DCN GOLE: Vision and Challenges

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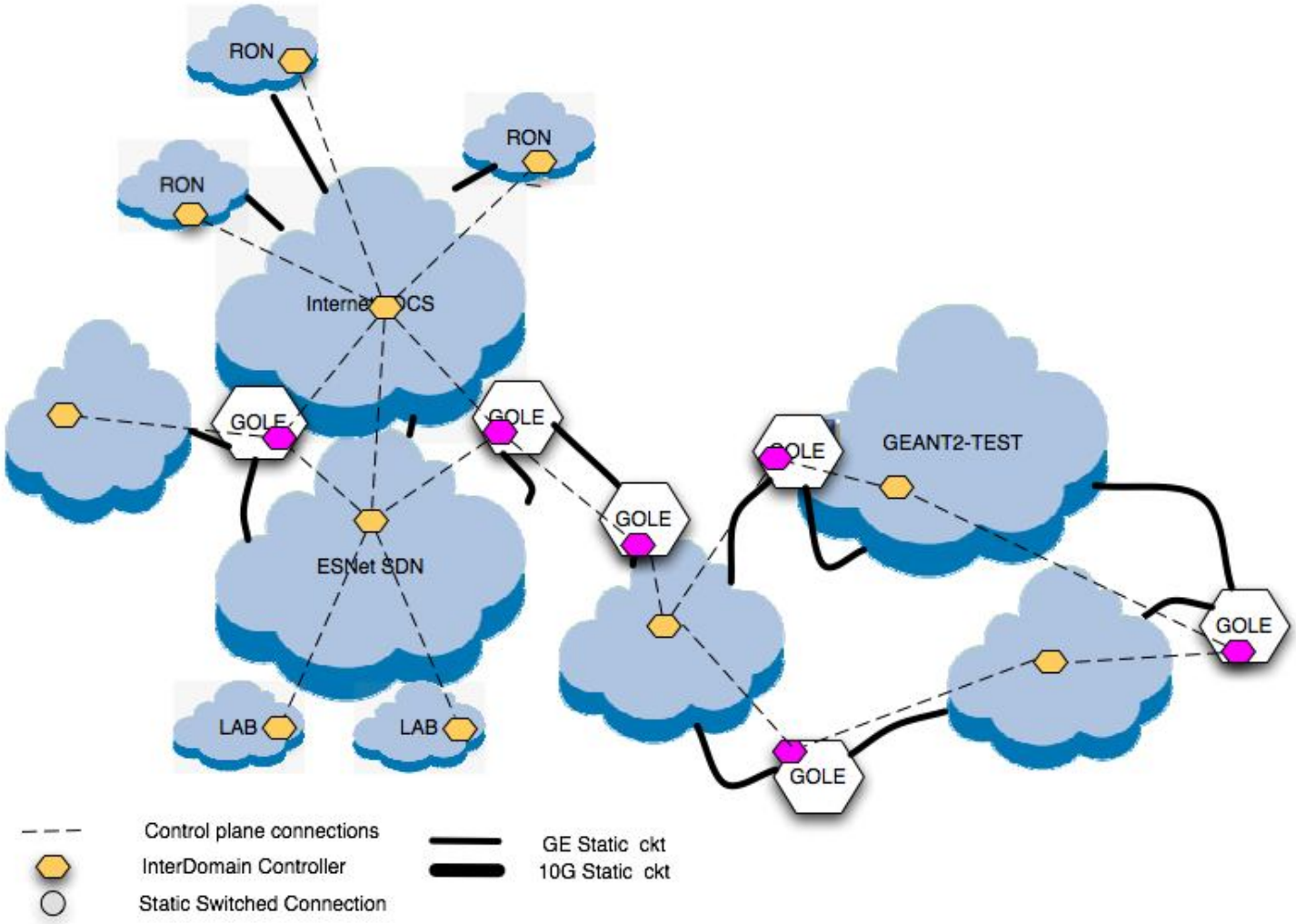
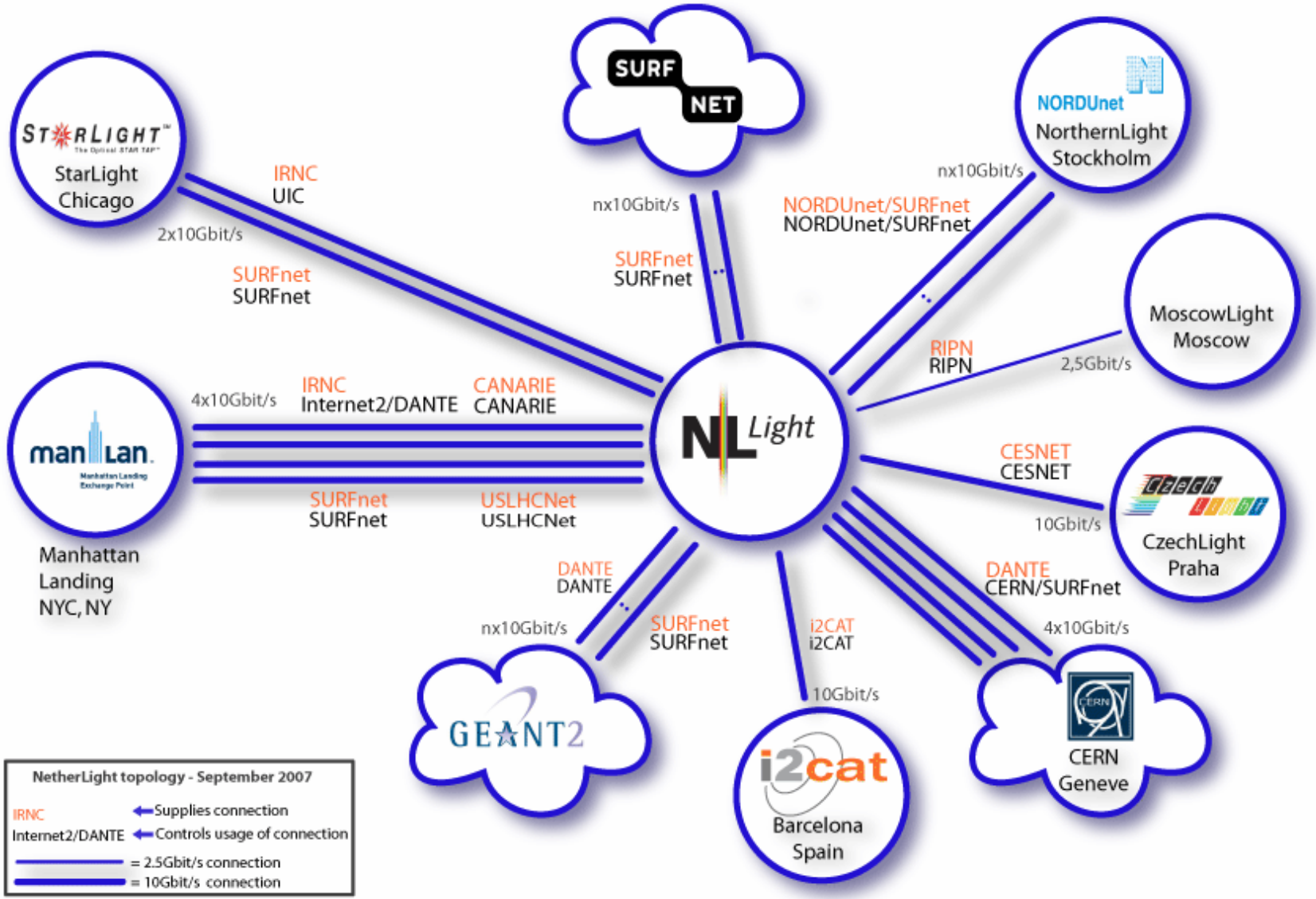
DCN GOLEs

