



**SNE 6.1 RESTful
Remote Control API Manual.**

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1 Upload Command

Uploads a map file.

1.1 Parameters

- **"mapFile"** (required) - The SNE map XML file to be uploaded.
- **"userToken"** (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

1.2 Curl Command

Single user mode

```
curl -X POST "http://192.168.1.100/api/maps/upload"
-H "accept: application/json"
-H "Content-Type: multipart/form-data"
-F "mapFile={mapFile};type=text/xml"
```

Multi-user command

```
curl -X POST "http://192.168.1.100/api/maps/upload?userToken={userToken}"
-H "accept: application/json"
-H "Content-Type: multipart/form-data"
-F "mapFile=@{mapFile};type=text/xml"
```

1.3 Return Value

```
{
  "status": {
    "code": 1201,
    "message": "Operation Successful"
  },
  "map": {
    "mapName": "example_map",
    "mapId": "{F154EEC2-FED4-4F98-93D4-093D4A1D0234}",
    "state": "Stopped",
    "user": "",
    "portsUsed": "1,2"
  }
}
```

2 Start Command

Starts executing a loaded map.

2.1 Parameters

- **“mapId”**(required) - The SNE map name or id to be started.
- **“userToken”** (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

2.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/start"  
-H "accept: text/plain" -H "Content-Length: 0"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/start?userToken={userToken}"  
-H "accept: text/plain"
```

2.3 Return Value

```
{  
  "code": 1201,  
  "message": "Operation Successful"  
}
```

3 Stop Command

Stops executing a running map but does not unload it from the SNE.

3.1 Parameters

- **“mapId”**(required) - The SNE map name or id to be stopped.
- **“userToken”** (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

3.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/stop"  
-H "accept: text/plain"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/stop?userToken={userToken}"  
-H "accept: text/plain"
```

3.3 Return Value

```
{  
  "code": 1201,  
  "message": "Operation Successful"  
}
```


4 Unload Command

Unloads a stopped map from the SNE.

4.1 Parameters

- **“mapId”**(required) - The SNE map name or id to be unloaded.
- **“userToken”** (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

4.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/unload"  
-H "accept: text/plain"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/unload?userToken={userToken}"  
-H "accept: text/plain"
```

4.3 Return Value

```
{  
  "code": 1201,  
  "message": "Operation Successful"  
}
```

5 Maps Command

Retrieves information about all loaded maps.

5.1 Parameters

- NONE

5.2 Curl Command

Single user mode

```
curl -X GET "http://192.168.1.100/api/maps"  
-H "accept: application/json"
```

5.3 Return Value

```
{  
  "status": {  
    "code": 1201,  
    "message": "Operation Successful"  
  },  
  "maps": [  
    {  
      "mapName": "example_map",  
      "mapId": "{F154EEC2-FED4-4F98-93D4-093D4A1D0234}",  
      "state": "Active",  
      "user": "",  
      "portsUsed": "1,2"  
    }  
  ]  
}
```

6 MapId Command

Retrives information about a specific loaded map.

6.1 Parameters

- **"mapId"**(required) - The SNE map name or id of the loaded map.
- **"userToken"** (optional) - Specifies a valid user account name for multi-user mode.. Not required when multi-user mode is disabled.

6.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}"  
-H "accept: application/json"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}?userToken={userToken}"  
-H "accept: application/json"
```

6.3 Return Value

```
{  
  "status": {  
    "code": 1201,  
    "message": "Operation Successful"  
  },  
  "map": {  
    "mapName": "example_map",  
    "mapId": "{F154EEC2-FED4-4F98-93D4-093D4A1D0234}",  
    "state": "Active",  
    "user": "",  
    "portsUsed": "1,2"  
  }  
}
```

7 Impairment Information Command

Retrives information about all impairments in loaded map.

