id	engineid	String	255 char	The engine id of agent to use for authentication
Tenant Name	tenantName	String	255 char	Openstack Tenant Name
BGP AS Identifier	bgp-as-identifier	String	255 char	BGP AS Identifier

Column Name (UI)	Column Name	Data Type	Valid Values	Description
OSPF Router Id	ospf-router-id	String	255 char	OSPF Router Id
Ne Action Template Id	node-action-template-id	String	40 char UUID	The network element action template object used to configure this NE
Telemetry port	telemetry-port	Integer		The Telemetry port
Telemetry user name	telemetry-user-name			The Telemetry user name
Telemetry Password	telemetry-password	String	255 char	The Telemetry authentication password
CPE MAC Address	cpe-mac-address	String	255 char	Customer Premise Equipment MAC address
CPE IP Address	cpe-ip-address	String	255 char	Customer Premise Equipment IP address
	network-object	Object Reference	network-object	
Default Service Id	groupingServiceId			Service associated with the network element, used to group alarms from this network element
Has Attachments	hasAttachments	Boolean	true, false	Has Attachments
	attachments	Object Reference	List of attachments	
Network Object ACL	aclTag	Long	columnDefinition="BIGINT DEFAULT 0",length=20	Effective bitValue of ACL objects
administrativeDomain	administrativeDomain	Object Reference	administrativeDomain	

Supported Columns - Network Elements



The latitude and longitudes are expressed as floating point values whose range should be given from (-90.0 to +90.0) degrees and (-180.0 to +180.0) respectively.



### Example

```
network-element,,,,,,,,,,,,,
```

✓  
name,latitude,longitude,parent,parent|name,protocol,profile,userid,pa  
ssword,connection-type,primary-ip,primary-port,telemetry-  
username,telemetry-password,telemetry-port, ciena-dnf-  
vi,19,77,subnetwork,netconf,NETCONF,ciena-d-nfvi-  
netconf,user,ciena123,MANAGER,10.182.23.9,830,user,ciena,6072

✓  
**Example**

```
network-element,,,,,,,,,,,,,  
xid,name,parent,parent|name,protocol,primary-ip,primary-  
port,profile,connection-type,network-element-template-id  
CE-1-1,CE-1-1,subnetwork,the world,SNMP,192.168.1.51,1610,cisco-  
3560,DIRECT,Managed NE
```

□ You can now use # as a feature to comment a line during import. If any data starts with a special character such as #, it will be treated as comment and will be ignored for import.  
If there is a need to start the line with #, make sure to insert inverted quotes.

✓  
**Example**

```
ha-test1,#ha-test1,subnetwork,Subnetwork1... - Accepted  
#ha-test2,ha-test2,subnetwork,Subnetwork1... - Ignored as comment  
"#ha-test3",ha-test3,subnetwork,Subnetwork1,... - Accepted
```



## End Points

Object type string: end-point

Specific object look-up methods: By MAC address

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Description	description	String	255 characters	Free form string that describes the end point
ID	id	String	40 char UUID	Unique database key of object
MAC Address	mac-address	String	255 characters	MAC address of the end point if applicable
Node	network-element-name	String	255 characters	Name of associated network element
Node ID	node-id	String	40 char UUID	ID of associated network element
Oper State	operational-state	Boolean	true(up), false(down)	Indicates the operational state of the end-point
Admin State	administrative-state	Boolean	true(up), false(down)	Indicates the administrative state of the endpoint
Speed	speed	Long	20 Int	
	service-logical-id	List<String>		
Service	service	Object reference	service	Reference to the service the end point belongs to
Source ID	source-id	String	255 characters	Network identifier for this end point (for example the OID)
Source Index	source-index	String	255 characters	Network index of this end point (if SNMP)
Source	source-name	String	255 characters	Name of the end point
Source Ifname	source-ifname	String	255 characters	Source Interface Name
Source Type	source-type	String	255 characters	Free form string the describes the type of end point
Source Type ID	source-type-id	String	255 characters	Network identifier that identifies the type of end point

Column Name (UI)	Column Name	Data Type	Valid Values	Description
External ID	xid	String	255 characters	External object identifier
Name	name	String	255 characters	Endpoint name
	end-point-template-id	String	255 characters	Value can be ** Name/Id of the end-point template
	pm-template-id	String	255 characters	Value can be ** Name/Id of the performance monitoring template
	cepf_cep4	String	255 characters	Custom endpoint <b>Note:</b> While importing a custom end point field, make sure to prefix the custom end point field name by "cepf_".
Association Name	associationName	String	255 characters	value will always be <b>End-Point</b>
	associationName id	String	40 char UUID	Unique database key of object which will override ID if Association is overridden
Parent Name	parentName	String	255 characters	value will always be <b>End-Point</b>
	parentName id	String	40 char UUID	Unique database key of object which will override ID if Parent is overridden
Override Parent	overrideParent	Boolean		Displays True or False if override Parent is enabled or disabled respectively
Override Association	overrideAssociation	Boolean		Displays True or False if override LAG Association is enabled or disabled respectively
Operating Frequency	operating-frequency	Long		Operating frequency for cable upstream and downstream tables

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Last Synchronization Time	last-syn-chronization-time	Long		Last Synchronization Time
IP Address	ip-address	String		IP Address to be used for Layer 3 EndPoints
Subnet mask	subnet-mask	Integer		Layer3 Subnet Mask for the IpAddress
VLAN	vlan	String		Port VLAN ID
VLANs	vlangs	String		Store the values as ",1,2,512,2048,4096,". Always enclosed within "," to easily filter values from DB
	parent	Object Reference		Parent/support end-point for this endpoint.
parentIdentifier	parentIdentifier	String		
OSPF Area Id	ospf-area-id	String		OSPF Area Id
Association Type	association-type	String		Association Type
administrativeDomain	administrativeDomain	Object Reference	administrativeDomain	

Supported Columns - End Points



### Example

```
end-point,,,,,,,,,
xid,network-element-name,source-name,source-
type,service,service|xid,end-point-template-id,pm-template-id,cepf_
cep4
43,RCDNTX010A1,OC48-2,OC48,,service,22,d990bf5f-5bba-4091-9991-
04434bebf89d,141196dc-93cb-407d-ae9f-a80ebab22f4e,xyz
```



### Example

```
end-point,,,,,,,,,
xid,network-element-name,source-name,source-
type,service,service|xid,end-point-template-id,pm-template-id,cepf_
cep4
,CE-1-1,GigabitEthernet0/0/0/1,ethernetCsmacd(6),,,Ethernet
FLT/Binned-PM,if-mib if-mib.ethernet_availability-1,
```

## Services

Object type string: `service`

Specific object look-up methods: `NONE`

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Customer	<code>customer</code>	Object reference	<code>customer</code>	Reference to the customer of this service
Customer description	<code>customer-description</code>	String	255 characters	Free form string that captures the customers description of this service
Collect performance	<code>collect-performance</code>	Boolean	True or False	Enable/disable performance collection on services
Description	<code>description</code>	String	255 characters	Free form string that captures the internal description of the service
ID	<code>id</code>	String	40 char UUID	Unique database key of object
Name	<code>name</code>	String	255 characters	Free form field name of the service
Priority	<code>priority</code>	Enumeration	LOW, NORMAL, HIGH, URGENT	Business importance of this service
Segments	<code>segments</code>	Object reference	<code>service</code>	One or more references to the services this service depends upon
Service type	<code>type</code>	Object reference	<code>service-type</code>	Reference to the type of service
	<code>service-pm-metrics</code>	List<String>		
Auto discovery	<code>auto-discovery</code>	Boolean	true, false	To check if the auto discovery is enabled or not
	<code>pm-threshold-policies</code>	List<String>		
SLA ID	<code>sla Id</code>	String	255 characters	SLA ID
External ID	<code>xid(External ID)</code>	String	255 characters	External object identifier

Column Name (UI)	Column Name	Data Type	Valid Values	Description
	csf_location	String	256 characters	Custom Service field <b>Note:</b> While importing a custom service field, make sure to prefix the custom service field name by "csf_". Custom service field also applies to all service related pages such as EVCs, Network and VNFs.

