MDONS OOF in R7

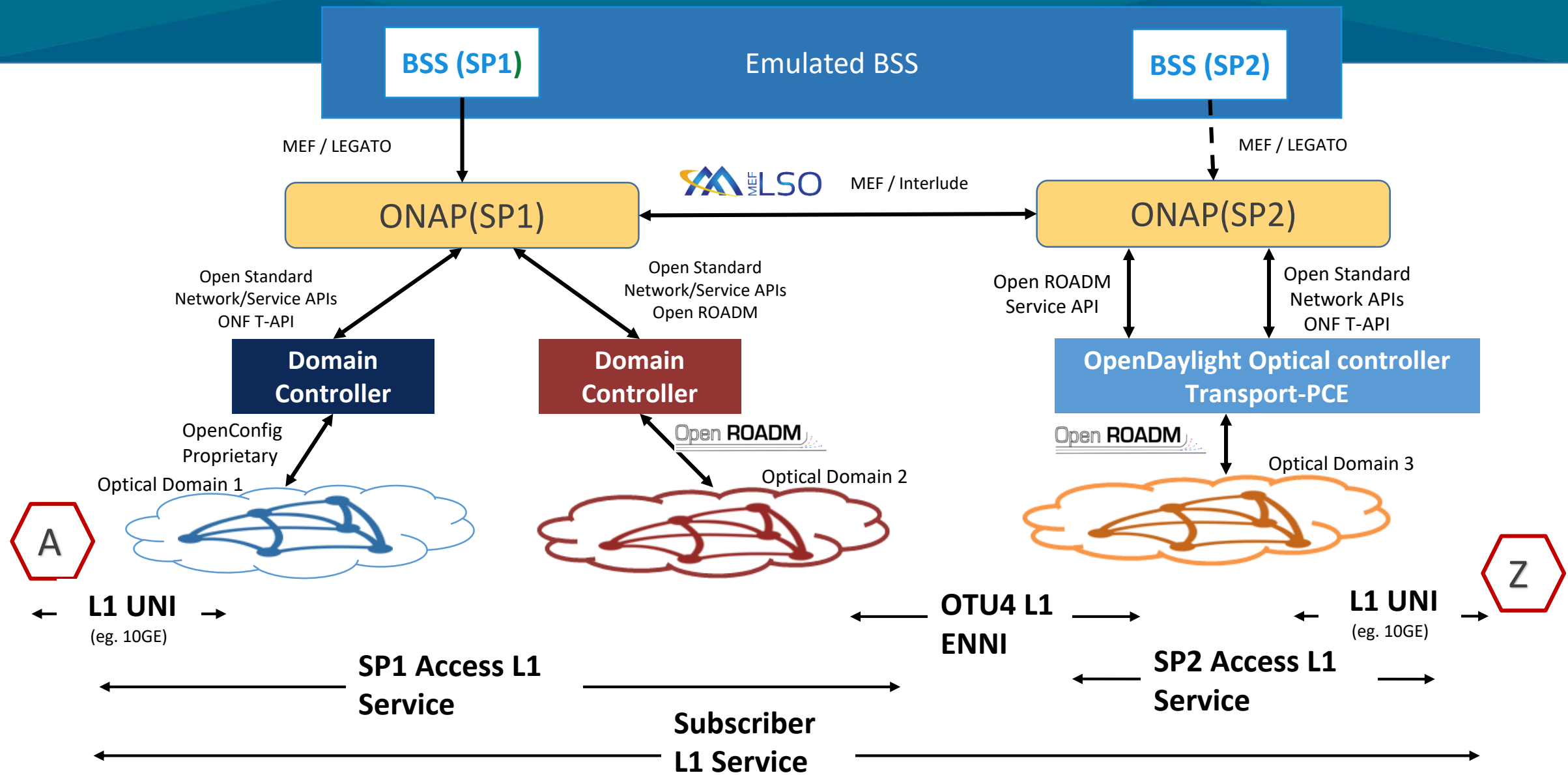## Introduction and work items in Guilin

June 2020   Fujitsu
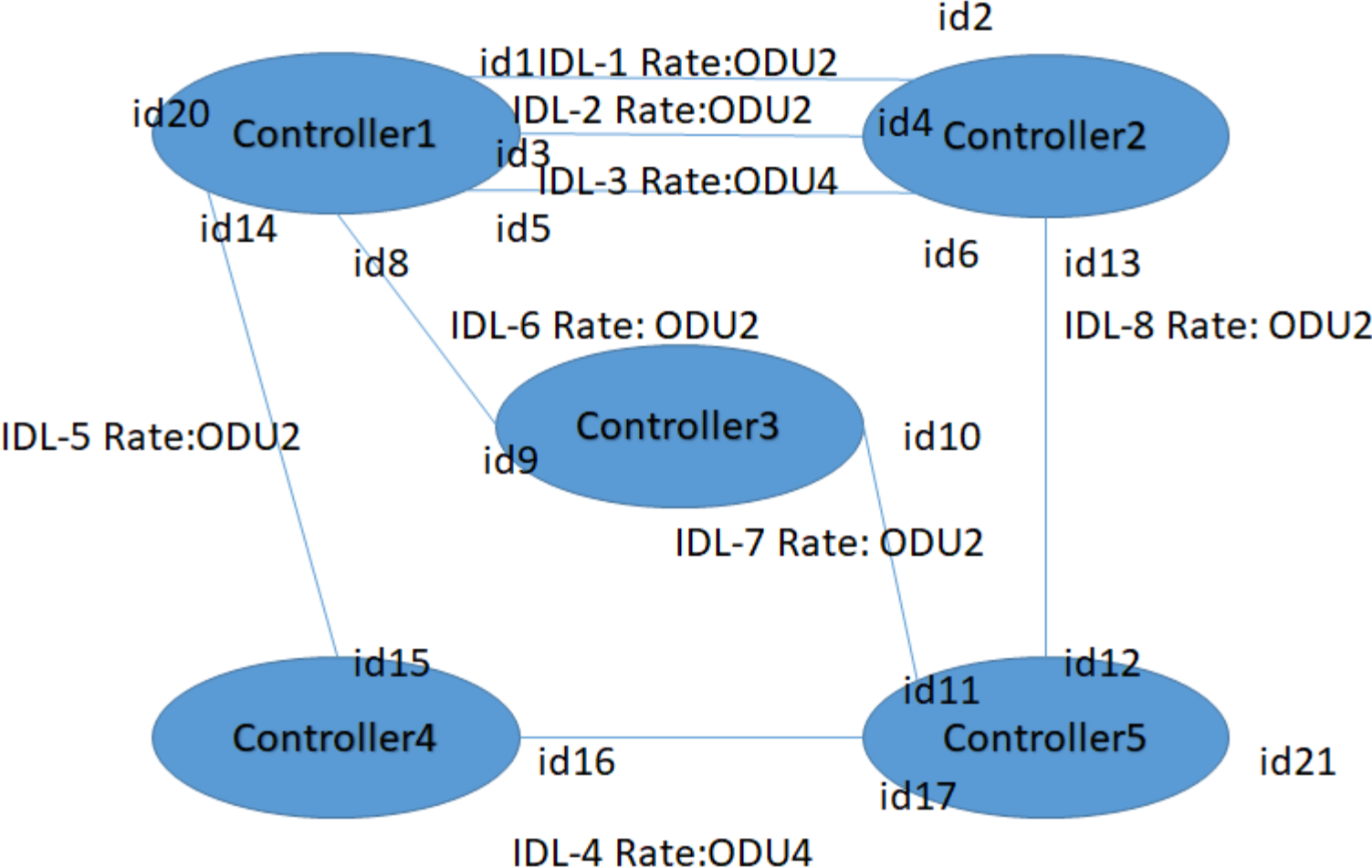