7.1 Parameters

- **“mapId”**(required) - The SNE map name or id of the loaded map.
- **“userToken”** (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

7.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments"
-H "accept: application/json"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments?userToken={userToken}"
-H "accept: application/json"
```

7.3 Return Value

```
{
  "status": {
    "code": 1201,
    "message": "Operation Successful"
  },
  "impairments": [
    {
      "name": "Jitter",
      "impld": "18381B33-9B82-4F6B-9CF8-1428CC371A82",
      "enabled": true,
      "type": "JitterDisruptor"
    },
    {
      "name": "Delay Packet",
      "impld": "B7E15507-76BA-4BCD-ADAB-9F47577E309C",
      "enabled": true,
      "type": "PacketDelayDisruptor"
    },
    {
      "name": "Bandwidth Throttle",
      "impld": "A8B18790-D1D4-43B6-828C-EF88940CCFE2",
      "enabled": true,
      "type": "BandwidthThrottleDisruptor"
    }
  ]
}
```

8 Enable Impairment Command

Updates the enabled status of an impairment.

8.1 Parameters

- **“enabled”** - True or False.
- **“mapId”**(required) - The SNE map name or id to modify.
- **“impId”** - The impairment name or id.
- **“userToken”** (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

8.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/enabled?enabled={enabled}"
-H "accept: application/json"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/enabled?enabled={enabled}&userToken={userToken}"
-H "accept: application/json"
```

8.3 Return Value

```
{
  "code": 1201,
  "message": "Operation Successful"
}
```

9 Delay Commands

9.1 Retrieve Settings

Retrieves the current settings of the delay impairment.

9.1.1 Parameters

- **“mapId”**(required) - The SNE map name or id to modify.
- **“impId”** - The impairment name or id.
- **“userToken”** (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

9.1.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/delay"
-H "accept: application/json"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/delay&userToken={userToken}"
-H "accept: application/json"
```

9.1.3 Return Value

```
{
  "status": {
    "code": 1201,
    "message": "Operation Successful"
  },
  "updatePending": false,
  "maxDelayTime": 0,
  "delay": {
    "delayMode": "constDelayMode",
    "enabled": true,
    "maxDataRate": 0,
    "timeConstraints": {
      "enableTimeConstraints": false,
      "startDelay": 1000,
      "duration": 5000
    }
  },
  "delayModeSettings": {
    "constDelayMode": {
      "latency": 50,
      "jitterPcnt": 0
    }
  },
  "rangeDelayMode": null,
  "gaussianDelayMode": null,
  "rampDelayMode": null,
  "sinDelayMode": null
}
}
```

9.2 Update Settings

Updates the current settings of the Delay impairment.

9.2.1 Parameters

- **"item"** - Json parameter data.
- **"mapId"**(required) - The SNE map name or id to modify.
- **"impId"** - The impairment name or id.
- **"userToken"** (optional) - Specifies a valid user account name multi-user mode.
Not required when multi-user mode is disabled.

9.2.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}/delay"  
-H "accept: application/json"  
-d "{item}"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}/delay&userToken={userToken}"  
-H "accept: application/json"  
-d "{item}"
```

9.2.3 Return Value

```
{  
  "code": 1201,  
  "message": "Operation Successful"  
}
```


9.2.4 JSON input

```

{
  "delayMode": "constDelayMode",
  "enabled": true,
  "maxDataRate": 1000,
  "timeConstraints": {
    "enableTimeConstraints": false,
    "startDelay": 1000,
    "duration": 5000
  },
  "delayModeSettings": {
    "constDelayMode": {
      "latency": 50,
      "jitterPcnt": 0
    },
    "rangeDelayMode": {
      "minLatency": 50,
      "maxLatency": 100,
      "allowReordering": false
    },
    "gaussianDelayMode": {
      "minLatency": 25,
      "meanLatency": 50,
      "deviation": 10,
      "allowReordering": false
    },
    "rampDelayMode": {
      "startLatency": 50,
      "startPeriod": 250,
      "endLatency": 75,
      "riseTime": 500,
      "allowReordering": false
    },
    "sinDelayMode": {
      "minLatency": 70,
      "maxLatency": 100,
      "sinDuration": 5,
      "allowReordering": false
    }
  }
}

```

Global Parameters

Json Key	Accepted Data	Description
delayMode	constDelayMode rangeDelayMode gaussianDelayMode rampDelayMode sinDelayMode	Sets the type of delay to be updated.
enabled	true false	Sets the enabled status of the impairment.
maxDataRate	100 1000 10000 25000	The predicted line rate going through the impairment
enableTimeConstraints	true false	Sets the enable status of the time constraints.
startDelay	0.10 to 36000	Sets the start delay time in milliseconds.
duration	0.10 to 36000	Sets the run time in milliseconds.

constDelayMode

Json Key	Accepted Data	Description
latency	Dependson maxDataRate 0.01 to 10000 0.01 to 4000	Sets the latency for the impairment For 100 and 1000 Data Rate For 10000, 25000 Data Rate
jitterPcnt	0 to 100	Sets the jitter percent on the impairment

rangeDelayMode

Json Key	Accepted Data	Description
minLatency	0.01 to < maxLat	Sets the min value of the latency range.
maxLatency	minLat < to 10000	Sets the max value of the latency range.
allowReordering	true	Enables/disables reordering.