Supported Columns - Services

## Example

✓

```
service,,,,,,,,,
name,customer,customer|name,description,type,type|name,service-
template-id
Service1,customer,,,service-type,OC-12,Default Service Template
```

✓

```
service,,,,,,,,,
name,customer,customer|name,description,type,type|name,servicetemplat
e-id,csf_customfieldname
Service1,customer,,,service-type,OC-12,Default Service
Template,TestCSF
```

## Exclusions

Object type string: exclusion

Specific object look-up methods: NONE

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Name	name	varchar	255 characters	Name of the exclusion object
Start Date	start-date	datetime	datetimestamp	Start date to specify the period for the exclusion object.
End Date	end-date	datetime	datetimestamp	End date to specify when the period ends.

Supported Columns - Service Exclusions

✓

**Example**

```
exclusion,,,

```



```
xid,name,start-date,end-date  
xid10,exclusion3,2016-03-31 01:00:00.0,2016-03-31 05:00:00.0
```



**Example - To import exclusion from a service**

```
service,,  
xid,name,exclusions,exclusions|xid,exclusions|xid  
servxid1,service_Test,exclusion,"xid10"
```

## Delete Exclusion



**Example**

```
delete--service,,  
name,exclusions,exclusions|name  
service_Test,exclusion,exclusion3
```

## Protected Services

Object type string: `protected-service`

Column Name (UI)	Column Name	Data Type	Valid Values	Description
ID	<code>id</code>	String	40 char UUID	Unique database key of object
Name	<code>name</code>	String	255 characters	Free form field name of the service
Description	<code>description</code>	String	255 characters	Free form string that captures the internal description of the service
Domain	<code>domain</code>	String	255 characters	
Protection Type	<code>protectiontype</code>	Enumeration	TRAIL, TRAIL_GROUP, SNC, SNC_GROUP	
Is worker active	<code>isworkeractive</code>	Boolean	true, false	To check if the worker active is is enabled or not

Supported Columns - Protected Services



Here - **name**, **administrativeDomain/domain**, and **protection-type** are mandatory fields to be included for creating a protected service.



### Protected Service: Create

```
protected-service,,,,,,,,,
```

```
name,description,administrativeDomain,administrativeDomain|name,protection-type,is-worker-active
```

```
Imported Protected Service,Importing PS,administrative-domain,Default,TRAIL,false
```



### Protected Service: Modify

```
protected-service,,,,,,,,,
```

```
id,name,protection-type,is-worker-active
```

```
39f4891e-4eaa-4989-934a-c060ec9faac7,Modified Imported Protected Service,TRAIL_GROUP,true
```



**Protected Service: Delete** (only deletes if there are no included services associated, if not throws error "Delete protected service failed: Object in use remove all included services,



**and try again")**

```
delete--protected-service,,  
name  
Modified Imported Protected Service
```



**Protected Service: Force Delete (Detaches the included services first then delete protected service Object)**

```
force-delete--protected-service,,  
name  
Modified Imported Protected Service
```



**Included Services: Create/Modify (Using Ids of both Protected Service & Included service)**

```
service-protected-service,,,,,  
protectedServiceId,serviceId,serviceMode,servicePathType  
39f4891e-4eaa-4989-934a-c060ec9faac7,4a406ef6-0416-41e3-a829-  
31f64babf564,ACTIVE,WORKER  
39f4891e-4eaa-4989-934a-c060ec9faac7,db758df8-677b-4b6d-a327-  
e4939207e79f,STANDBY,PROTECTED
```



**Included Services: Create/Modify (Using Xids of both Protected Service & Included service)**

```
service-protected-service,,,,,  
protectedServiceXid,serviceXid,serviceMode,servicePathType  
957456,2472,STANDBY,PROTECTED  
957456,2471,ACTIVE,WORKER
```



**Included Services: Create/Modify (Using Names of both Protected Service & Included service)**

```
service-protected-service,,,,,  
protectedServiceName,serviceName,serviceMode,servicePathType  
Final Test,47_1,ACTIVE,WORKER  
Final Test,47_2,STANDBY,PROTECTED
```





Service Id/name/externalId, ProtectedService Id/name/externalId can be used to import included services in any possible combinations.

## Network Connections

Object type string: `network-connection`

Specific object look-up methods: `NONE`



Currently, while exporting Network Connections using CSV format will only export single (1<sup>st</sup> in the list) End Point even if multiple End Point are selected.

The import mechanism only supports files 'ASCII Text' type files. Files with special characters, BOM (byte order mark) or CRLF characters will fail the import.

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Customer	<code>customer</code>	Object reference	<code>customer</code>	Reference to the customer of this connection
Customer description	<code>customer-description</code>	String	255 characters	Free form string that captures the customers description of this connection
Description	<code>description</code>	String	255 characters	Free form string that captures the internal description of the connection
ID	<code>id</code>	String	40 char UUID	Unique database key of object
Name	<code>name</code>	String	255 characters	Free form field name of the connection
Service type	<code>type</code>	Object reference	<code>service-type</code>	Reference to the type of connection
	<code>service-pm-metrics</code>	List<String>		
External ID	<code>xid(External ID)</code>	String	255 characters	External object identifier

Supported Columns - Network Connections



### Example

```
network-connection,,,,,,,,,
```

```
name,description,type,type|name,service-template-  
id,endpoints,endpoints|id,endpoints|id
```

```
test_regression_1vPE1:ge-0/0/0<->vP1:ge-0/0/2,L2,service-type,LAYER2-  
ADJACENCY,Default Layer2 Service Template,end-point,a952c44d-7546-  
40cd-904a-55e9de79ee90,5e5e7d52-3ae9-4ff0-a4f0-dbd82ebb09ee
```

## Service Types

Object type string: `service-type`

Specific object look-up methods: `NONE`

Column Name (UI)	Column Name	Data Type	Valid Vvalues	Description
ID	<code>id</code>	String	40 char UUID	Unique database key of object
Name	<code>name</code>	String	255 characters	Free form field name of the service type
Description	<code>description</code>	String	255 characters	Free form field description of the service type
Physical connection	<code>physical</code>	Boolean	true, false	If this service type represents a physical connection or not
External ID	<code>xid</code>	String	255 characters	External object identifier
	<code>service-type-pm-metrics</code>	List<String>		

Supported Columns - Service Types



### Example

```

service-type, ,
name,description,physical
10M,10 Mbps,FALSE
100M,100 Mbps,FALSE
1G,1 Gbps,FALSE
10G,10 Gbps ,FALSE
ATM-PVC,ATM permanent,FALSE
1M ETH,1 Mbps ETH,FALSE
3M ETH,3 Mbps ETH,FALSE
6M ETH,6 Mbps ETH,FALSE
9M ETH,9 Mbps ETH,FALSE
1G ETH,1 Gbps ETH,FALSE
1.5G ETH,1.5 Gbps ETH,FALSE
10G ETH,10 Gbps ETH,FALSE
1.5M ETH,1.544 Mbps ETH,FALSE

```

# Customers

Object type string: customer  
Specific object look-up methods: NONE

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Contact info	contact-info	String	255 characters	Free form contact info field
Contact info2	contact-info-2	String	255 characters	Free form contact info field
Contact info3	contact-info-3	String	255 characters	Free form contact info field
Street address	street-address	String	255 characters	Free form street-address field
City	city	String	255 characters	Free form city field
State	state	String	255 characters	Free form state field
Postal code	Postal-code	String	255 characters	Free form postal-code field
ID	Id	String	40 char UUID	Unique database key of object
Name	name	String	255 characters	Free form field name of the customer
External ID	xid	String	255 characters	External object identifier

Supported Columns - Customers

✓

Example

```
customer, , , , ,
xid,name,contact-info,contact-info-2,contact-info-3
1,JP Morgan,Steve Lyod,211-457-5759,steve@jpmorgan.com
2,Bank of America,David Smith,232-124-5232,dave@bofa.com
```

## Ethernet Virtual Connection

Object type string: Ethernet-virtual-connection

Specific object look-up methods: NONE



Currently, while exporting Ethernet Virtual Connections using CSV format will only export single (1<sup>st</sup> in the list) End Point even if multiple End Point are selected.

