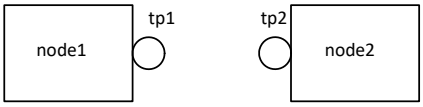
nss-tp example

Friday, June 14, 2024 3:32 PM

This example uses:
ietf-network-slice-service
ietf-network
ietf-network-topology

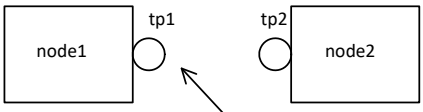



```
{
 "ietf-network:networks": {
  "network": [
   {
    "network-id": "network1",
    "node": [

     {

      "node-id": "node1",
      "ietf-network-topology:termination-point": [
       {
        "tp-id": "tp1"
       }
      ]
     },
     {
      "node-id": "node2",
      "ietf-network-topology:termination-point": [
       {
        "tp-id": "tp2"
       }
      ]
     }
    ]
   }
  ]
 },
 "ietf-network-slice-service:network-slice-services": {
  "slo-sle-templates": {
   "slo-sle-template": [
    {
     "id": "high-BW-template",
     "description": "take the highest BW forwarding path"
    },
    {
     "id": "low-latency-template",
     "description": "lowest possible latency forwarding behavior"
    }
   ]
  },
  "slice-service": [
   {
    "id": "slice1",
    "description": "example slice1",
    "service-tags": {
     "tag-type": [
      {
       "tag-type": "ietf-network-slice-service:service",
       "value": [
        "L3"
       ]
      }
     ]
    },
    "slo-sle-template": "low-latency-template",
    "sdps": {
     "sdp": [
      {
       "id": "1",
       "node-id": "PE-A",
       "tp-ref": "tp1",
       "service-match-criteria": {
        "match-criterion": [
         {
          "index": 1,
          "match-type": "ietf-network-slice-service:any",
          "target-connection-group-id": "matrix1",
          "target-connectivity-construct-id": "1"
         }
        ]
```

Topology needs a "network", "nodes", and "termination points"

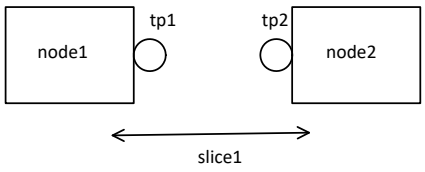


SDP 1: node-id: "PE-A"

SDP 2: node-id: "PE-B"

slice1 service demarcation point (sdp) 1 uses "tp1" from the topology

```
        "target-connection-group-id": "matrix1",
        "target-connectivity-construct-id": "1"
       }
      ]
     },
     "attachment-circuits": {
      "attachment-circuit": [
       {
        "id": "ac1",
        "description": "AC1 connected to device 1",
        "ac-node-id": "PE-A",
        "ac-tp-id": "GigabitEthernet5/0/0/0.100",
        "ac-ipv4-address": "192.0.2.1",
        "ac-ipv4-prefix-length": 26,
        "ac-tags": {
         "ac-tag": [
          {
           "tag-type": "ietf-network-slice-service:vlan-id",
           "value": [
            "100"
           ]
          }
         ]
        }
       }
      ]
     }
    },
    {
     "id": "2",
     "node-id": "PE-B",
     "service-match-criteria": {
      "match-criterion": [
       {
        "index": 1,
        "match-type": "ietf-network-slice-service:any",
        "target-connection-group-id": "matrix1",
        "target-connectivity-construct-id": "1"
       }
      ]
     },
     "attachment-circuits": {
      "attachment-circuit": [
       {
        "id": "ac2",
        "description": "AC2 connected to device 2",
        "ac-node-id": "PE-B",
        "ac-tp-id": "GigabitEthernet8/0/0/4.101",
        "ac-ipv4-address": "192.0.2.65",
        "ac-ipv4-prefix-length": 26,
        "ac-tags": {
         "ac-tag": [
          {
           "tag-type": "ietf-network-slice-service:vlan-id",
           "value": [
            "101"
           ]
          }
         ]
        }
       }
      ]
     }
    }
   ]
  },
  "connection-groups": {
   "connection-group": [
    {
     "id": "matrix1",
     "connectivity-type": "ietf-vpn-common:any-to-any",
     "connectivity-construct": [
      {
       "id": "1",
       "a2a-sdp": [
        {
         "sdp-id": "1"
        },
        {
         "sdp-id": "2"
```

Attachment Circuits can be defined here in the context of the SDP, Or the attachment circuit as a service module can be used and a ac-svc-ref pointer to the attachment circuits defined there.

SDP 1: node-id: "PE-A" has ac1 SDP 2: node-id: "PE-A" has ac2

For slice1, SDP 1 and SDP2 are in a connectivity construct.

```
            }
           ]
          }
         ]
        }
       ]
      },
      "custom-topology": {
       "network-ref": "network1"
      }
     }
    ]
   }
}
```

The pointer to the network topology this slice is associated with, this is used to navigate to the tp-id. This is how the NSS topology can be related back to the abstract topology in ietf-network-topology.