Proposal for the DEISA network infrastructure phase 2

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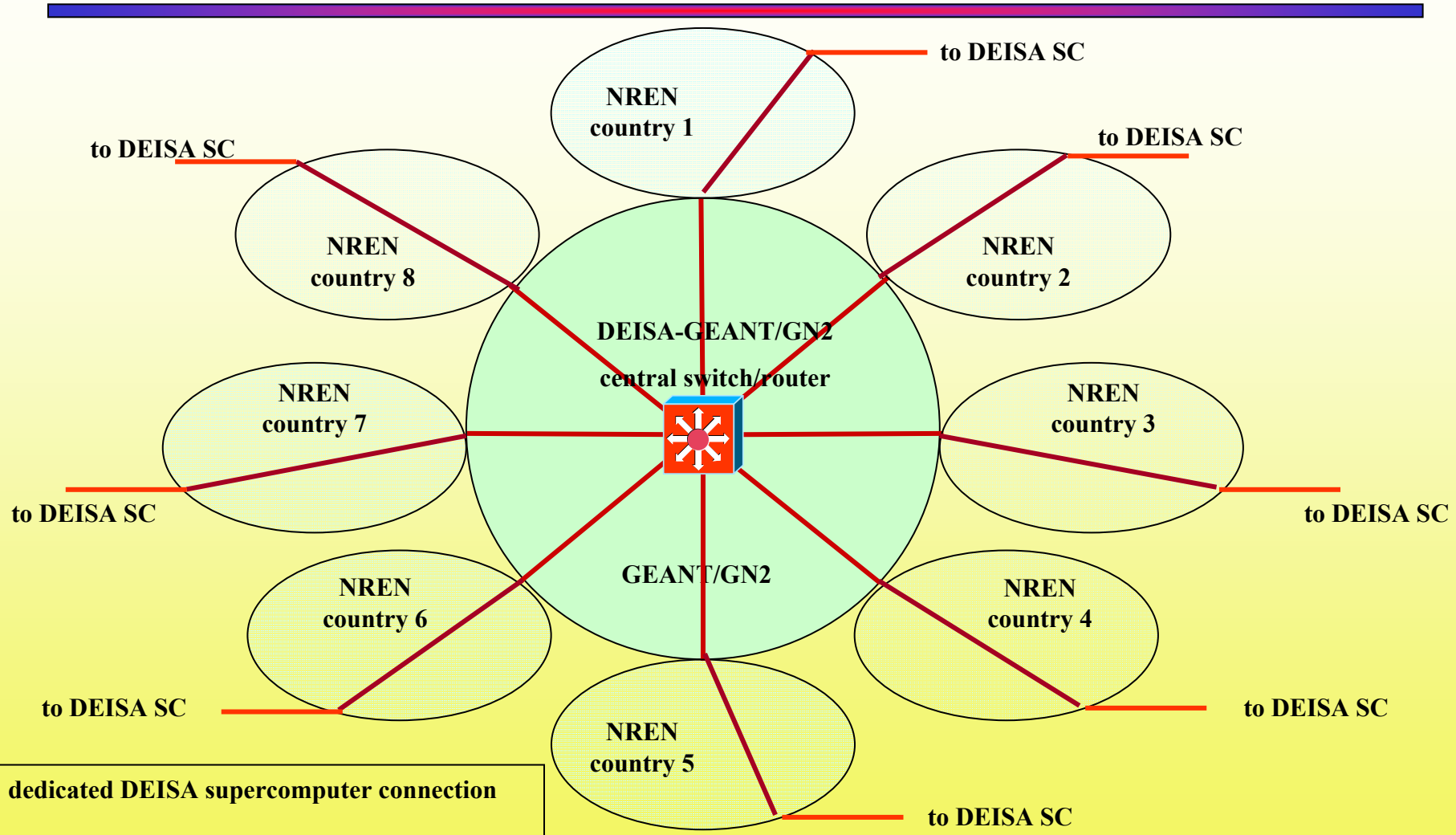
Logical view of DEISA network