Refer services section for more examples.

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Customer	customer	Object reference	customer	Reference to the customer of this service
Customer description	customer-description	String	255 characters	Free form string that captures the customers description of this service
Description	description	String	255 characters	Free form string that captures the internal description of the service
ID	id	String	40 char UUID	Unique database key of object
Name	name	String	255 characters	Free form field name of the service
Priority	priority	Enumeration	LOW,	Business importance of this service
			NORMAL,	
			HIGH,	
			URGENT	
Segments	segments	Object reference	service	One or more references to the services this service depends upon
Service type	type	Object reference	service-type	Reference to the type of service
	service-pm-metrics	List<String>		
Auto discovery	auto-discovery	Boolean	true, false	To check if the auto discovery is enabled or not
	pm-threshold-policies	List<String>		
SLA ID	sla Id	String	255 characters	SLA ID

Column Name (UI)	Column Name	Data Type	Valid Values	Description
External ID	xid	String	255 characters	External object identifier
	evc-type	Enumeration	POINT_TO_POINT, MULTIPOINT_TO_MULTIPPOINT, ROOTED_MULTIPPOINT;	
	evc-id	String	255 characters	
	protected	Boolean	true, false	
	user-label	String	255 characters	
	ce-vlan-id-preservation	Boolean	true, false	
	ce-vlan-cos-preservation	Boolean	true, false	

Supported Columns - Ethernet Virtual Connection

## Example

✓  
`ethernet-virtual-connection,,,,,,,,,  
xid,name,customer-description,segments,segments|xid  
125,evc1,description,service,95`

✓  
`ethernet-virtual-connection,,,,,,,,,  
xid,name,customer-description,segments,segments|xid,csf_customfieldname  
125,evc1,description,service,95,TestCSF`

## Exclusions

Object type string: `exclusion`

Specific object look-up methods: `NONE`

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Name	name	varchar	255 characters	Name of the exclusion object
Start Date	start-date	datetime	datetimestamp	Start date to specify the period for the exclusion object.
End Date	end-date	datetime	datetimestamp	End date to specify when the period ends.

Supported Columns - EVC Exclusions



### Example

```
exclusion,,,  
xid,name,start-date,end-date  
xid10,exclusion3,2016-03-31 01:00:00.0,2016-03-31 05:00:00.0
```



### Example to Import Exclusions with an EVC

```
ethernet-virtual-connection,  
xid,name,exclusions,exclusions|xid,exclusions|xid  
id1,evc1,exclusion,"xid16","xid17"  
id2,evc2,exclusion,"xid15",  
id3,evc3,exclusion,"xid14","xid13"
```

## Flow Point

Object type string: flow-point

Specific object look-up methods: MAC Address

Column Name (UI)	Column Name	Data Type	Valid Values	Descript
Evc	evc	Object reference	EthernetVirtualConnection	EVC
	logical-interface	Object reference	LogicalInterface	
	bandwidth-profiles	List<String>		
	cir	Long		Committed Information Rate (CIR) in bits per second for one direction
	eir	Long		Excess Information Rate (EIR) in bits per second for one direction.
Location	location	Enumeration	NONE, A_END_FLOWPOINT, Z_END_FLOWPOINT	Flow Point Location
Node	network-element-name	String	255 characters	Network element name
Node ID	node-id	String	255 characters	Network element ID
Source	source-name	String	255 characters	Source
	source-iframe	String	255 characters	
Description	description	String	255 characters	Description
	<del>service</del>	Object reference	service	
Source ID	source-id	String	255 characters	Source ID
Source Index	source-index	String	255 characters	Source Index
Source Type	source-type	String	255 characters	Source Type
Source Type ID	source-type-id	String	255 characters	Source Type ID
Oper State	operational-state	Boolean	true(up), false(down)	To check if the operational state of the flow-point is up or down



Column Name (UI)	Column Name	Data Type	Valid Values	Descript
Admin State	administrative-state	Boolean	true(up), false(down)	To check if the administrative state of the flow-point is up or down
MAC Address	mac-address	String	255 characters	MAC address of the flow-point
Speed	speed	Long		Speed
	service-logical-id	String	255 characters	
ID	id	String	40 char UUID	Unique database key of the object
	name	String	255 characters	Free form field name of the flow-point
External ID	xid	String	255 characters	External Object identifier
	end-point-template-id	string		
	pm-template-id	string		
	cepf_cep4			Custom endpoint column can be user defined

Supported Columns - Flow Point



### Example

```

flow-point,,,,,,,,,
network-element-name,node-id,source-name,source-type-id,source-type,
cepf_cep4
TEXAS,d990bf5f-5bba-4091-9991-04434bebf89d,FP-1,2001,Flow Point,xyz

```

## IP SLA Operation

Object type string: `ip-sla-operation`

Specific object look-up methods: MAC Address

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Description	<code>description</code>	String	255 characters	Free form string that describes the end point
ID	<code>Id</code>	String	40 char UUID	Unique database key of object
	<code>ethernet-interface</code>	Boolean	true, false	To specify if the end point is ethernet interface or not.
	<code>mac-address</code>	String	255 characters	MAC address of the end point if applicable
Node	<code>network-element-name</code>	String	255 characters	Name of associated network element
Node ID	<code>node-id</code>	String	40 char UUID	Id of associated network element
Oper State	<code>operational-state</code>	Boolean	true(up), false (down)	Indicates the operational state of the endpoint
Admin State	<code>administrative-state</code>	Boolean	true(up), false (down)	Indicates the administrative state of the endpoint
	<code>Speed</code>	Long	20 Integers	
	<code>service-logical-id</code>	List<String>		
Service	<code>Service</code>	Object reference	service	Reference to the service the end point belongs to
Source ID	<code>source-id</code>	String	255 characters	Network identifier for this end point (for example the OID)
Source Index	<code>source-index</code>	String	255 characters	Network index of this end point (if SNMP)
Source	<code>source-name</code>	String	255 characters	Name of the end point

Column Name (UI)	Column Name	Data Type	Valid Values	Description
	source-ifname	String	255 characters	Source Interface Name
Source Type	source-type	String	255 characters	Free form string the describes the type of end point
Source Type ID	source-type-id	String	255 characters	Network identifier that identifies the type of end point
Frequency	Frequency	Integer		RTT operation frequency
Operation Number	operation-number	Integer		Unique number to identify RTT operation
Owner	Owner	String	255 characters	Owner of RTT operation
Operation Type	rtt-type	Enumeration	UNKNOWN, ECHO, PATH_ECHO, FILE_IO, SCRIPT, UDP_ECHO, TCP_CONNECT, HTTP, DNS, JITTER, DLSW, DHCP, FTP, VOIP, RTP, LSP_GROUP, ICMP_JITTER, LSP_PING, LSP_TRACE, ETHERNET_PING, ETHERNET_JITTER, LSP_PING_PSEUDOWIRE	RTT operation type
Tag	Tag	String	255 characters	RTT operation Tag
Threshold	Threshold	Integer		RTT threshold limit
Timeout	Timeout	Integer		RTT operation timeout
Group Name	group-name	String	255 characters	
Life	Life	Integer		RTT operation life

