



German Internet Exchange

DENOG1

DE-CIX technical update

arnold.nipper@de-cix.net

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German Internet Exchange

DE-CIX infrastructure today

- 9 Force10 TeraScale E1200 for customer access ports
 - DE-CIX1/InterXion FRA1: 2x
 - DE-CIX2/InterXion FRA4: 3x
 - DE-CIX3/TeleCity Gutleut: 1x
 - DE-CIX4/Kleyerstrasse 90: 3x

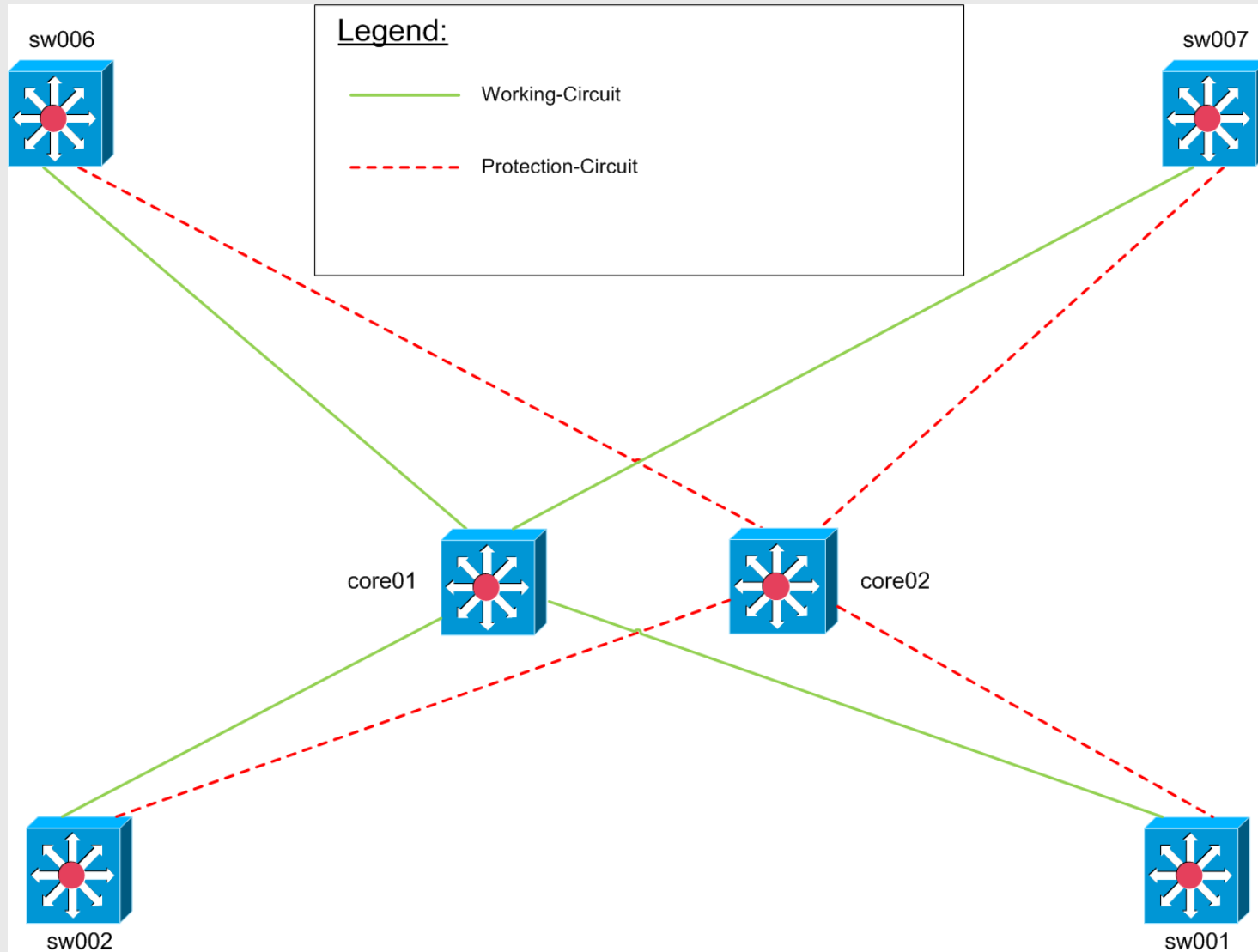
- 2 Brocade MLX32 core switches

- 4 access switch locations and 2 core switch locations (DE-CIX2 and DE-CIX4)