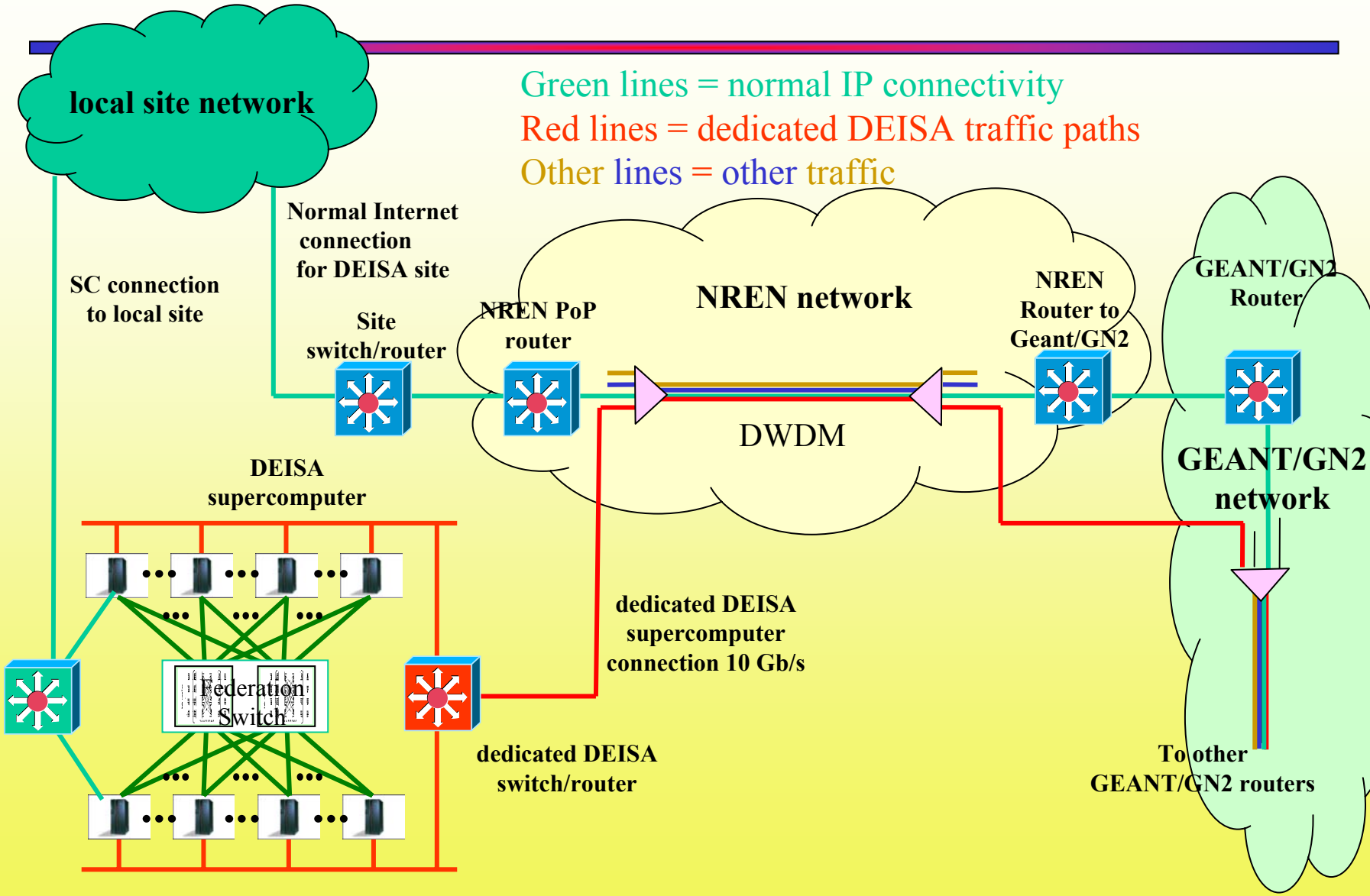
dedicated DEISA supercomputer connection

red lines (site local) = 1Gb/s / 10 Gb/s
red lines (NREN) = 1Gb/s / 10 Gb/s
red lines GEANT/GN2) = 1Gb/s / 10 Gb/s

Description to
"logical view of DEISA network"

- DEISA supercomputers are connected to each other via a star like network
- A central switch/router within GEANT/GN2 infrastructure forwards traffic to other sites
- Connection to this switch preferable 1-10 Gb/s wavelength (point-to-point from DEISA site to central DEISA switch/router).
  Other possibilities are PremiumIP, TDM, …
  This allows mixing phase 1 and phase 2 connections.
- Technical realization dependent on local site connect, NREN, GEANT/GN2 (see below)