gaussianDelayMode

Json Key	Accepted Data	Description
minLatency	0.01 to < maxLat	Sets the minimum delay value.
maxLatency	minLat < to 10000	Sets the max delay value
deviation	0.01 to 10000	Sets the deviation value.
allowReordering	true false	Enables/disables reordering.

rampDelayMode

Json Key	Accepted Data	Description
startLatency	0.01 to 30000.00	Sets the minimum delay value.
startPeriod	0.01 to 10000	Sets the max delay value.
endLatency	0.01 to 10000.00	Sets the deviation value.
riseTime	0.01 to 30000.00	Sets the time period for the delay to rise.
allowReordering	true false	Enables/disables reordering.

sinDelayMode

Json Key	Accepted Data	Description
minLatency	0.01 to < maxLatency	Sets the mini latency of the sin curve.
maxLatency	minLat < to 10000	Sets the max latency of the sin curve
sinDuration	0.01 to 10000	Sets the sinusoidal duration to which to go between min/max delay
allowReordering	true false	Enables/disables reordering.

10 Jitter Commands

10.1 Retrieve Settings

Retrieves the current settings of the Jitter impairment.

10.1.1 Parameters

- **“mapId”**(required) - The SNE map name or id to modify.
- **“impId”** - The impairment name or id.
- **“userToken”** (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

10.1.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/jitter"
-H "accept: application/json"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/jitter&userToken={userToken}"
-H "accept: application/json"
```

10.1.3 Return Value

```
{
  "status": {
    "code": 1201,
    "message": "Operation Successful"
  },
  "jitter": 0,
  "updatePending": false,
  "enabled": true
}
```

10.2 Update Settings

Updates the current settings of the Jitter impairment.

10.2.1 Parameters

- **"item"** - Json parameter data.
- **"mapId"**(required) - The SNE map name or id to modify.
- **"impId"** - The impairment name or id.
- **"userToken"** (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

10.2.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/jitter"
-H "accept: application/json"
-d "{item}"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/jitter&userToken={userToken}"
-H "accept: application/json"
-d "{item}"
```

10.2.3 Return Value

```
{
  "code": 1201,
  "message": "Operation Successful"
}
```

10.2.4 JSON input

```
{
  "jitter": 10,
  "enabled": true
}
```

Json Key	Accepted Data	Description
jitter	0.01 to 1000.00	Sets the amount of Jitter
enabled	True false	Sets the enabled status of the impairment.

11 Packet Drop Commands

11.1 Retrieve Settings

Retrieves the current settings of the Packet Drop impairment.

11.1.1 Parameters

- **“mapId”**(required) - The SNE map name or id to modify.
- **“implId”** - The impairment name or id.
- **“userToken”** (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

11.1.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{implId}
/packetdrop"
-H "accept: application/json"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{implId}
/packetdrop&userToken={userToken}"
-H "accept: application/json"
```

11.1.3 Return Value

```
{
  "status": {
    "code": 1201,
    "message": "Operation Successful"
  },
  "updatePending": false,
  "packetDrop": {
    "packetDropMode": "standardDropMode",
    "enabled": true,
    "timeConstraints": {
      "enableTimeConstraints": false,
      "startDelay": 1000,
      "duration": 5000
    },
    "packetDropSettings": {
      "standardDropMode": {
        "packetDropCount": 5,
        "perPacketCount": 100,
        "dropMethod": "dropEvenly"
      },
      "percentageDropMode": {
        "percentageDrop": 1
      }
    }
  }
}
```

11.2 Update Settings

Updates the current settings of the Packet Drop impairment.

11.2.1 Parameters

- **"item"** - Json parameter data.
- **"mapId"**(required) - The SNE map name or id to modify.
- **"implId"** - The impairment name or id.
- **"userToken"** (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

11.2.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{implId}
/packetdrop"
-H "accept: application/json"
-d "{item}"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{implId}
/packetdrop&userToken={userToken}"
-H "accept: application/json"
-d "{item}"
```