Contents

- Introduction
- OOF Impact
- Backup

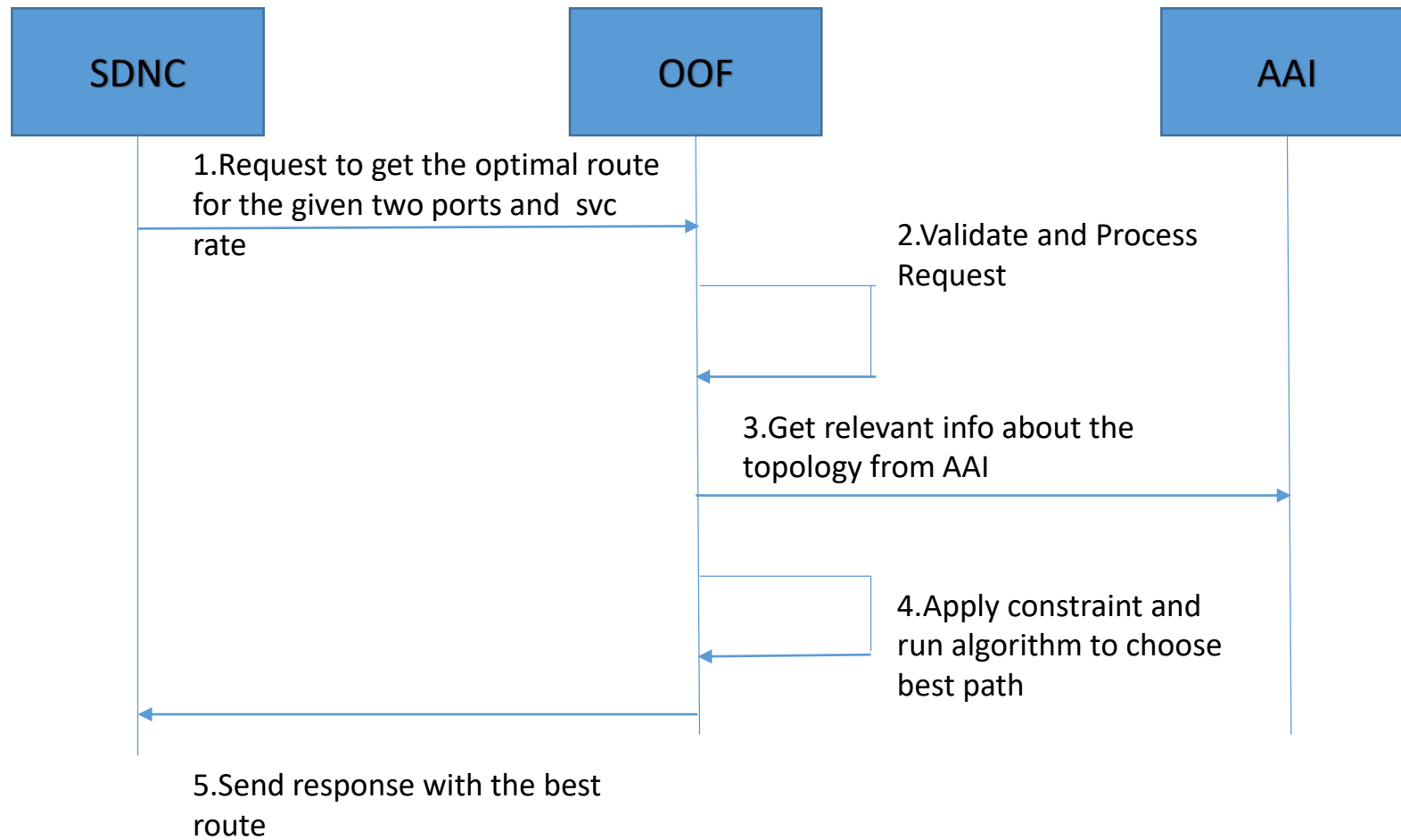# Cross Carriers L1 Service – MEF based.