DEISA supercomputer and normal site connect

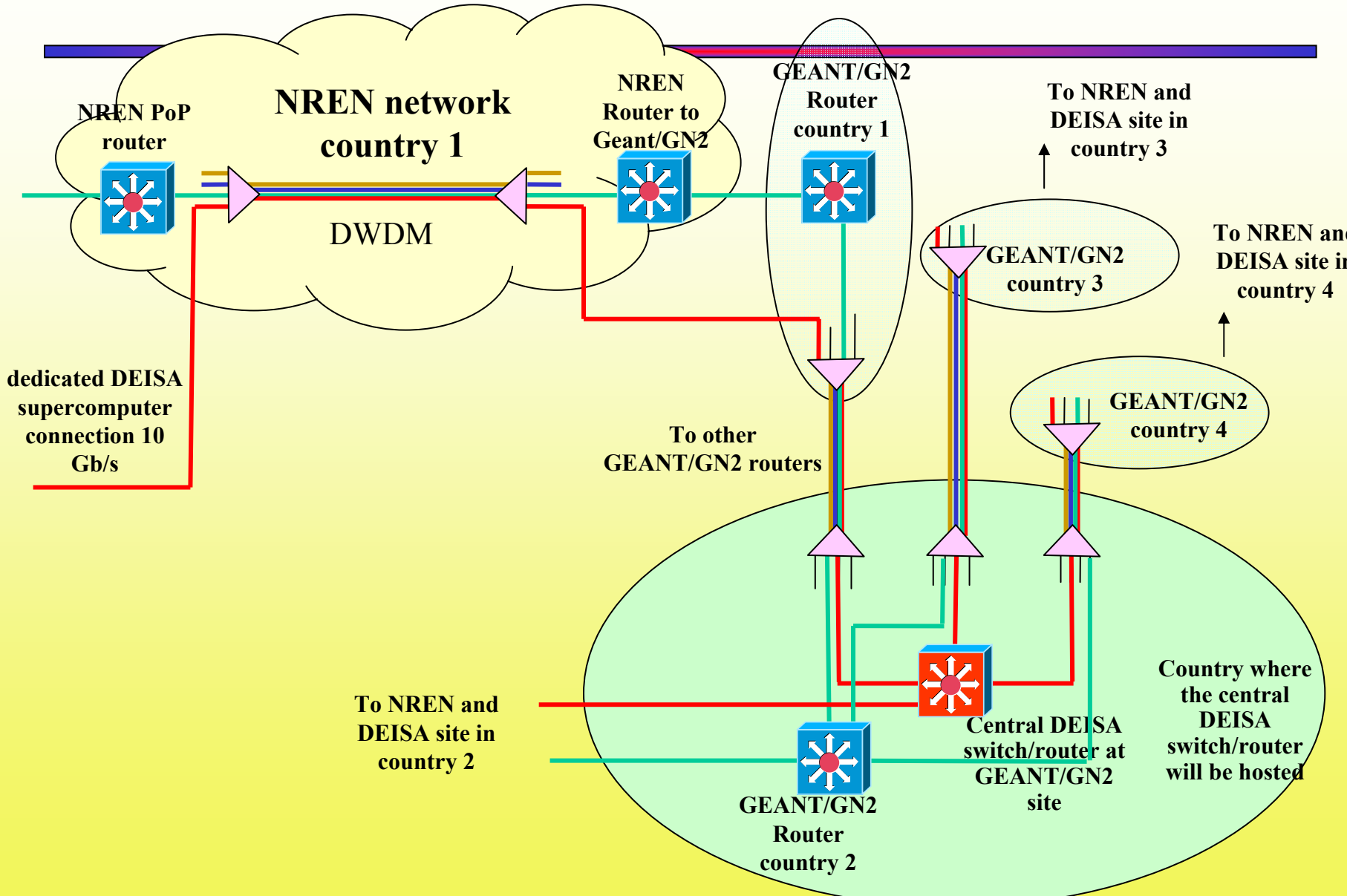


Description to

„DEISA supercomputer and normal site connect“

- Slide shows DEISA supercomputer connection (10 Gb/s) and normal site network connection (e.g. at FZJ)
- Two connections go to the NREN PoP (e.g. at Jülich/ Germany)
- NREN forwards these connections to NREN PoP where GEANT/GN2 connection resides (GEANT/GN2 PoP) (e.g. using DWDM equipment) e.g at Frankfurt/Germany