11.2.3 Return Value

```
{
  "code": 1201,
  "message": "Operation Successful"
}
```


11.2.4 JSON input

```

{
  "packetDropMode": "standardDropMode",
  "enabled": true,
  "timeConstraints": {
    "enableTimeConstraints": false,
    "startDelay": 1000,
    "duration": 5000
  },
  "packetDropSettings": {
    "standardDropMode": {
      "packetDropCount": 5,
      "perPacketCount": 100,
      "dropMethod": "dropEvenly"
    },
    "percentageDropMode": {
      "percentageDrop": 1
    }
  }
}

```

Global Parameters

Json Key	Accepted Data	Description
packetDropMode	standardDropMode percentageDropMode	Sets the packet drop mode.
enabled	true false	Sets the enabled status of the impairment.

timeConstraints

Json Key	Accepted Data	Description
enableTimeConstraints	true false	Enable/disables time constraints.
startDelay	0.01 to 360000.00	Sets the start delay.
duration	0.01 to 360000.00	Sets the duration.

standardDropMode

Json Key	Accepted Data	Description
packetDropCount	1 to perPacketCount	Number of packets to drop.
perPacketCount	packetDropCount to 10000000	Packet distance between each drop.
dropMethod	dropEvenly dropBurst	

percentageDropMode

Json Key	Accepted Data	Description
percentageDrop	0 to 100	The percentage of packets to drop.

12 Bandwidth Throttle Commands

12.1 Retrieve Settings

Retrieves the current settings of the Bandwidth Throttle impairment.

12.1.1 Parameters

- **“mapId”**(required) - The SNE map name or id to modify.
- **“impId”** - The impairment name or id.
- **“userToken”** (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

12.1.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/bandwidththrottle"
-H "accept: application/json"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/bandwidththrottle&userToken={userToken}"
-H "accept: application/json"
```

12.1.3 Return Value

```

{
  "status": {
    "code": 1201,
    "message": "Operation Successful"
  },
  "updatePending": false,
  "bandwidthThrottle": {
    "bandwidthThrottleMode": "constantThrottleMode",
    "enabled": true,
    "timeConstraints": {
      "enableTimeConstraints": false,
      "startDelay": 1000,
      "duration": 5000
    },
    "includeEthernetFraming": false,
    "ethernetFrameSize": 24,
    "fifoSize": 0,
    "bandwidthThrottleSettings": {
      "constantThrottleMode": {
        "bandwidth": 16
      },
      "rangeThrottleMode": {
        "minBandwidth": 8,
        "maxBandwidth": 16,
        "duration": 5000
      }
    }
  }
}

```

12.2 Update Settings

Updates the current settings of the Bandwidth Throttle impairment.

12.2.1 Parameters

- **"item"** - Json parameter data.
- **"mapId"**(required) - The SNE map name or id to modify.
- **"impId"** - The impairment name or id.
- **"userToken"** (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

12.2.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/bandwidththrottle"
-H "accept: application/json"
-d "{item}"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/bandwidththrottle&userToken={userToken}"
-H "accept: application/json"
-d "{item}"
```

12.2.3 Return Value

```
{
  "code": 1201,
  "message": "Operation Successful"
}
```

12.2.4 JSON input

```
{
  "bandwidthThrottleMode": "constantThrottleMode",
  "enabled": true,
  "timeConstraints": {
    "enableTimeConstraints": false,
    "startDelay": 1000,
    "duration": 5000
  },
  "includeEthernetFraming": false,
  "ethernetFrameSize": 24,
  "fifoSize": 0,
  "bandwidthThrottleSettings": {
    "constantThrottleMode": {
      "bandwidth": 16
    },
    "rangeThrottleMode": {
      "minBandwidth": 8,
      "maxBandwidth": 16,
      "duration": 5000
    }
  }
}
```

Global Parameters

Json Key	Accepted Data	Description
packetDropMode	constantThrottleMode rangeThrottleMode	Sets the throttle mode.
enabled	true false	Sets the enabled status of the impairment.

timeConstraints

Json Key	Accepted Data	Description
enableTimeConstraints	true false	Enable/disables time constraints.
startDelay	0.01 to 360000.00	Sets the start delay.
duration	0.01 to 360000.00	Sets the duration.

rangeThrottleMode

Json Key	Accepted Data	Description
minBandwidth	500 to 25000 bytes	Minimum allowed bandwidth.
maxBandwidth	minBandwidth to 25000	Maximum allowed bandwidth..
duration	Time in milliseconds	Duration of range values.

constantThrottleMode

Json Key	Accepted Data	Description
bandwidth	500 to 25000 bytes	The specified bandwidth limit..