- 18 dark fibers running passive DWDM with up to 16 wavelengths
 - Half on north route, the other half on south route

- 950 Gbps interconnect capacity in total

Design of the infrastructure

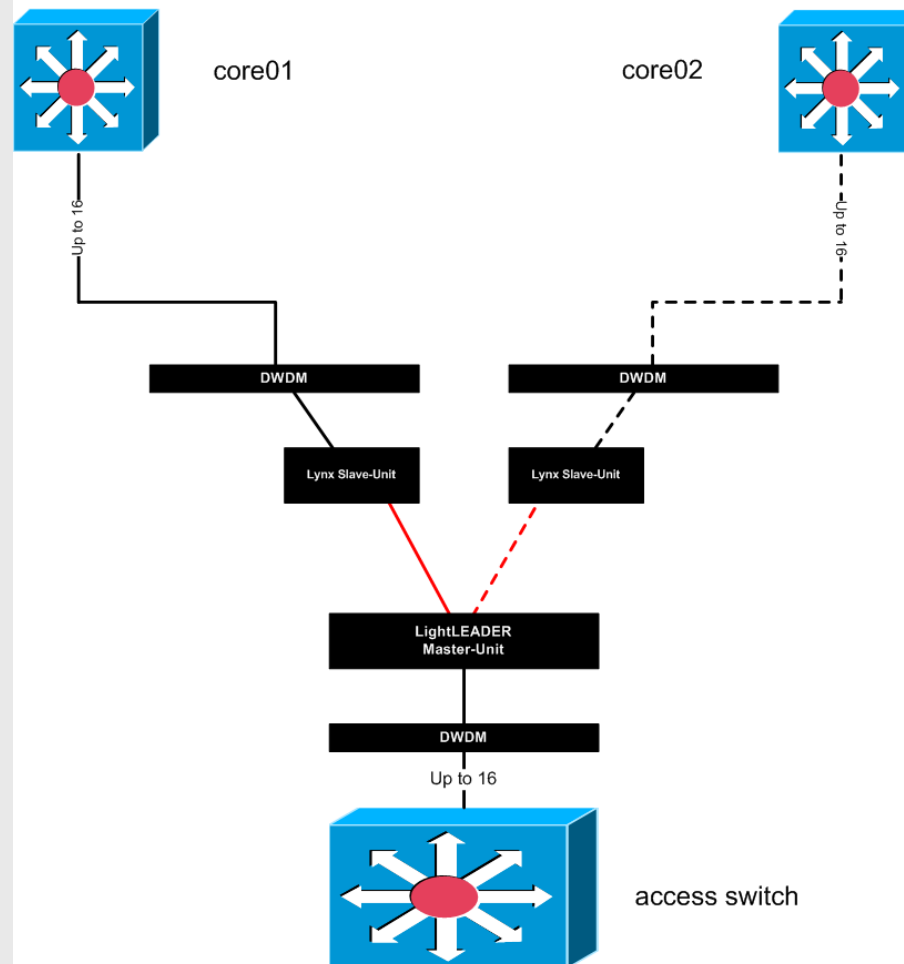


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details

Info:

- All lines are duplex fiber pairs!
- duplex fiber pair (working-link)
- - - - - duplex fiber pair (protection-link)
- n— n fiber pairs (bundle)
- darkfiber (~10km length)



DE-CIX infrastructure Q1/Q2 2010

- 10 Force10 TeraScale/Exascale E1200 for customer access ports
 - DE-CIX1: 2x
 - DE-CIX2: 3x
 - DE-CIX3: 1x
 - DE-CIX4: 3x
 - DE-CIX6/InterXion FRA5: 1x (12/2009)
- 4 additional access switches - vendor needs to be selected
 - DE-CIX1: +1
 - DE-CIX2: +1
 - DE-CIX3: +1
 - DE-CIX4: +1
- 2 core switches
- 2 additional core switches – vendor needs to be selected
- 5 -6 access switch locations
- 28 dark fibers running passive DWDM with up to 16/32 wavelengths
- ~1250 Gbps interconnect capacity in total

Projects we're working on

- BSI certification / CMDB
 - Dr. Thomas King

- Route server improvement and testing
 - Stefan Jakob
 - Sebastian Spies (intern)

- ALP-IX expansion
 - Bernhard Hahn

- Monitoring infrastructure improvement
 - Jan Stumpf
 - Maximilian Schmidt (intern)

- Implementing access switches sw009 (DX4) and sw010 (DX6)
 - Thomas Kehlenbach

- Planning edge and core expansion 2010
 - