

# FTS channel setup for cross-cloud transfers

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- T2Ds: T2s directly connected to T1s of different clouds
  - “directly” in the DDM topology
- T2Ds should
  - demonstrate “good” connectivity from/to every T2
  - provide a certain level of commitment
- T2Ds could be de-commissioned if they degrade
- Currently, 20 candidates T2Ds
  - US: SLAC, MWT2, AGLT2, SWT2\_CPB, NET2
  - DE: DESY-ZK, DESY-HH, LRZ, LMU
  - ES: IFAE, IFIC, UAM
  - FR: GRIF-LPNHE, TOKYO-LCG2, GRIF-LAL
  - IT: NAPOLI, ROMA1, MILANO
  - UK: MANCHESTER, GLASGOW
- There is no “maximum number” of T2Ds

- In setting FTS topology, consider that
  - Each T2D should exchange data with every T1 (+CERN)
    - And exchange data with every T2D
    - And (DONE) exchange data with every T2 of the same ATLAS cloud
  - Using only STAR channels could create complications
  - We can not create too many channels (FTS performance)
- Possible configuration:
  - define two “FTS clouds”
    - T1S: cloud of all T1s
    - T2DS: cloud of all T2Ds
  - 1. For a given T2D (T2\_X), create a channel T1S-T2\_X
  - 2. For a given T2D (T2\_X), create a channel T2DS-T2\_X
  - 3. For a give T1 (T1\_Y), create a channel T2DS-T1\_Y
  - Alternative to (2.) is to use STAR-T2\_X channel
- To be taken into account
  - Pro: 50 channels (in total) for 20 T2s. Not so many.
  - Con: the list of T2Ds could be extended
  - Overlap with CMS (few common T2s, many shared T1s)
    - CMS uses the FTS of the source for T2-T2 transfers