Authors: Qilei Wang (ZTE), Radha Valiveti (Infinera), Haomian Zheng (Huawei), Huub van Helvoort (Hai Gaoming B.V), Sergio Belotti (Nokia), Iftekhar Hussain (Infinera), Daniele Ceccarelli (Ericsson)

Contributors: Rajan Rao (Infinera), Fatai Zhang, Italo Busi, Zheyu Fan (Huawei), Yuanbin Zhang (ZTE), Zafar Ali (Cisco), Daniel King, Manoj Kumar, Antonello Bonfanti, Akshaya Nadahalli (Cisco)
Scope and aim of this draft

- Uncertainty about how to configure ODUCn link still exists, and this uncertainty may have relationship with the progress in ITU-T after discussion among authors. Therefore, the scope of this draft is limited to how to set up ODUk/ODUflex LSPs over configured ODUCn links. How to configure ODUCn link is not in the scope of this draft.

- The aim of this draft is to evaluate whether the GMPLS mechanisms defined in RFC 7138 and RFC 7139 for ODUk can be reused to configure ODUk/ODUflex LSP over one configured ODUCn link.
TE-Link depiction in ODUk, OTUk and ODUCn context

• Similar to ODUk/OTUk TE-Links, ODUCn links can also be represented as TE-Links.
• Two ends of a TE-Link is able to know whether the TE-Link is supported by an OD UCn or an ODUk or an OTUk, as well as the resource related information (e.g., slot granularity, number of tributary slot available).
GMPLS Signalling Implication

• The resource on the ODUCn TE-Link can be seen by the client ODUk/ODUflex, the label defined in RFC7139 is able to be applied in the case of configuring ODUk/ODUflex over ODUCn TE-Link.

• Example: Label format defined in RFC7139 for multiplexing ODU4 onto ODUC10. One ODUC10 has 200 5G slots, and twenty of them are allocated to the ODU4.
GMPLS Routing Implication

• Once one ODUCn link is up, the resources on it need to be advertised:
  • Similar to OTUk, ODUCn TE-Link is the ultimate hierarchy of the multiplexing, so there is no need to define a new ODUCn signal type for OSPF-TE extension defined in RFC7138.
  • No new ODUCn signal type is introduced, the SCSI filed carried in ISCD would not be changed, as current defined signal type can satisfy the needs.
  • Only one slot granularity is defined for ODUCn TE-Link, so there is no need to advertise this information as this information can be obtained by two ends of ODUCn link.
Conclusion

• Existing protocols defined in RFC7138 and RFC7139 can be reused in the case of configuring ODUk LSPs over ODUCn TE-Links without new protocol extensions.

• It would be useful to publish an Applicability Statement describing in details how these protocols can be reused.
Next steps

• Request for WG adoption