13 Packet Duplication Commands

13.1 Retrieve Settings

Retrieves the current settings of the Packet Duplication impairment

13.1.1 Parameters

- **“mapId”**(required) - The SNE map name or id to modify.
- **“impId”** - The impairment name or id.
- **“userToken”** (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

13.1.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/packetduplication"
-H "accept: application/json"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/packetduplication&userToken={userToken}"
-H "accept: application/json"
```

13.1.3 Return Value

```
{
  "status": {
    "code": 1201,
    "message": "Operation Successful"
  },
  "updatePending": false,
  "packetDuplication": {
    "packetDuplicationMode": "simpleMode",
    "enabled": true,
    "packetDuplicationSettings": {
      "complexMode": {
        "delay": 10,
        "amount": 10,
        "maxPacketsToStore": 1000
      },
      "timedMode": null
    }
  }
}
```

13.2 Update Settings

Updates the current settings of the Packet Duplication impairment

13.2.1 Parameters

- **"item"** - Json parameter data.
- **"mapId"**(required) - The SNE map name or id to modify.
- **"impId"** - The impairment name or id.
- **"userToken"** (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

13.2.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/packetduplication"
-H "accept: application/json"
-d "{item}"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/packetduplication&userToken={userToken}"
-H "accept: application/json"
-d "{item}"
```

13.2.3 Return Value

```
{
  "code": 1201,
  "message": "Operation Successful"
}
```


13.2.4 JSON input

```

{
  "packetDuplicationMode": "simpleMode",
  "enabled": true,
  "packetDuplicationSettings": {
    "complexMode": {
      "delay": 10,
      "amount": 10,
      "maxPacketsToStore": 1000
    },
    "timedMode": null
  }
}

```

Global Parameters

Json Key	Accepted Data	Description
PacketDuplication Mode	simpleMode timedMode complexMode	Sets duplication mode.
enabled	true false	Sets the enabled status of the impairment.

simpleMode

Json Key	Accepted Data	Description
N/A	N/A	No parameters required.

timedMode

Json Key	Accepted Data	Description
delay	1 to 36000	Number of milliseconds to wait between outputting of duplicate packets
maxPacketsToStore	0 to 15800704	Sets the maximum packets to store.

complexMode

Json Key	Accepted Data	Description
delay	1 to 36000	Number of milliseconds to wait between outputting of duplicate packets
amount	1 to 10	Number of times to duplicate each packet.
maxPacketsToStore	0 to 15800704	Sets the maximum packets to store.

14 Ethernet Fragmentation Commands

14.1 Retrieve Settings

Retrieves the current settings of the Ethernet Fragmentation impairment

14.1.1 Parameters

- **“mapId”**(required) - The SNE map name or id to modify.
- **“impId”** - The impairment name or id.
- **“userToken”** (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

14.1.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/ethfragmentation"
-H "accept: application/json"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/ethfragmentation&userToken={userToken}"
-H "accept: application/json"
```

14.1.3 Return Value

```
{
  "status": {
    "code": 1201,
    "message": "Operation Successful"
  },
  "mtuSize": 1500,
  "updatePending": false,
  "enabled": true
}
```

14.2 Update Settings

Updates the current settings of the Ethernet Fragmentation impairment

14.2.1 Parameters

- “item” - Json parameter data.
- “**mapId**”(required) - The SNE map name or id to modify.
- “**impId**” - The impairment name or id.
- “**userToken**” (optional) - Specifies a valid user account name for multiuser mode. Not required when multi-user mode is disabled.

14.2.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/ethfragmentation"
-H "accept: application/json"
-d "{item}"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/ethfragmentation&userToken={userToken}"
-H "accept: application/json"
-d "{item}"
```

14.2.3 Return Value

```
{
  "code": 1201,
  "message": "Operation Successful"
}
```

14.2.4 JSON input

```
{
  "mtuSize": 1500,
  "enabled": true
}
```

Global Parameters

Json Key	Accepted Data	Description
mtuSize	68 to 9000	Sets the maximum MTU value (in bytes).
enabled	true false	Sets the enabled status of the impairment.

15 Packet Reorder Commands

15.1 Retrieve Settings

Retrieves the current settings of the Packet Reorder impairment

15.1.1 Parameters

- **“mapId”**(required) - The SNE map name or id to modify.
- **“impId”** - The impairment name or id.
- **“userToken”** (optional) - Specifies a valid user account for multi-user mode. Not required when multi-user mode is disabled.