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Operation Protocol	rtt-protocol	Enumeration	UNKNOWN, NOT_APPLICABLE, IP_ICMP_ECHO, IP_UDP_ECHO_APPL, SNA_RU_ECHO, SNA_LU0_ECHO_APPL, SNA_LU2_ECHO_APPL, SNA_LU62_ECHO, SNA_LU62_ECHO_APPL, APPLE_TALK_ECHO, APPLE_TALK_ECHO_APPL, DEC_NET_ECHO, DEC_NET_ECHO_APPL, IPX_ECHO, IPX_ECHO_APPL, ISO_CLNS_ECHO, ISO_CLNS_ECHO_APPL, VINES_ECHO, VINES_ECHO_APPL, XNS_ECHO, XNS_ECHO_APPL, APOLLO_ECHO, APOLLO_ECHO_APPL, NETBIOS_ECHO_APPL, IP_TCP_CONN, HTTP_APPL, DNS_APPL, JITTER_APPL, DLSW_APPL, DHCP_APPL, FTP_APPL, MPLS_LSP_PING_APPL, VOIP_APPL, RTP_APPL, ICMP_JITTER_APPL, ETHERNET_PING_APPL, ETHERNET_JITTER_APPL	RTT operation protocol
Source Address	source-address	String	255 characters	
Source Port	source-port	Integer		

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Target Address	target-address	String	255 characters	
Target Port	target-port	Integer		
Customer	Customer	String	255 characters	
TOS	Tos	Integer		Type of service
Additional Inform- ation	additional-information	String	255 characters	Additional inform- ation about the RTT operation
RTT threshold crossing alarm severity	threshold-alarm-severity	Enumeration	NOT_REPORTED, INDETERMINATE, INFO, WARNING, MINOR, MAJOR, CRITICAL, COMMUNICATION	Severity of RTT threshold crossing alarm
	targetNetworkElementId	Double		Target Net- workElement Id
	end-point-template-id	string		
	pm-template-id	string		

Supported Columns - IP SLA Operation



### Example

```
ip-sla-operation,,,,,
xid, customer, rtt-type, source-port, threshold, network-element-
name, source-name
1, JP Morgan, UNKNOWN, 8080, 10, TEXAS, 20frames-operation1
```

## Logical Interface

Object type string: logical-interface

Specific object look-up methods: MAC Address

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Description	description	String	255 characters	Free form string that describes the end point
ID	id	String	40 char UUID	Unique database key of object
MAC Address	mac-address	String	255 characters	MAC address of the end point if applicable
Node	network-element-name	String	255 characters	Name of associated network element
Node ID	node-id	String	40 char UUID	Id of associated network element
Oper State	operational-state	Boolean	true (up), false (down)	Indicates the operational state of the endpoint
Admin State	administrative-state	Boolean	true (up), false (down)	Indicates the administrative state of the endpoint
Speed	speed	Long	20 Integers	
	service-logical-id	List<String>		
Service	service	Object reference	service	Reference to the service the end point belongs to
Source ID	source-id	String	255 characters	Network identifier for this end point (for example the OID)
Source Index	source-index	String	255 characters	Network index of this end point (if SNMP)
Source	source-name	String	255 characters	Name of the end point
	source-ifname	String	255 characters	Source Interface Name
Source Type	source-type	String	255 characters	Free form string the describes the type of end point

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Source Type ID	source-type-id	String	255 characters	Network identifier that identifies the type of end point
	uni-identifier	String	255 characters	UNI Identifier
	service-multiplexing	Boolean	true, false	Service Multiplexing
	service-bundling	Boolean	true, false	Service Bundling
	bandwidth-profiles	List<String>		
	id	String	40 char UUID	Unique database key of the object
	name	String	255 characters	Free form field name of the logical-interface
	Xid	String	255 characters	External Object identifier
	cepf_cep4			Custom endpoint is user defined

Supported Columns - Logical Interface



### Example

```
logical-interface,,,,,,,,,
network-element-name,node-id,source-name,description,end-point-
template-id,pm-template-id
DALLAS_new,987f7e09-a0f2-4da6-9ac8-
6c14c956dff5,GI011111111111,withoutservice,ffa86d31-1a0f-40cd-bd16-
1352538b0c
```

# External Scheduled Maintenance

Object type string: external-scheduled-maintenance

Specific object look-up methods: NONE

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Object Type	scheduledObjectType	Object types	NETWORK_ELEMENT, END_POINT, SERVICE, ETHERNET_VIRTUAL_CONNECTION, FLOW_POINT	Object types in maintenance
Number of Objects	objects	Objects	network-element, end-point, service, ethernet-virtual-connection, flow-point	Number of objects in maintenance
Duration	duration	Long		Time duration the scheduled maintenance would be active
Recurrence	recurrence	Enumeration	NONE, DAILY, WEEKLY, MONTHLY, YEARLY, ALWAYS_ON, HOURLY, MINUTELY	Recurrence option defined in the scheduled maintenance



Column Name (UI)	Column Name	Data Type	Valid Values	Description
Recurrence type	interval-type	Enumeration	SINGLE, EVERY_X_ DAY, EVERY_ WEEKDAY, EVERY_X_ WEEK, EVERY_X_ MONTH_DAY, EVERY_X_ MONTH_ WEEK, EVERY_X_ YEAR_ MONTH_DAY, EVERY_X_ YEAR_WEEK_ DAY, EVERY_ X_YEAR_ MONTH_ WEEK, EVERY_X_ HOURS, EVERY_X_ MINUTES	Recurrence type of the scheduled maintenance
	interval-value	Integer		
	P dayParam	String	255 characters	
	P weekParam	String	255 characters	
	P monthParam	String	255 characters	
Start Date	start-date	Date		Start date of the scheduled maintenance
End Date	end-date	Date		End date of the scheduled maintenance
Count	count	Integer		Number of times the scheduled maintenance need to execute
ID	id	String	40 char UUID	

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Name	name	String	255 characters	Free form field name of the external-scheduled-maintenance
	scheduleEntity-type	ManagedObjectType		
	created-time	date		
	activeStatus	ActiveStatus	ACTIVE, INACTIVE, COMPLETED, NOT_ APPLICABLE;	
	duration	long		

Supported Columns - External Scheduled Maintenance



### Example

```
external-scheduled-maintenance,,,,
xid, object-type, objects, recurrence, interval-type
1, end-point, end-point, WEEKLY, SINGLE
```

## Internal Scheduled Maintenance

Object type string: `internal-scheduled-maintenance`

Specific object look-up methods: `NONE`

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Object Type	<code>scheduledObjectType</code>	Object types	<code>NETWORK_ELEMENT,</code> <code>END_POINT,</code> <code>SERVICE,</code> <code>ETHERNET_VIRTUAL_CONNECTION,</code> <code>FLOW_POINT</code>	Object types in maintenance
Number of Objects	<code>objects</code>	Objects	<code>network-element,</code> <code>end-point,</code> <code>service,</code> <code>ethernet-virtual-connection,</code> <code>flow-point</code>	Number of objects in maintenance
Duration	<code>duration</code>	Long		Time duration the scheduled maintenance would be active
Recurrence	<code>recurrence</code>	Enumeration	<code>NONE,</code> <code>DAILY,</code> <code>WEEKLY,</code> <code>MONTHLY,</code> <code>YEARLY,</code> <code>ALWAYS_ON,</code> <code>HOURLY,</code> <code>MINUTELY</code>	Recurrence option defined in the scheduled maintenance

