

OSPF-TE Protocol Extension for Constraint-aware RSA in Flexi-Grid
Networks

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Motivation

In flexi-grid networks, when processing routing and spectrum assignment (RSA) , some constraints need to be considered , such as spectral continuity constraint and impairments constraint.

In this draft, we consider two special constraints of flexi-grid :

- ✓ Consecutive Spectrum Slots constraint
- ✓ Variable Guard Band constraint

Consecutive Spectrum Slots Weight Information

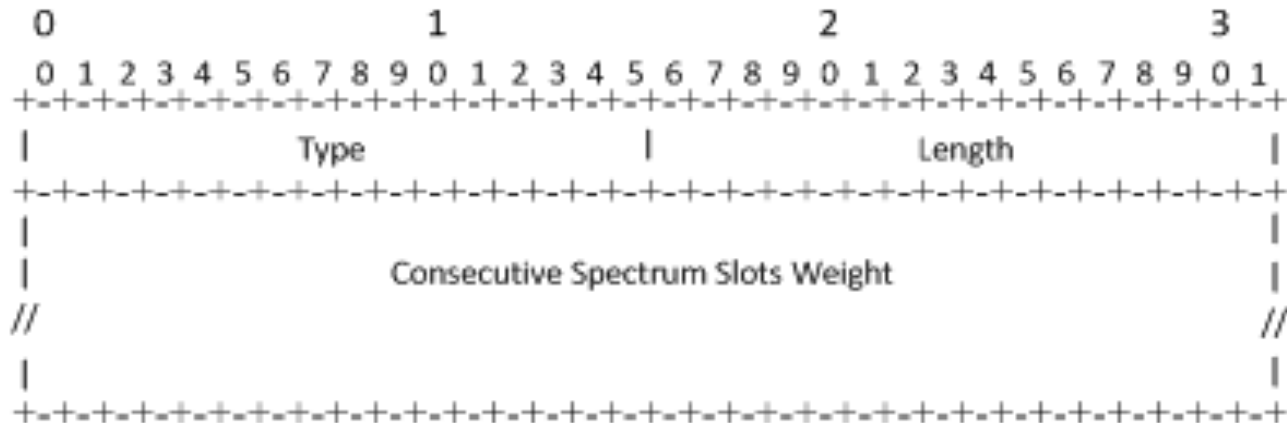
- ✓ It represents the situation of the available consecutive spectrum slots information in a link of the flexi-grid networks
- ✓ For example the percentage of the total bandwidth of the number of five or ten consecutive spectrum slots...

Variable Guard Band Information

- ✓ It describes the guard band that between two adjacency client LSPs which is variable based on different network environments
- ✓ It avoid crosstalk and bad impact that can affect the transmission performance of each client LSP

OSPF-TE extension

- ✓ Consecutive spectrum slots weight sub-TLV



- ✓ Variable guard band sub-TLV



Next Steps

- ✓ Some other constraints to be considered?
- ✓ Improve the document according to the feedback from meeting or mailing list
- ✓ Comments are always appreciated

Thank you