15.1.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/packetreorder"
-H "accept: application/json"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/packetreorder&userToken={userToken}"
-H "accept: application/json"
```

15.1.3 Return Value

```
{
  "status": {
    "code": 1201,
    "message": "Operation Successful"
  },
  "updatePending": false,
  "packetReorder": {
    "packetReorderMode": "timeReorderMode",
    "enabled": true,
    "packetProbability": 50,
    "packetReorderSettings": {
      "distanceReorderMode": {
        "minDistance": 1,
        "maxDistance": 10
      },
      "timeReorderMode": {
        "minDisplacement": 1,
        "maxDisplacement": 12.75
      }
    }
  }
}
```

15.2 Update Settings

Updates the current settings of the Packet Reorder impairment.

15.2.1 Parameters

- **"item"** - Json parameter data.
- **"mapId"**(required) - The SNE map name or id to modify.
- **"impId"** - The impairment name or id.
- **"userToken"** (optional) - Specifies a valid user account for multiuser.
Not required when multi-user mode is disabled.

15.2.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/packetreorder"
-H "accept: application/json"
-d "{item}"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/packetreorder&userToken={userToken}"
-H "accept: application/json"
-d "{item}"
```

15.2.3 Return Value

```
{
  "code": 1201,
  "message": "Operation Successful"
}
```

15.2.4 JSON Input

```
{
  "packetReorderMode": "timeReorderMode",
  "enabled": true,
  "packetProbability": 50,
  "packetReorderSettings": {
    "distanceReorderMode": {
      "minDistance": 1,
      "maxDistance": 10
    },
    "timeReorderMode": {
      "minDisplacement": 1,
      "maxDisplacement": 12.75
    }
  }
}
```

Global Parameters

Json Key	Accepted Data	Description
packetReorderMode	timeReorderMode distanceReorderMode	Sets packet reorder mode.
enabled	true false	Sets the enabled status of the impairment.
packetProbability	0 to 100	The perntage of packets to reorder.

timeReorderMode

Json Key	Accepted Data	Description
minDisplacement	0 to < maxDisplacement	The minimum delay to displace a packet
maxDisplacementd	MinDisplacement to 500	The maximum delay to displace a packet.

distanceReorderMode

Json Key	Accepted Data	Description
minDisplacement	1 to < maxDisplacement	The minimum packetdistanceto displace a packet
maxDisplacementd	minDisplacement to 10000	The maximum packetdistanceto displace a packet.

16 Bit Error Commands

16.1 Retrieve Settings

Retrieves the current settings of the Bit Error impairment

16.1.1 Parameters

- **“mapId”**(required) - The SNE map name or id to modify.
- **“impId”** - The impairment name or id.
- **“userToken”** (optional) - Specifies a valid user account for multiuser mode. Not required when multi-user mode is disabled.

16.1.2 Return Type

16.1.3 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/biterror"
-H "accept: application/json"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/biterror&userToken={userToken}"
-H "accept: application/json"
```

16.1.4 Return Value

```
{
  "status": {
    "code": 1201,
    "message": "Operation Successful"
  },
  "updatePending": false,
  "bitError": {
    "enabled": true,
    "erroredBits": 1,
    "totalBits": 1000000
  }
}
```

16.2 Update Settings

Updates the current settings of the Bit Error impairment

16.2.1 Parameters

- **"item"** - Json parameter data.
- **"mapId"**(required) - The SNE map name or id to modify.
- **"impId"** - The impairment name or id.
- **"userToken"** (optional) - Specifies a valid user account for multiuser mode..
Not required when multi-user mode is disabled.

16.2.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/biterror"
-H "accept: application/json"
-d "{item}"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/biterror&userToken={userToken}"
-H "accept: application/json"
-d "{item}"
```

16.2.3 Return Value

```
{
  "code": 1201,
  "message": "Operation Successful"
}
```

16.2.4 JSON Input

```
{
  "enabled": true,
  "erroredBits": 1,
  "totalBits": 1000000
}
```

Global Parameters

Json Key	Accepted Data	Description
enabled	true false	Sets the enabled status of the impairment.
erroredBits	1 to 8	Sets the number of bits to corrupt.
totalBits	1 to 100,000,000	Sets the number of bits to miss before corrupting