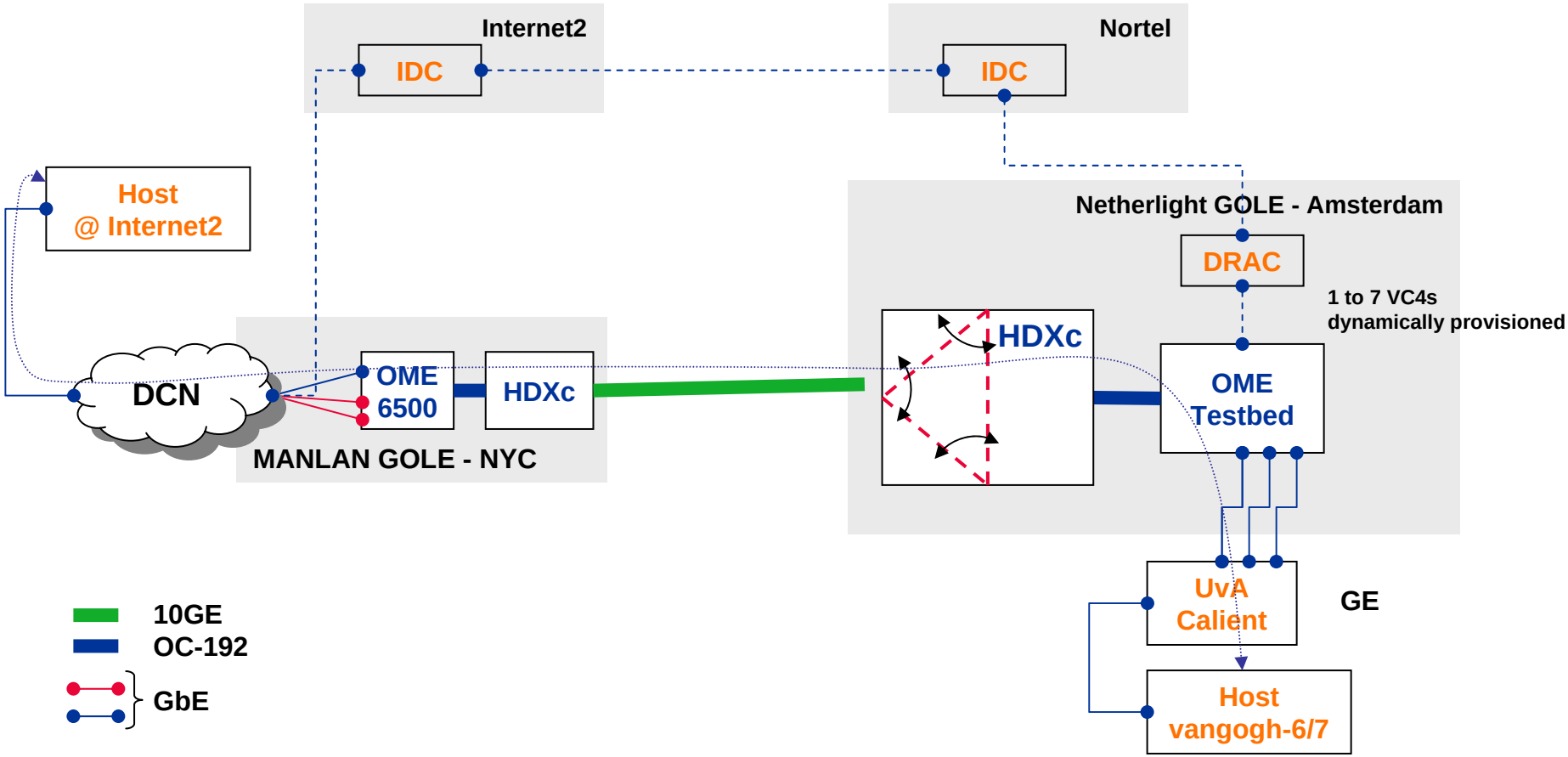
Automated Exchange Points for Dynamic Circuits



DCN GOLEs
Dynamic World-wide Mesh



DCN GOLE Demonstration



Operational Issues

- Policy
  - Can GOLEs truly be policy free?
- Global Scheduler
  - How do the intra-domain schedules affect inter-domain connections?
  - Can we exchange “availability” in addition to topology based on internal schedules?
- Holding time for circuits/Preemption
  - Is the project really using the circuit?
  - Administrator/NOC control?
- Any others?

Possible GOLE policies

- Individual DCN GOLE is policy free
  - GOLE is non blocking
  - If both links agree path between them is made
  - This is initial demo being done at here and at JT
- When GOLEs connect to each other
  - Link between GOLEs is limited resource
  - Now have to have policy that determines what is allowed on inter GOLE link
- GOLE role :) may be
  - “superdomain” aggregating info on other domains
  - Part of GOLE domain that consists of only GOLES, administered by some standards body
- GLIF role in defining DCN GOLE?

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