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Recurrence type	interval-type	Enumeration	SINGLE, EVERY_X_ DAY, EVERY_ WEEKDAY, EVERY_X_ WEEK, EVERY_X_ MONTH_DAY, EVERY_X_ MONTH_ WEEK, EVERY_X_ YEAR_ MONTH_DAY, EVERY_X_ YEAR_WEEK_ DAY, EVERY_ X_YEAR_ MONTH_ WEEK, EVERY_X_ HOURS, EVERY_X_ MINUTES	Recurrence type of the scheduled maintenance
	interval-value	Integer		
	P dayParam	String	255 characters	
	P weekParam	String	255 characters	
	P monthParam	String	255 characters	
Start Date	start-date	Date		Start date of the scheduled maintenance
End Date	end-date	Date		End date of the scheduled maintenance
Count	count	Integer		Number of times the scheduled maintenance need to execute
ID	id	String	40 char UUID	Id of the specified object in scheduled maintenance

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Name	name	String	255 characters	Free form field name of the internal-scheduled-maintenance
	scheduleEntity-type	ManagedObjectType		
	created-time	date		
	activeStatus	ActiveStatus	ACTIVE, INACTIVE, COMPLETED, NOT_APPLICABLE;	
	duration	long		

Supported Columns - Internal Scheduled Maintenance



### Example

```

scheduled-maintenance,,,,,
name,scheduledObjectType,objects,objects|id,recurrence,interval-
type,start-date
SM2_test,NETWORK_ELEMENT,network-element,c5274ab5-523c-478f-bad3-
78c0ba3ba88a,NONE,SINGLE,2018-10-08 20:33:00
SM5_test,END_POINT,end-point,5e9bb9a6-5593-46fb-936d-
dc5702818dd1,NONE,SINGLE,2018-10-08 23:07:00
SM5_test_evcc,ETHERNET_VIRTUAL_CONNECTION,ethernet-virtual-
connection,966424c7-8ccf-497e-bd1b-1db38b10e536,NONE,SINGLE,2018-10-
08 23:38:00
SM5_test_flowpoint,FLOW_POINT,flow-point,29dab2ca-7ece-4558-91ca-
6acabd4d7240,NONE,SINGLE,2018-10-08 23:15:00
SM5_test_service,SERVICE,service,475662cc-9a94-4203-ac9e-
ff6c28070398,NONE,SINGLE,2018-10-08 23:28:00

```

## Trouble Ticket Settings

Object type string: `trouble-ticket-settings`

Specific object look-up methods: `NONE`

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Hostname	hostname	String	255 characters	Hostname
Username	username	String	255 characters	Username
Password	password	String	255 characters	Password
Ticket system type	ticket-system-type	Enumeration	GENERIC, WEB_SERVICES	Ticket system type
Update ticket with alarm comments	update-ticket-with-alarm-comments	Boolean	true,false	Update ticket with alarm comments
Update ticket with alarm clears	update-ticket-when-alarm-clears	Boolean	true,false	Update ticket with alarm clears
Close ticket when alarm clears	close-ticket-when-alarm-clears	Boolean	true,false	Close ticket when alarm clears
Ticket system remote query URL	query-url	String	255 characters	Ticket system remote query URL
Create ticket script filename	generic-create-ticket-script-filename	String	255 characters	Create ticket script filename
Update ticket script filename	generic-update-ticket-script-filename	String	255 characters	Update ticket script filename
Close ticket script filename	generic-close-ticket-script-filename	String	255 characters	Close ticket script filename
Static arguments	generic-static-arguments	String	255 characters	Static arguments
Enabled	enabled	Boolean	true, false	Enabled
Service URL	web-services-service-url	String	255 characters	Service URL
Update Service URL	web-services-update-service-url	String	255 characters	Update Service URL
Close Service URL	web-services-close-service-url	String	255 characters	Close Service URL

Column Name (UI)	Column Name	Data Type	Valid Values	Description
WSDL URL (or) File Location	web-services-wsdl-url-or-file	String	255 characters	WSDL URL (or) File Location
WSDL Update URL	web-services-wsdl-update-url-or-file	String	255 characters	WSDL Update URL
WSDL Close URL	web-services-wsdl-close-url-or-file	String	255 characters	WSDL Close URL
	web-services-is-wsdl-url	String	255 characters	
Request Timeout	web-services-request-timeout	Long		Request Timeout
Create ticket SOAP Request	web-services-create-ticket-soap-request	String	255 characters	Create ticket SOAP Request
Create ticket SOAP Action	web-services-create-ticket-soap-action	String	255 characters	'SOAPAction' HTTP Header value for Create ticket request
Create ticket SOAP Response	web-services-create-ticket-soap-response	String	255 characters	Create ticket SOAP Response
Update ticket with every alarm comment	web-services-update-ticket-with-every-alarm-comment	Boolean	true,false	Update ticket with every alarm comment
Update ticket SOAP Request	web-services-update-ticket-soap-request	String	255 characters	Update ticket SOAP Request
Update ticket SOAP Action	web-services-update-ticket-soap-action	String	255 characters	'SOAPAction' HTTP Header value for Update ticket request
Close ticket on alarm clear	web-services-close-ticket-on-alarm-clear	Boolean	true, false	Close ticket on alarm clear
Close ticket SOAP Request	web-services-close-ticket-soap-request	String	255 characters	Close ticket SOAP Request
Close ticket SOAP Action	web-services-close-ticket-soap-action	String	255 characters	'SOAPAction' HTTP Header value for Close ticket request
Default Trouble Ticket Text Template	default-trouble-ticket-text-template	String	255 characters	Template used to build default trouble ticket text

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Ticket Creation Soap Request selection	ticket-create-token	String	255 characters	Template used to create SOAP Request trouble ticket
	ticket-udpate-token	String	255 characters	
	ticket-delete-token	String	255 characters	
Extra http header tokens	extra-http-header-tokens	String	255 characters	Extra http header tokens

Supported Columns - Trouble Ticket Settings



### Example

```
trouble-ticket-settings,,,,
xid,hostname, ticket-system-type, update-ticket-with-alarm-comments,
web-services-close-ticket-on-alarm-clear
1,Centina,GENERIC,true,true
```



## Export Request

Object type string: `request`

Specific object look-up methods: `NONE`

The fields to be exported for a particular object-type should be mentioned after the above column values. The `classTag` column is mandatory while rest of the columns is optional.



### Example

```
request
classTag, fileNamePrefix, format, filter
network-element, FILENAME, csv, ,
```

Object Name	Class Tag
AdministrativeDomain	administrative-domain
AlarmThresholdPolicy	alarm-threshold-policy
NetworkConnection	network-connection
Service	service
ExclusionObject	exclusion
TroubleTicketSettings	trouble-ticket-settings
ApplicationMonitorsTemplate	application-monitors-template
PmTemplate	perf-template
PmThresholdPolicy	perf-threshold-policy
ProfileConfig	profile-config
ExternalScheduledMaintenance	external-scheduled-maintenance
InternalScheduledMaintenance	scheduled-maintenance
AccessConrolLevel	access_control_level
Customer	customer
EndPoint	end-point
EndPointTemplate	end-point-template
Interfaces	interface
ServiceTemplate	service-template
ServiceType	service-type
ExternalDatabaseConfig	external-dbconfig

Object Name	Class Tag
NetworkElement	network-element
NetworkElementTemplate	network-element-template
NetworkObject	network-object
Subnetwork	subnetwork
EthernetVirtualConnection	ethernet-virtual-connection
IpSlaOperation	ip-sla-operation
ChartDecoration	chart-decoration
WorkflowEmailAction	workflow-email-action
WorkflowTriggerflow	workflow-trigger-flow

Export Format

# Templates

## Network Element Templates

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Check Trap Host Configuration	checkTrapHostConfig	Boolean	True or false	Trap Host Configuration to check whether this network element has trap host configured properly
Cable Modem Reachability poll retry count	cmReachabilityPollRetryCount	Integer		Cable Modem Reachability SNMP poll retry count
Cable Modem Reachability poll timeout	cmReachabilityPollTimeout	Integer		Cable Modem Reachability SNMP poll timeout
Cable Modem Reachability Soak Count	cmReachabilitySoakCount	Integer		Number of reachability polls to be soaked before declaring a modem offline.
Communication Alarm Severity	communicationAlarmSeverity	Enum (NOT_REPORTED, INDETERMINATE, INFO, WARNING, MINOR, MAJOR, CRITICAL, COMMUNICATION)		The alarm severity to use for communication alarms

