

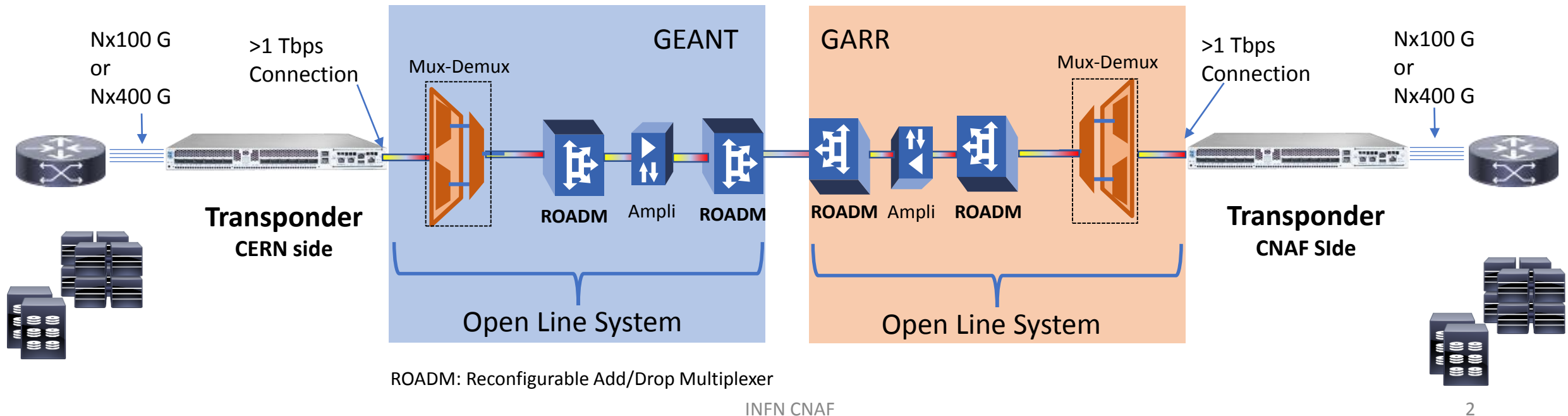
# CERN-CNAF Collaboration

## Topic-1.4: Network

08-10-2020  
CERN - CNAF DCI

# DCI between CERN and CNAF

A possible solution to implement a Tbps DCI between CERN and CNAF is the use of packet/optical **transponders** in the sites connected through an Open Line System transport infrastructure provided by GARR+GEANT.



## GARR and GEANT potential interest and support

- GARR is awarding a Tender for the new Open line optical transport network that should be available for sites in Q3 2021.
- GARR with GEANT is part of GN4-3 Project that is implementing the new European Open Line Infrastructure which is supposed to provide high capacity optical interconnections. In particular WP7 T2 is in charge of the spectrum sharing between different organization and is prototyping the **Spectrum Connection Service (SCS)**.
  - **Candidate use case: “CNAF (IT) Tier1 to CERN Tier0, through GARR and Géant SCS service providers ”** (This will be presented @STF meeting the 26<sup>th</sup> of October)

## DCI possible use cases

Using this technology, for high bandwidth links should be less expensive than using traditional WAN routed links

- A DCI interconnection could be used as the underlay network for the implementation of a Data Lake spanning between CERN and CNAF.
- A programmable transponder based interconnection infrastructure could be used to dynamically resize the T0 –T1 Link to the needs
- High bandwidth end to end channels for specific purposes could be deployed in few seconds
- Other ?

