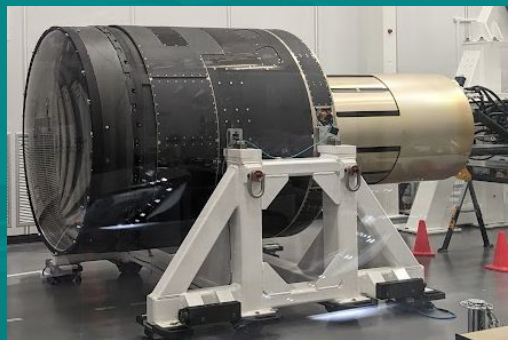




Rubin Observatory US Data Facility

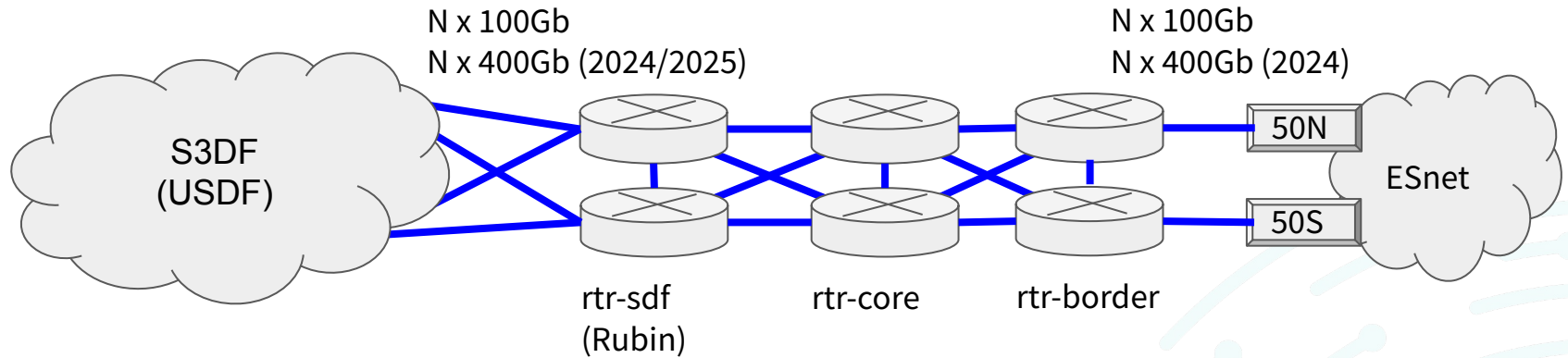
SA3CC+NET Networking Update

Matthew Mountz
Mark Foster
April 2024



U. S. DEPARTMENT OF
ENERGY

SLAC / USDF Networking

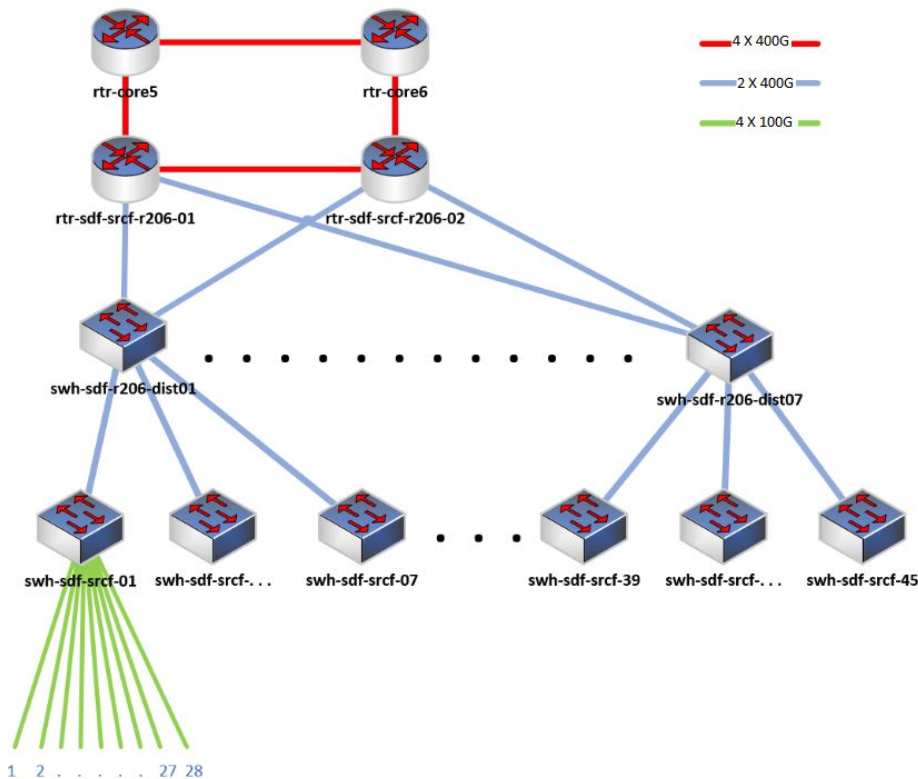


USDF Server/Storage enclave: Nx100G (layer2) to routing infrastructure via SLAC core and SLAC border. Expand to Nx400G during 2024/2025 timeframe.

Currently support 400Gbps aggregate capability between SLAC and other sites with multiple ESnet 100Gbps links, Expect Nx400Gbps in 2024.

ESnet6: two optical nodes on SLAC premises (50N, 50S): part of Bay Area optical ring (multi-Tbps optical capacity)

S3DF Networking (in progress)



S3DF in SRCF-II

97 racks (6 rows @ 15 racks, 1 row @ 7)

Plan:

2 Tbps to ESnet (aggregate)

100 GbE per compute node

200 GbE per storage server (2x100G)

45 32-port x 400 GbE TOR switches

Fat tree / distribution to layer 3 routers

(alt: direct connect switches to L3 routers)

5040 100GbE connections via 1260

4x100GbE breakouts

Questions?



SRCF-II + SRCF



SRCF-II isles