17 Packet Counting Commands

17.1 Retrieve Settings

Retrieves the current settings of the Packet Counting Filter,

17.1.1 Parameters

- **“mapId”**(required) - The SNE map name or id to modify.
- **“impId”** - The impairment name or id.
- **“userToken”** (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

17.1.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/packetcounting"
-H "accept: application/json"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/packetcounting&userToken={userToken}"
-H "accept: application/json"
```

17.1.3 Return Value

```
{
  "status": {
    "code": 1201,
    "message": "Operation Successful"
  },
  "updatePending": false,
  "packetCounting": {
    "packetCountingMode": "xInYMode",
    "enabled": true,
    "packetCountingSettings": {
      "xInYMode": {
        "packetFailCount": 1,
        "perPacketCount": 1000
      },
      "percentageCountMode": {
        "percentageFailCount": 15
      }
    }
  }
}
```

17.2 Update Settings

Updates the current settings of the Packet Counting Filter.

17.2.1 Parameters

- **"item"** - Json parameter data.
- **"mapId"**(required) - The SNE map name or id to modify.
- **"impId"** - The impairment name or id.
- **"userToken"** (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

17.2.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/packetcounting"
-H "accept: application/json"
-d "{item}"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/packetcounting&userToken={userToken}"
-H "accept: application/json"
-d "{item}"
```

17.2.3 Return Value

```
{
  "code": 1201,
  "message": "Operation Successful"
}
```

17.2.4 JSON Input

Global Parameters

Json Key	Accepted Data	Description
packetCountingMode	xInYMode percentageCountMode	
enabled	true false	Sets the enabled status of the impairment.

xInYMode

Json Key	Accepted Data	Description
packetFailCount	1 to 1,000,000,000	Set the number of packets to fail(X)
perPacketCount	1 to 1,000,000,000	The number of packets to skip until the next failure count(Y)

percentageCountMode

Json Key	Accepted Data	Description
percentageFailCount	1 to 100	Sets the percentage of packets to fail.

18 Traffic Generator Commands

18.1 Retrieve Settings

Retrieves the current settings of the Packet Counting Filter,

18.1.1 Parameters

- “**mapId**”(required) - The SNE map name or id to modify.
- “**implId**” - The impairment name or id.
- “**userToken**” (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

18.1.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{implId}
/trafficgen"
-H "accept: application/json"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{implId}
/trafficgen&userToken={userToken}"
-H "accept: application/json"
```

18.1.3 Return Value

```
{
  "status": {
    "code": 1201,
    "message": "Operation Successful"
  },
  "updatePending": false,
  "trafficGen": {
    "trafficGenMode": "constGenMode",
    "enabled": true,
    "trafficGenSettings": {
      "constGenMode": {
        "dataRate": 64,
        "broadcastTraffic": false
      },
      "rangeGenMode": {
        "minDataRate": 1,
        "maxDataRate": 8,
        "rangeDuration": 5000,
        "broadcastTraffic": false
      },
      "timeConstraints": {
        "enableTimeConstraints": false,
        "startDelay": 1000,
        "duration": 5000
      }
    }
  }
}
```

18.2 Update Settings

Updates the current settings of the Traffic Generator.

18.2.1 Parameters

- **"item"** - Json parameter data.
- **"mapId"**(required) - The SNE map name or id to modify.
- **"impId"** - The impairment name or id.
- **"userToken"** (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

18.2.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/trafficgen"
-H "accept: application/json"
-d "{item}"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/impairments/{impId}
/trafficgen&userToken={userToken}"
-H "accept: application/json"
-d "{item}"
```

18.2.3 Return Value

```
{
  "code": 1201,
  "message": "Operation Successful"
}
```

18.2.4 JSON Input

```
{
  "trafficGenMode": "constGenMode",
  "enabled": true,
  "trafficGenSettings": {
    "constGenMode": {
      "dataRate": 64,
      "broadcastTraffic": false
    },
    "rangeGenMode": {
      "minDataRate": 1,
      "maxDataRate": 8,
      "rangeDuration": 5000,
      "broadcastTraffic": false
    },
    "timeConstraints": {
      "enableTimeConstraints": false,
      "startDelay": 1000,
      "duration": 5000
    }
  }
}
```

Global Parameters

Json Key	Accepted Data	Description
trafficgenMode	constGenMode rangeGenMode	
enabled	true false	Sets the enabled status of the impairment.

rangeGenMode

Json Key	Accepted Data	Description
minDataRate	1 to maxDataRate	Min amount of background traffic to generate in bytes per second.
maxDataRate	minDataRate ; to 1,000,000	Max amount of background traffic to generate in bytes per second.
rangeDuration	1 to 360000	Delay in milliseconds.
broadcastTraffic	true false	Enables/disables broadcast traffic.