- NREN connects normal NREN IP connections to GEANT/GN2 router and DEISA wavelength as a second connection to GEANT/GN2 (e.g. Geant/GN2 PoP also at Frankfurt Germany)
- GEANT/GN2 forwards DEISA wavelength to location of central DEISA(GEANT/GN2) switch (e.g. somewhere in Europe; could also be at Franfurt/Germany)
- All other DEISA sites 10 Gb/s connections, preferable wavelengths, will also arrive at this GEANT/GN2 location, so that DEISA routing can be done there)

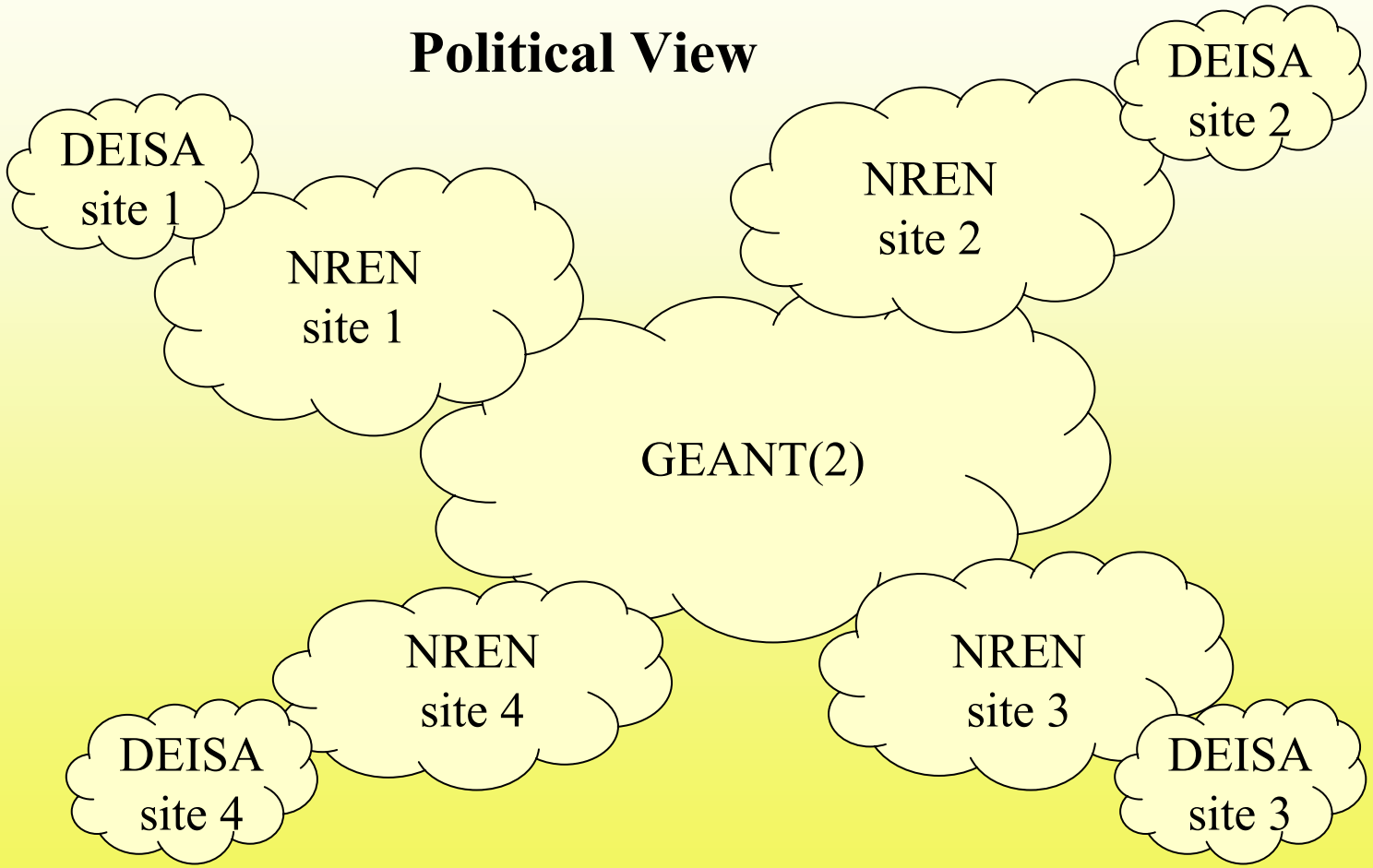
European view of DEISA network and normal IP connect



