

TeraFlow  
**SDN**  
*by ETSI*

# Hackfest #4: Challenges

Pablo Armingol(TID)

Juan Carlos Caja (TID)

# 1 - Change WebUI license

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**Correct version:**  
2022-2024 ETSI OSG/SDG TeraFlowSDN (TFS)

## 2 - Modify Device upload

### Configuration Rules

connect/address

127.0.0.1

connect/port

0













connect/settings

```
{}
```













# 4 - Remove inventory config rules

**Configurations:**

Key	Value		
_connect/address	• 192.168.159.32		
_connect/port	• 830		
/inventory/0/0-Virtual-Motherboard	<ul style="list-style-type: none"> <li>• <b>attributes:</b> {'description': 'Cisco IOS-XRv 9000 Virtual LC Motherboard', 'empty': 'false', 'location': '0/0', 'removable': 'false'}</li> <li>• <b>class:</b></li> <li>• <b>component-reference:</b> [4, 'idx:LINECARD', '']</li> <li>• <b>name:</b> 0/0-Virtual-Motherboard</li> <li>• <b>parent-component-references:</b> 0/0</li> </ul>		
/inventory/0/0-Ether Port container 0	<ul style="list-style-type: none"> <li>• <b>attributes:</b> {'description': 'Port Container for port0', 'empty': 'false', 'location': '0/0', 'removable': 'false'}</li> <li>• <b>class:</b></li> <li>• <b>component-reference:</b> [5, '']</li> <li>• <b>name:</b> 0/0-Ether Port container 0</li> <li>• <b>parent-component-references:</b> 0/0-Virtual-Motherboard</li> </ul>		
/inventory/0/0/0	<ul style="list-style-type: none"> <li>• <b>attributes:</b> {'description': 'N/A', 'empty': 'false', 'hardware-rev': 'N/A', 'location': '0/0/0', 'manufacturer-name': 'CISCO SYSTEMS, INC', 'removable': 'true', 'serial-num': 'N/A', 'software-rev': '7.11.1'}</li> <li>• <b>class:</b> idx:FRU</li> <li>• <b>component-reference:</b> [6, '']</li> <li>• <b>name:</b> 0/0/0</li> <li>• <b>parent-component-references:</b> 0/0-Ether Port container 0</li> </ul>		
/inventory/0/0/0-Virtual-Board	<ul style="list-style-type: none"> <li>• <b>attributes:</b> {'description': 'Cisco IOS-XRv 9000 Virtual 1G Module', 'empty': 'false', 'location': '0/0/0', 'removable': 'false'}</li> <li>• <b>class:</b></li> <li>• <b>component-reference:</b> [7, 'idx:FRU', '']</li> <li>• <b>name:</b> 0/0/0-Virtual-Board</li> <li>• <b>parent-component-references:</b> 0/0/0</li> </ul>		