19 Link Commands

19.1 Link Up

Sets the link status to up for a port.

19.1.1 Parameters

- “**mapId**”(required) - The SNE map name or id to modify.
- “**port**” - The physical port number.
- “**userToken**” (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

19.1.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}/{port}/linkup"  
-H "accept: application/json"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}  
/{port}/linkup?userToken={userToken}"  
-H "accept: application/json"
```

19.1.3 Return Value

```
{  
  "code": 1201,  
  "message": "Operation Successful"  
}
```


19.2 Link Down

Sets the link status to Down for a port.

19.2.1 Parameters

- “**mapId**”(required) - The SNE map name or id to modify.
- “**port**” - The physical port number.
- “**userToken**” (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

19.2.2 Curl Command

Single user mode

```
curl -X PUT "http://192.168.1.100/api/maps/example_map/1/linkdown"  
-H "accept: application/json"
```

Multi-user mode

```
curl -X PUT "http://192.168.1.100/api/maps/{mapId}  
/{port}/linkdown?userToken={userToken}"  
-H "accept: application/json"
```

19.2.3 Return Value

```
{  
  "code": 1201,  
  "message": "Operation Successful"  
}
```

19.3 Link Status/Port

Retrieves the link status of a port.

19.3.1 Parameters

- “**mapId**”(required) - The SNE map name or id to modify.
- “**port**” - The physical port number.
- “**userToken**” (optional) - Specifies a valid user account name for multi-user mode. Not required when multi-user mode is disabled.

19.3.2 Curl Command

Single user mode

```
curl -X GET "http://192.168.1.100/api/maps/{mapId}/{port}"  
-H "accept: application/json"
```

Multi-user mode

```
curl -X GET "http://192.168.1.100/api/maps/{mapId}/{port}?userToken={userToken}"  
-H "accept: application/json"
```

19.3.3 Return Value

```
{  
  "status": {  
    "code": 1201,  
    "message": "Operation Successful"  
  },  
  "portStatus": "Down"  
}
```

20 Capture Replay Commands

20.1 Get Capture replay Files Information

Retrieves information about all loaded capture replay files.

20.1.1 Parameters

- NONE

20.1.2 Curl Command

```
curl -X GET "http://192.168.1.100/api/files/capturereplay"  
-H "accept: application/json"
```

20.1.3 Return Value

```
{  
  "status": {  
    "code": 1201,  
    "message": "Operation Successful"  
  },  
  "availableDiskSpace": null,  
  "maxFileSize": null,  
  "files": [  
    {  
      "pcapFile": "CaptureFile",  
      "size": 2134512  
    },  
    {  
      "pcapFile": "TrafficCapture.pcap",  
      "size": 32145673  
    }  
  ]  
}
```

20.2 Upload a Capture Replay File

Uploads a capture replay file.

20.2.1 Parameters

- “**pcapFile**” - The pcap file to be uploaded.

20.2.2 Curl Command

```
curl -X POST "http://192.168.1.100/api/files/capturereplay"  
  -H  "accept: application/json"  
  -H  "Content-Type: multipart/form-data"  
  -F "pcapFile={pcapFile};type="
```

20.2.3 Return Value

```
{  
  "code": 1201,  
  "message": "Operation Successful"  
}
```

20.3 Get a Capture Replay File

Downloads a capture replay file.

20.3.1 Parameters

- “**pcapFile**” - The name of the pcap file to be downloaded.

20.3.2 Curl Command

```
curl -X GET "http://192.168.1.100/api/files/capturereplay/{pcapFile}"  
-H "accept: application/json"
```

20.3.3 Return Value

```
{  
  "code": 1201,  
  "message": "Operation Successful"  
}
```

20.4 Delete a Capture Replay File

Deletes an uploaded capture replay file.

20.4.1 Parameters

- “**pcapFile**” - The pcap file to be deleted.

20.4.2 Return Value

```
{  
  "code": 1201,  
  "message": "Operation Successful"  
}
```

21 Build Version Commands

Retrieves the system software version information

21.1 Parameters

- NONE

21.2 Curl Command

```
curl -X GET "http://192.168.1.100/api/instrument/software/buildversion"  
-H "accept: application/json"
```

21.3 Return Value

Sne build number.