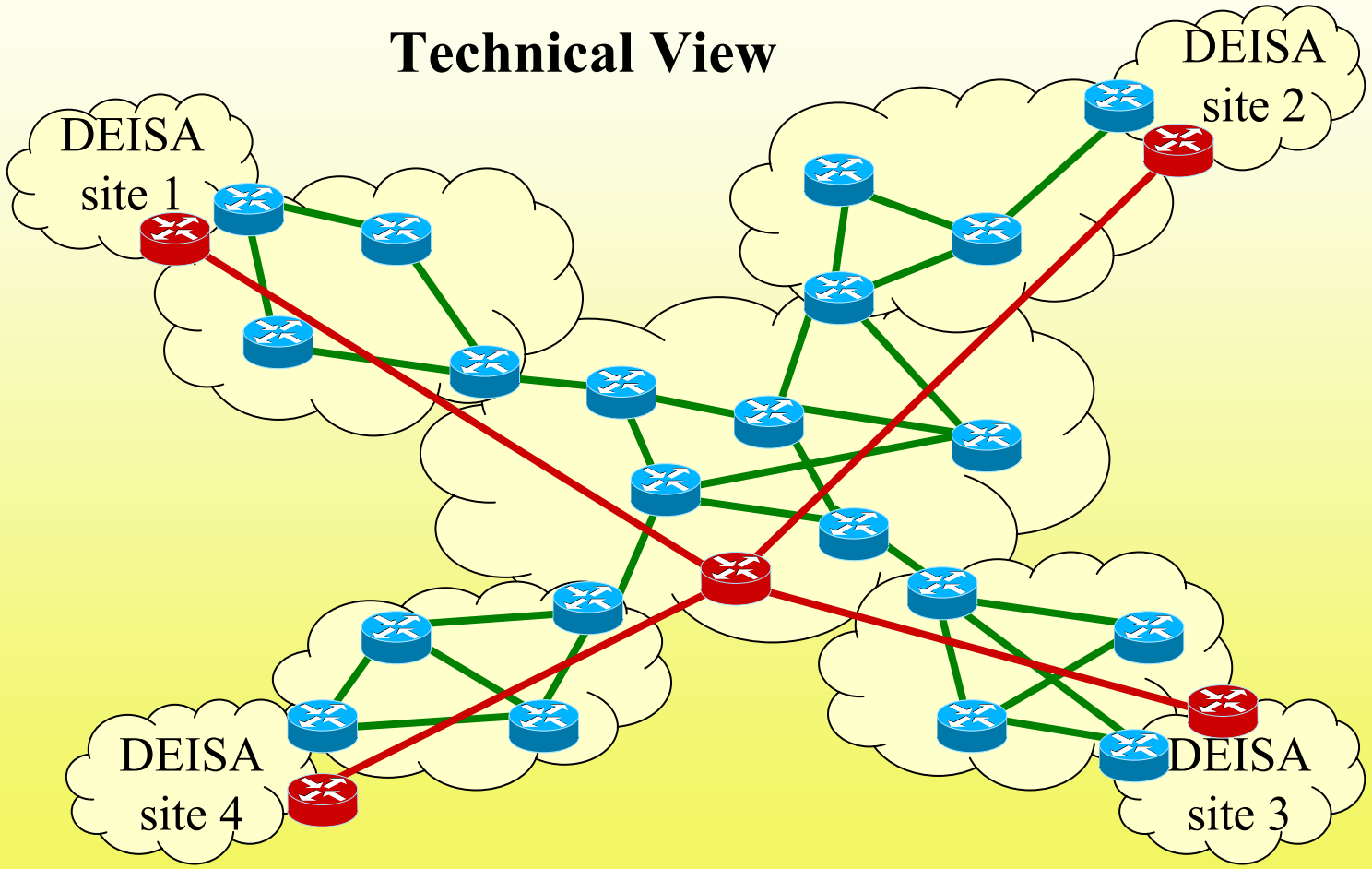
Description to
„European view of DEISA network and normal IP connect“

- Slide shows European view of DEISA and normal IP network
- Connections will be realized independent of each other and may be transferred via the same fiber (different wavelength). However, other scenarios are possible (TDM, different fibers, different paths, …)
- The location of the DEISA switch router should be determined according to financial issues, technical issues, footprint availability, … by GEANT/GN2
- Management of the DEISA switch router can be done by GEANT/GN2 or DEISA network staff. It has to be agreed on this issue.