# 5 - Remove endpoints config rules

**Configurations:**

Key	Value	
_connect/address	• 192.168.159.32	 
_connect/port	• 830	 
/endpoints/endpoint[0/0/1-GigabitEthernet0/0/0/1]	<ul style="list-style-type: none"> <li>• <b>sample_types:</b> {'101': "//oci:interfaces/oci:interface[oci:name='0/0/1-GigabitEthernet0/0/0/1']/state/counters/out-pkts", '102': "//oci:interfaces/oci:interface[oci:name='0/0/1-GigabitEthernet0/0/0/1']/state/counters/in-pkts", '201': "//oci:interfaces/oci:interface[oci:name='0/0/1-GigabitEthernet0/0/0/1']/state/counters/out-octets", '202': "//oci:interfaces/oci:interface[oci:name='0/0/1-GigabitEthernet0/0/0/1']/state/counters/in-octets"}</li> <li>• <b>type:</b> -</li> <li>• <b>uuid:</b> 0/0/1-GigabitEthernet0/0/0/1</li> </ul>	 
/endpoints/endpoint[0/0/1-SFP Socket]	<ul style="list-style-type: none"> <li>• <b>sample_types:</b> {'101': "//oci:interfaces/oci:interface[oci:name='0/0/1-SFP Socket']/state/counters/out-pkts", '102': "//oci:interfaces/oci:interface[oci:name='0/0/1-SFP Socket']/state/counters/in-pkts", '201': "//oci:interfaces/oci:interface[oci:name='0/0/1-SFP Socket']/state/counters/out-octets", '202': "//oci:interfaces/oci:interface[oci:name='0/0/1-SFP Socket']/state/counters/in-octets"}</li> <li>• <b>type:</b> -</li> <li>• <b>uuid:</b> 0/0/1-SFP Socket</li> </ul>	 
/endpoints/endpoint[0/0/2-GigabitEthernet0/0/0/2]	<ul style="list-style-type: none"> <li>• <b>sample_types:</b> {'101': "//oci:interfaces/oci:interface[oci:name='0/0/2-GigabitEthernet0/0/0/2']/state/counters/out-pkts", '102': "//oci:interfaces/oci:interface[oci:name='0/0/2-GigabitEthernet0/0/0/2']/state/counters/in-pkts", '201': "//oci:interfaces/oci:interface[oci:name='0/0/2-GigabitEthernet0/0/0/2']/state/counters/out-octets", '202': "//oci:interfaces/oci:interface[oci:name='0/0/2-GigabitEthernet0/0/0/2']/state/counters/in-octets"}</li> </ul>	 

# 6 - Extend Logical Inventory: interfaces

## Example on Device 3.3.3.3

/routing\_policy/policy\_definition[PASS\_ALL]

• **policy\_name:** PASS\_ALL



- ▼ Routing Policy
  - ▶ PASS\_ALL

## Example on physical router:

- ▼ Routing Policy
  - ▼ srv\_ACLr
    - { "ext\_community\_set\_name": "set\_srv\_ACLr" }
    - { "ext\_community\_member": "65000:533", "ext\_community\_set\_name": "set\_srv\_ACLr" }
  - ▶ srv\_ACL
  - ▶ import\_export\_1\_import\_policy
  - ▶ import\_export\_1\_export\_policy
  - ▶ Undefined

# 7 - Add new BGP TLV

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**It is proposed to add a new TLV in BGP to display latency data:**

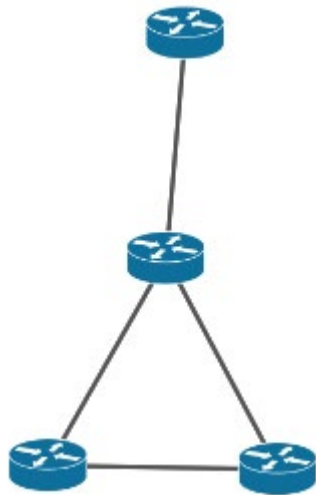
- 1) Design the format of the TLV
- 2) Indicate how it would be added in BGP
- 3) Indicate how it would be processed in TFS.

(It is not necessary to program TFS to display the changes)

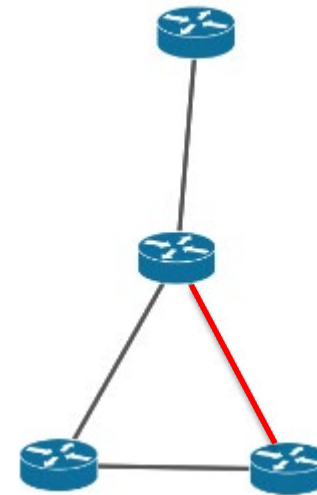


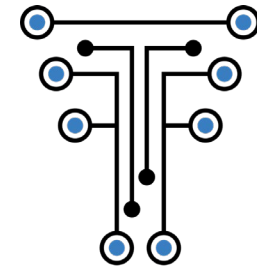
# 8 - Manage link deactivation

Current topology



Withdraw BGP message





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Thank You all for  
your participation!