Column Name (UI)	Column Name	Data Type	Valid Values	Description
SNMP Concurrent Requests	concurrentRequests	Integer		The maximum number of simultaneous SNMP requests that can be issued to this NE
CORBA Connection Type	corbaConnectionType	Enum(URL, IOR)		CORBA Connection Type
	description	String	255 characters	description
Discard Events	discardEvents	Boolean		If the system should discard non alarmed events (severity lower than Minor)
Enable cable Assurance	enableCableAssurance	Boolean		Boolean for enabling cable assurance
SNMP GETBULK enabled	enableGetBulk	Boolean		Use SNMP GETBULK to communicate if this is an SNMPv2c network element
Enable inventory synchronization	enableInventorySynchronization	Boolean		Enable/disable system from synchronizing inventory information with the device

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Enable alarm synchronization	enableSynchronization	Boolean		Enable/disable system from synchronizing fault information with the device
Reconnect interval	forcedReconnectInterval	Long		The time between involuntary disconnection and reconnection
Inventory resynchronization interval	inventoryResynchronizationIntervalMins	Long		Time in minutes between inventory synchronization attempts
IP SLA capable	ipSlaCapable	Boolean		whether the profile used by this network element is IP SLA capable or not
	ipSlaEnabled	Boolean		If enabled and if the network element is IP SLA capable, system would discover IP SLA operations configured on the network element
SNMP concurrent connections override	overrideConcurrentRequests	Boolean		SNMP concurrent connections override

Column Name (UI)	Column Name	Data Type	Valid Values	Description
	overrideNameFromDevice	Boolean		If enabled, override node name from device
Pm Profile	pmProfile	String		
	protocol	enum (TL1, SNMP, SNMPv1, SNMPv2c, SNMPv3, ASCII, NONE, CORBA, AUTO, API)		Protocol through which BPUAA communicates with the network element
	resynchronizeIntervalMins	Long		Time between two synchronization attempts
Additional information override	snmpAdditionalInfoOverride	Boolean		Override the contents of Additional Information
Alarm additional info OID 1	snmpAdditionalInfoVarbindOid1	String	255 character	SNMP TRAP varbind OID to include in Alarm Additional Information
Alarm additional info OID 2	snmpAdditionalInfoVarbindOid2	String	255 character	SNMP TRAP varbind OID to include in Alarm Additional Information
Alarm additional info OID 3	snmpAdditionalInfoVarbindOid3	String	255 character	SNMP TRAP varbind OID to include in Alarm Additional Information

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Alarm additional info OID 4	snmpAdditionalInfoVarbindOid4	String	255 character	SNMP TRAP varbind OID to include in Alarm Additional Information
Alarm additional info OID 5	snmpAdditionalInfoVarbindOid5	String	255 character	SNMP TRAP varbind OID to include in Alarm Additional Information
Connection retry count	snmpConnectionRetryCount	Integer		Connection retry count, use blank for system default
Connection timeout	snmpConnectionTimeout	Integer		SNMP connection timeout value in ms, use blank for system default
SNMP GETBULK max-repetitions	snmpGetBulkMaxRept	Integer		Max-repetitions value used in SNMP GETBULK requests for this network element
SNMP Socket pool size	snmpSocketPoolSize	Integer		SNMP Socket pool size per adapter

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Alarm source expression	snmpSourceExpression	String	255 character	SNMP TRAP expression would be applied to the Alarm Source, use blank to let system compute Alarm Source
Alarm source index	snmpSourceIndex	Integer		SNMP TRAP varbind Index whose value to be set as Alarm Source, use blank to let system compute Alarm Source
Alarm source OID	snmpSourceOid	String	255 character	SNMP TRAP varbind Pattern to combine upto 5 bind values with \$1 to \$5 representing the bind index/OID
Alarm source pattern	snmpSourceOidPattern	String	255 character	SNMP TRAP varbind Pattern to combine upto 5 bind values with \$1 to \$5 representing the bind index/OID
	snmpVarbindMultipleIndex	String	255 character	Comma separated values of SNMP Varbind indexes



Column Name (UI)	Column Name	Data Type	Valid Values	Description
SNMP Varbind Size Limit	snmpVarbindSizeLimit	Integer		Maximum number of variable bindings sent in SNMP requests for this network element
Type	templateType	Enum (system, plugin, custom)		Network element template type
Time zone	timeZone	String	255 character	Time zone of the network element
TL1 format type	tl1FormatType	enum (GR831, NORTEL_OPC)		The TL1 format this device emits
ID	id	String	255 character UUID	Unique id for the template
	name			
	xid			

Supported Columns - Network Element Templates



### Example

```
network-element-template,
name,description,templateType,communicationAlarmSeverity,snmpAdditionalInfoOverride,resynchronizeIntervalMins,tl1FormatType,enableSynchronization,checkTrapHostConfig,inventoryResynchronizationIntervalMins,enableInventorySynchronization,ipSlaCapable.ipSlaEnabled,overrideNameFromDevice,enableCableAssurance,overrideConcurrentRequests,corbaConnectionType,snmpConnectionRetryCount,enableGetBulk
testImport_1.5-
81,testImport,CUSTOM,COMMUNICATION,false,,GR831,true,true,720,true,false,false,true,false,false,false,URL,3,false
```

## End Point Template

Object type string: end-point-template

Specific object look-up methods: NONE

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Collect performance data from '15 MIN bin'	collectMin15Bin	Boolean	True or false	Collect performance data from '15 MIN bin'
Collect device performance	collectModemPerformance	Boolean		Enable/disable performance collection of cable modem
Collect MTA performance	collectMtaPerformance	Boolean		Enable/disable performance collection of mta
Collect performance	collectPerformance	Boolean		Enable/disable performance collection on ep
	dayRetentionPeriod	Integer		no of days before purging 1 day performance data
Description	description	String		description
Performance collection period	deviceTimePeriod	Enum (DAY_1, HR_1, MIN_1, MIN_5, MIN_15, VARIABLE, OTHER, MIN_10, MIN_7_5, MIN_2, MIN_3, SEC_30, NA;)		Performance collection interval of cable device
Discard events	discardEvents	Boolean		Enable/disable event processing
Ethernet Interface	ethernetInterface	Boolean		Is endpoint an ethernet interface or not
	hourRetentionPeriod	Integer		no of days before purging 1 hour performance data

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Merge Defaults	mergeDefaults	Boolean		Use default property values when updating endpoints during inventory or import operations
Override device collection frequency	overrideDeviceTimePeriod	Boolean		Override performance collection frequency on the cable device
Override performance collection period	overridePmTimePeriod	Boolean		Override performance collection frequency on the ep
	overrideRetentionPeriods	Boolean		Use custom retention periods for PM collected for this end point
	pmProfile	String	255	Profile id assigned to this template
	pmTimePeriod	Enum (DAY_1, HR_1, MIN_1, MIN_5, MIN_15, VARIABLE, OTHER, MIN_10, MIN_7_5, MIN_2, MIN_3, SEC_30, NA;)		performance collection frequency
Priority	priority	Enum (low, normal, high, urgent)		The alarm priority applied to all alarms raised against this end point
Process alarms	processAlarms	Boolean		enable/disable alarm processing

Column Name (UI)	Column Name	Data Type	Valid Values	Description
	rawRetentionPeriod	Integer		no of days before purging raw performance data
Severity override	severityOverride	Enum (NOT_REPORTED, INDETERMINATE, INFO, WARNING, MINOR, MAJOR, CRITICAL, COMMUNICATION)		Override severity of all alarms raised against this end point
Template type	templateType	Enum(system,plugin,custom)		Type of template
Update speed on inventory sync	updateSpeedOnInventorySync	Boolean		update speed property on the ep on inventory synchronization
ID	id	String	255	unique template id
Alarm threshold policy	alarmThresholdPolicy_id	String	255	unique threshold policy id
	name	string		
	xid			