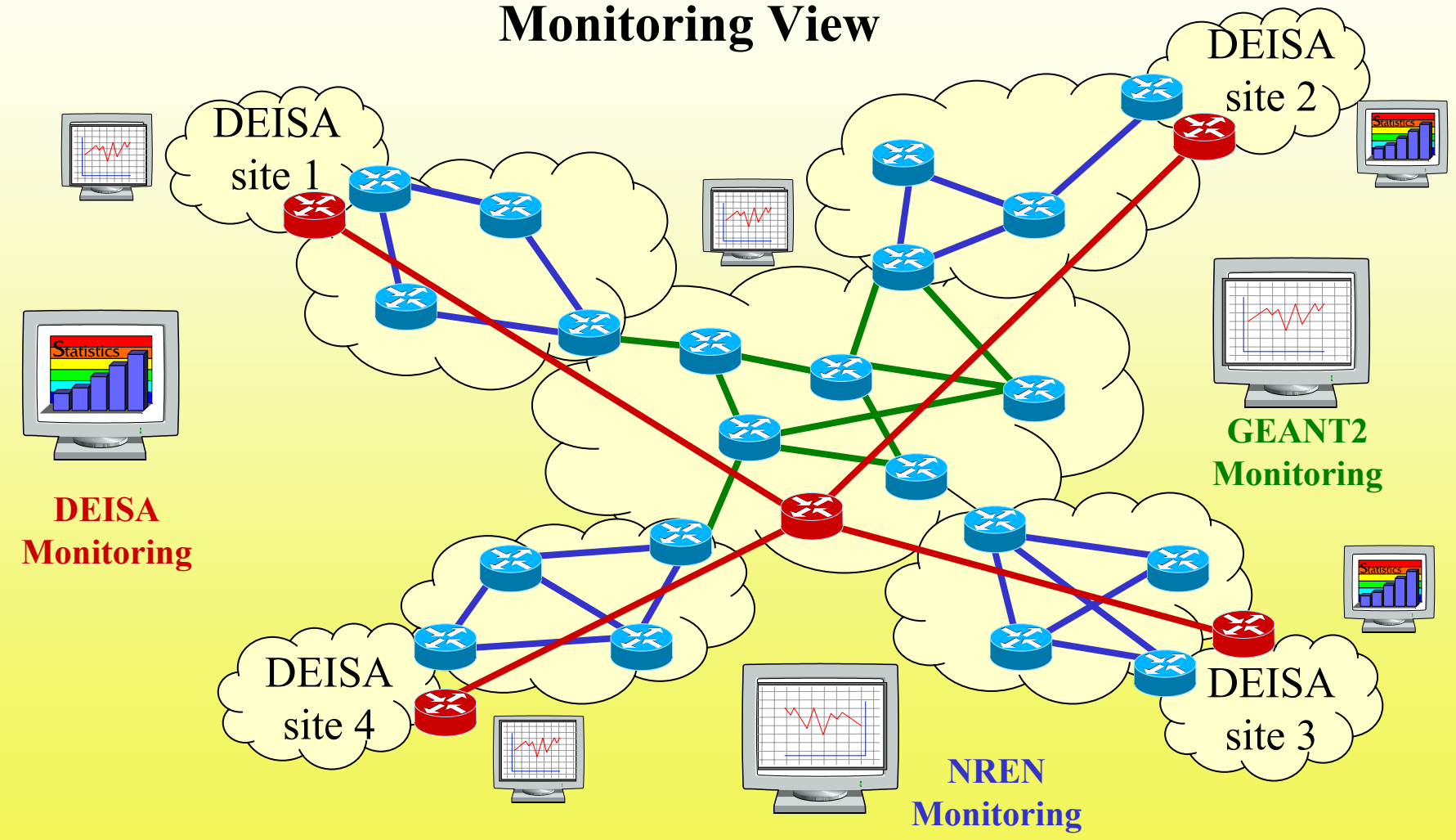
Different logical infrastructure views



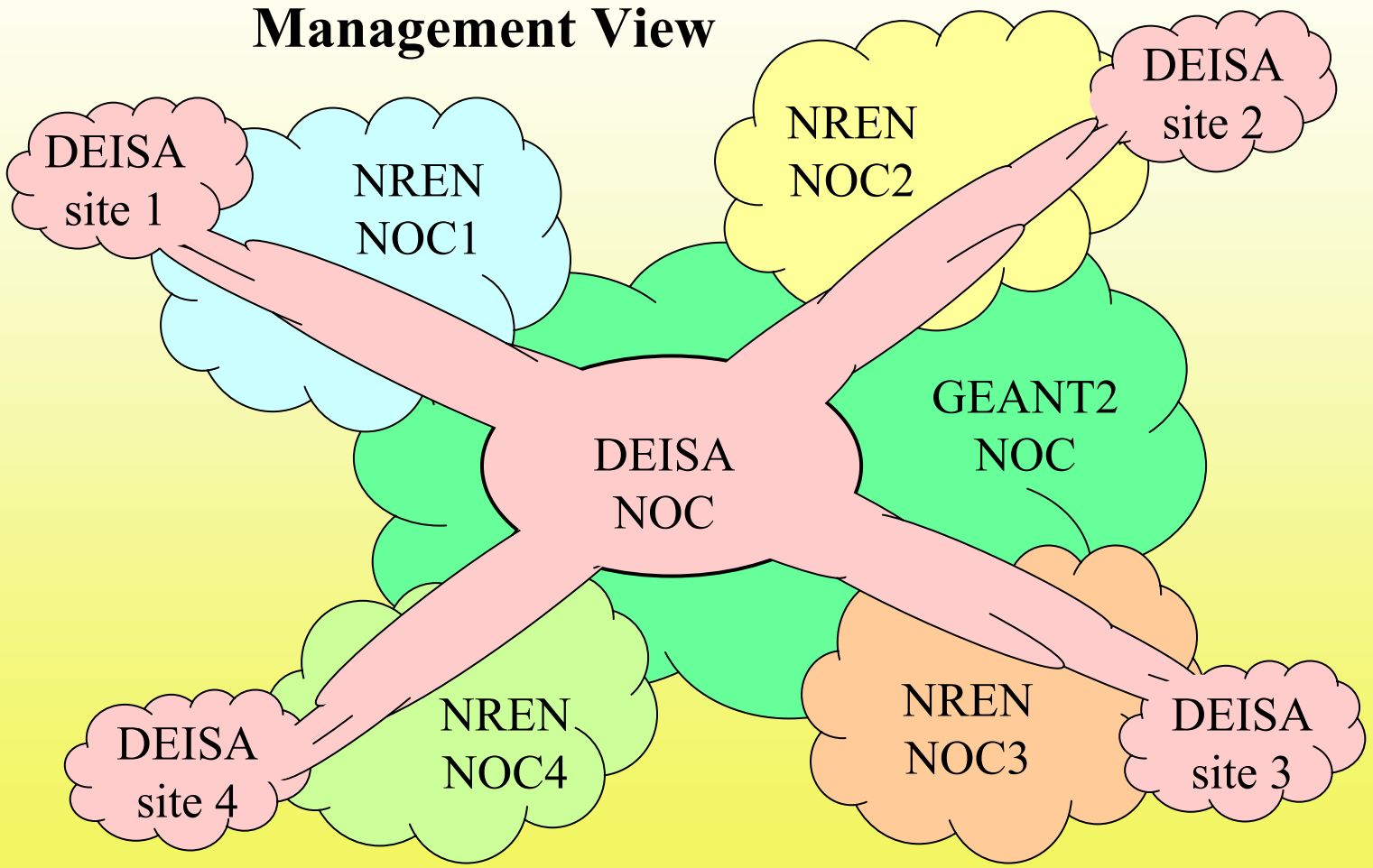
Different logical infrastructure views



Different logical infrastructure views



Different logical infrastructure views



Questions ???