BSS (SP1)   Emulated BSS   **BSS (SP2)**

MEF / LEGATO   MEF / LEGATO

MEF LSO   MEF / Interlude

ONAP(SP1)   ONAP(SP2)

Open Standard
Network/Service APIs
ONF T-API

Open Standard
Network/Service APIs
Open ROADM

Open ROADM
Service API

Open Standard
Network APIs
ONF T-API

Domain Controller   **Domain Controller**   **OpenDaylight Optical controller Transport-PCE**

OpenConfig
Proprietary

Open ROADM   Open ROADM

Optical Domain 1   Optical Domain 2   Optical Domain 3

A   Z

L1 UNI
(eg. 10GE)   **OTU4 L1 ENNI**   **L1 UNI**
(eg. 10GE)

SP1 Access L1 Service   **SP2 Access L1 Service**

Subscriber L1 Service

Inter Domain Link Path Selection

Flow Diagram

SDNC   OOF   AAI

1.Request to get the optimal route for the given two ports and svc rate

2.Validate and Process Request

3.Get relevant info about the topology from AAI

4.Apply constraint and run algorithm to choose best path

5.Send response with the best route

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OOF Impact

- A new API will be defined in the osdfapp.py class in optf-osdf repository for the MDONS route selection.

- Under the Route Optimizer section a new class has to be added to handle the MDONS route selection.

- The standard minizinc template which gives the shortest path in a graph data structure will be used for MDONS, same as the CCVPN use case.

- OPTFRA-753

API Input/Output

```
API: POST /api/oof/mdons/route/v1

BODY:
{
    "requestInfo":{
        "transactionId":"xxx-xxx-xxxx",
        "requestId":"yyy-yyy-yyyy",
        "callbackUrl":"",
        "sourceId":"SDNC",
        "requestType":"create",
        "numSolutions":1,
        "optimizers":[
            "route"
        ],
        "timeout":600
    },
    "routeInfo":{
        "routeRequest":{
            "srcDetails":{
                "interfaceId":"interface-id-1",
                "nodeId":"node-1",
                "controllerId":"Virtuora-TAPI1"
            },
            "dstDetails":{
                "interfaceId":"interface-id-2",
                "nodeId":"node-2",
                "controllerId":"Virtuora-TAPI2"
            },
            "serviceRate":"ODU2"
        }
    }
}
```

```
{
"transactionId":"123456",
"requestId":"789101",
"requestStatus":"completed",
"statusMessage":"success",
"solutions":{
  "startTime":"2016-10-01T00:30+01:00",
  "finishTime":"2016-10-01T00:40+01.00",
  "routeInfo":[
    {
      "serviceRoute":[
        {
          "srcInterfaceId":"id20",
          "dstInterfaceId":"id8"
        },
        {
          "srcInterfaceId":"id9",
          "dstInterfaceId":"id10"
        },
        {
          "srcInterfaceId":"id11",
          "dstInterfaceId":"id21"
        }
      ],
      "linkList":[
        "IDL-6",
        "IDL-7"
      ]
    }
  ]
}
}
```

References

- [MDONS Extension in ONAP Guilin Release](#)
- [MDONS OOF in R7](#)

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MDONS Closed Loop - Cross Domain OTN service IDL failure