Supported Columns - End Point Template



### Example

```
end-point-template, ,
name,description,templateType,severityOverride,ethernetInterface
imported-eptemplate11,imported,System,FALSE,FALSE
```

## Performance Monitoring Template

Object type string: `perf-template`

Specific object look-up methods: `NONE`

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Unique id for this template	<code>templateType</code>	Enum(system,plugin,custom)	255	Type of template
	<code>pm-metric-groups</code>	List<String>		List of performance metric group ids attached to this template
	<code>pm-threshold-policies</code>	List<String>		List of threshold policy ids attached to this template
	<code>name</code>	string		
	<code>description</code>	string		
	<code>xid</code>			
ID	<code>id</code>	String	255 character UUID	Unique id for this template

Supported Columns - Performance Monitoring Template



### Example

```
perf-template,,,,,,,,,
name,description,templateType,pm-metric-groups,pm-threshold-policies
csv-imp6,imported csv,Custom,"if-mib.discards,if-mib.percent
utilization 64",1dedc1d9-bfc8-49c2-82e1-5093805ff2c5
```

## Node Action Template

Object type string: node-action-template

Specific object look-up methods: NONE

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Template type	templateType	Enum(sys-tem,plugin,custom)	255	Type of template
	ne-actions	List<string>		List of node action names attached to this template
Name	name	string		
Description	description	string		
	xid			
ID	id	String	255 character UUID	Unique id for this template
Domain	administrativeDomain	varchar	255 characters	
	administrativeDomain   name	varchar	255 characters	

Supported Columns - Node Action Template



### Example

```
node-action-template,,,,,,,,,
id,templateType,description,name,administrativeDomain,administrativeD
omain|name,ne-actions,ne-actions|name,xid
96c4f61c-9e4d-4e84-94b0-e46c9d613df7,Custom,,test-action-
template,administrative-domain,Default,node-action,Search,
ea48d2bd-ee0c-4996-813f-5c3500da008a,Custom,,test-2,administrative-
domain,Default,node-action,Search,
```

## Node Actions

Object type string: node-actions

Specific object look-up methods: NONE

Column Name (UI)	Column Name	Data Type	Valid Values	Description
ID	id	Varchar		Unique id for each node action
Name	name	String		Name of the node action
Node Action Type	actionType	enum (Url, Script)		Type of action on a node to be performed
Timeout (Seconds)	timeoutSeconds	int		Wait time to execute the script
Domain	administrativeDomain	varchar		
	administrativeDomain   name	varchar		
	port	int		
	timePeriod	int		
	scriptName	varchar		
	pmTemplateId	int		
	endPointFilterXml	text		
	iconClass	string		
	xid	int		
	isHarmlessExecution	boolean	false	
	url	varchar		
	remoteScript	boolean		
	sshKey	string		
	collectServiceStatus	boolean	false	
	alarmClassification	enum	application failure	
	scriptDir	string		
	sshUser	string		
	collectPerformance	boolean	false	
	endPointFilterExpression	string		

Column Name (UI)	Column Name	Data Type	Valid Values	Description
	scriptArgs	string		
	monitorInputType	enum (node, endpoint)	node	

Supported Columns - Node Actions



### Example

```
node-action,,,,,,,,,,,,,,,,,,,,,
port,timePeriod,scriptName,pmTemplateId,endpointFilterXml,iconClass,actionType,xid,isHarmlessExecution,url,id,timeoutSeconds,remoteScript,sshKey,collectServiceStatus,name,alarmClassification,administrativeDomain,administrativeDomain|name,scriptDir,sshUser,collectPerformance,endpointFilterExpression,scriptArgs,monitorInputType
,,,,,Url,,false,https://www.google.com/,485ceccd-e661-4356-b2aa-655ef1cdaf91,,false,,true,Search,Application failure,administrative-domain,Default,,,false,,,NODE
,,check_ping,,,,Script,,true,,c074f264-c1b4-4ddf-b24a-bc90c0d372fe,22,false,,true,Ping1,Application failure,administrative-domain,Default,/usr/lib64/nagios/plugins,,false,--help,NODE
```



## External Database Connection

Object type string: `external-dbconfig`

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Name	<code>name</code>	String		Name of the External Database Connection
Database Type	<code>dbType</code>	String	MySQL	Database type for the connection
			oracle	
			netomniasharded	
Connection Url	<code>fullyQualifiedUrl</code>	URL		The URL to connect to the database server
Timeout	<code>timeOut</code>	Milliseconds		The time out value
User Name	<code>userName</code>	String		User name of the database to connect to
	<code>password</code>	String		Password of the database to connect to
Connection pool size	<code>threadPoolSize</code>	String		The connection threads allocated to the database connection
Domain	<code>administrativeDomain</code>	String		Domain assigned to the DB connection
Status	<code>loadStatus</code>	Boolean		Load status of the driver

Supported Columns - External Database Connection



### Example

```
external-dbconfig,,,,,,,,,
```

```
name,dbType,timeOut,loadStatus,fullyQualifiedUrl,threadPoolSize,userName,password
```

```
test1,postgresql,3000,true,jdbc:postgresql://uaa-core-db.docker:5432/bpuua,100,bpadmin,ury7hbpogdcs
```

```
test2,clickhouse,3000,true,jdbc:clickhouse://uaa-pm-db.docker:8123/sa,100,bpadmin,u8jx6i749uka
```



The password in the above example will change based on the password set in the postgres or clickhouse.



If user wanted to check password of postgres, open below file and retrieve (here the password is just example and may change in the user system)-

```
vi /etc/bp2/uaa-core-db/private/users.json
{ "PATRONI_SUPERUSER":"sbpadmin", "PATRONI_
SUPERUSERPW":"4uh19slhtt12", "PATRONI_REPLIUSER":"rbpadmin",
"PATRONI_REPLIUSERPW":"7v7v045ta5sp", ** * "PATRONI_
CLIENTUSER":"bpadmin",* * "PATRONI_
CLIENTUSERPW":"ury7hbpogdcs",* "PATRONI_
REWINDUSER":"wbpadmin", "PATRONI_REWINDUSERPW":"x1gyx343eg2g"
}
```

If user wanted to check password of clickhouse open below file and retrieve (here the password is just example and may change in the user system) -

```
vi /etc/bp2/uaa-pm-db/private/users.json
{ "SUPERUSER":"sbpadmin", "SUPERUSERPW":"rpoxpvn7bun7",
*"CLIENTUSER":"bpadmin",* * "CLIENTUSERPW":"u8jx6i749uka",*
"ROUSER":"wbpadmin", "ROUSERPW":"k6ogvxh8xsxn" }
```

## Access Control List

Object type string: `access_control_level`

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Name	<code>name</code>	String		Name of the acl that needs to be created or modified
Description	<code>description</code>	String		Description about the acl that needs to be created/modified
Domain	<code>administrativeDomain name</code>	String		Domain assigned to the DB connection
	<code>acl-network-element-objects</code>	String		This should contain a list of network-elements managed-object id
	<code>acl-subnetwork-objects</code>	String		This should contain a list of subnetworks managed-object id
	<code>acl-custom-tree-objects</code>	String		This should be list of FQDN of custom tree object
	<code>neListModified</code>	Boolean		This is a Boolean stating if there are any modifications with the network-elements. (Needs to be true while creating if there are any network-elements as a part of acl)
	<code>subnetsModified</code>	Boolean		This is a Boolean stating if there are any modifications with the subnetworks. (Needs to be true while creating if there are any subnetworks as a part of acl)
	<code>customTreeModified</code>	Boolean		This is a Boolean stating if there are any modifications with the custom-tree

Supported Columns - Access Control List



### Example



```
access_control_level,  
name,description,administrativeDomain,administrativeDomain|name,acl-  
network-element-objects,acl-subnetwork-objects,acl-custom-tree-  
objects,neListModified,subnetsModified,customTreeModified  
user_limUser1_acl,Created by patch,administrative-  
domain,Default,,world,ctl$$sn1,True,True,False
```

## Delete

Object type string: `delete`

- D** In case scheduled maintenance, segments, service etc. are associated an object (nodes, end points, flow points, interfaces etc.), then a regular delete function will not work. In all such cases, a force delete is required.

The force delete command can be created by prefixing the “force-“ option to the delete commands provided in the table below as required.

`force-delete--service`



Xid,id,name

1456,22206334-5b42-4189-80c2-6e3f6e3b1282,Oc-12\_Service

- D** To delete EndPoints when node is deleted through import. Following example shows command for force delete for EndPoints -

`delete--network-element--withEPs`



id,xid,name

c4f401a5-d189-4b8d-bb5e-7203dfd51346,123456,NodeName

- D** It is mandatory to add the **id** column to delete the objects.

Object Name	Command	Columns	Example
Nodes	<code>delete--network-element</code>	xid,id,name	223556, 6e85dd04-2109-46e3-bd51-be087a1cac3d, X350-24t_WGeco_Richmond
	<code>delete--end-point</code>	xid,id,source-name	aaaa, 2b435288-90ac-4467-9181-b287c2cf7c8d, test
Customers	<code>delete--customer</code>	xid,id,name	4asdf, ed6fd218-83d4-4d59-b937-7d8bfe67b815, customer44444
service	<code>delete--service</code>	xid,id,name	1456, 22206334-5b42-4189-80c2-6e3f6e3b1282, Oc-12_Service

Object Name	Command	Columns	Example
subnetwork	delete--subnetwork	xid,name,id	2526, PCS, e2f78480-86eb-41c2-b170-38886f7dd953
Network-connections	delete--network-connection	xid,name,id	9999, test_connections1, af8d3334-6bcf-4467-9b8d-fc46ccb9114c
service-types	delete--service-type	xid,name,id	12356, 10M, 2b725671-4dfc-4843-bc48-fa85ac5131f5
ethernet-virtual-connection	delete--ethernet-virtual-connection	xid,name,id	125, evcrrrrr, abca1e1b-9294-412f-a6fc-eb86791e0718
flow-point	delete--flow-point	xid,id,source-name	256253, eec693a6-650d-45d4-b007-041e6c01c812, FP-1-123
ip-sla-operations	delete--ip-sla-operation,,,,,	xid, network-element-name,source-name,id	55555555, LAB-3400-16GE-Digi26, test_12345, 85d300d8-e48f-43bc-844a-bce3aeca7236
Internal schedulemaintenance	delete--scheduled-maintenance,,,,,	name,scheduledObjectType,objects, objects id,recurrence,interval-type,start-date	SM2_test, NETWORK_ELEMENT, network-element, e40050dd-8fb3-41b5-8ebf-f735a24ab809, NONE, SINGLE, 2019-01-08 20:30:00
users	delete--user,,,,	name,password,roles,roles roletypes	prasad4566, centina, roletypes, "ADMIN, NETWORK_ADMIN"
External Database connections	delete--external-dbconfig,,,,,,,	id,xid,name,dbType,timeOut,loadStatus, fullyQualifiedUrl,threadPoolSize, userName,password	5e864b57-9da9-4753-b29a-c2f9d4390f13, T9858, test1, mySql, 3000, true, jdbc:mysql://172.31.1.85:3306/sa,100, centina, centina
end-point-templates	delete--end-point-template,,	id,xid,name,description,templateType, severityOverride,ethernetInterface	0f18847f-f7b0-40ea-82ec-3b5fe58c5f9f, T785823, imported-eptemplate12_test_regression_1.7-6, imported, Custome, FALSE, FALSE

Object Name	Command	Columns	Example
node-template	delete--network-element-template,	id,xid,name,description,templateType,communicationAlarmSeverity,snmpAdditionalInfoOverride,resynchronizeIntervalMins,t1FormatType,enableSynchronization,checkTrapHostConfig,inventoryResynchronizationIntervalMins,enableInventorySynchronization,ipSlaCapable.ipSlaEnabled,overrideNameFromDevice,enableCableAssurance,overrideConcurrentRequests,corbaConnectionType,snmpConnectionRetryCount,enableGetBulk	b69a9816-3bd9-4105-b42e-23c443bd94e9, T152589, testIImport_1.7-6, testIImport, CUSTOM, COMMUNICATION, false,, GR831,true, true, 720, true, false, false, true, false, false, URL, 3, false
Performance Monitoring Template	delete--perf-template,,,,,,,,,	id,xid,name,description,templateType,pm-metric-groups,pm-threshold-policies	74f21dd6-05c8-4ec6-b23d-fa16d26f2d46, T1525896,perf_imported_template, imported csv, Custom, "if-mib.discards, if-mib.percent utilization 64"
Access Control List	delete--access_control_level,	xid,name,description,administrativeDomain,administrativeDomain name,acl-network-element-objects,acl-subnetwork-objects,acl-custom-tree-objects,neListModified,subnetsModified,customTreeModified	T85858563, user_limUser1_acl, Created by patch, administrative-domain, Default,, world, ct1\$\$sn1, True, True, False
Internal Schedule Maintenance	delete--scheduled-maintenance,,,,,,,,,	xid,name,scheduledObjectType,objects,objects id,recurrence,interval-type,start-date	T123456, SM2_test, NETWORK_ELEMENT, network-element, f8bb5274-dffa-4264-8fa9-cab84011a92d, NONE, SINGLE, 2019-10-08 20:33:00
service tempaltes	delete--service-template	name,id,xid	test_service_template, 587e0d2d-0f4d-4ad5-b7c8-44def627a348

Object Name	Command	Columns	Example
Alarm threshold policies	delete--alarm-threshold-policy	name,xid,id	test11111
performance Threshold policies	delete--perf-threshold-policy	id,name,xid	fdcba7b8-f61a-4cf5-9f74-8cf956ea6a40,ptp1

Supported Columns - Delete



# Licenses

Object type string: license

Column Name (UI)	Column Name	Data Type	Valid Values	Description
Key	license	Hexadecimal		Plugin License key

Supported Columns - Licenses

✓

license

BnXz1S1KxZQWEiASffQ0FdxawoIXS6DqhAVkTB/7Bi3jo1ODzkXj4ESnWK435JC47P22356C9x4Bwf3Rblkjm+vQ==

# Associating End Points to Service or Connection

BP meta-objects support association of different objects as mentioned in the following section.

## Endpoint(s) to Service or Connection



```
network-connection-end-point,,,,  
service-id,endpoint-id,network-element-id,ep-type,ep-position  
d5902c4c-7768-49d5-87ec-dacb8a5763dd,70cda9a0-b8ac-4a82-b610-  
d699718f6ba3,e58ccbb6-0ae9-4b15-a9b1-ef780b23fccb,SOURCE,0  
d5902c4c-7768-49d5-87ec-dacb8a5763dd,71aae57a-939d-44fa-8fcb-  
07f2393ae6b2,e58ccbb6-0ae9-4b15-a9b1-ef780b23fccb,DESTINATION,1  
d5902c4c-7768-49d5-87ec-dacb8a5763dd,88f437a8-cf81-4182-9f6b-  
7961c133486b,e58ccbb6-0ae9-4b15-a9b1-ef780b23fccb,NONE,2  
d5902c4c-7768-49d5-87ec-dacb8a5763dd,84b0dcae-8447-4cc7-826c-  
291053ad2f60,e58ccbb6-0ae9-4b15-a9b1-ef780b23fccb,NONE,3
```

# Contacting Blue Planet

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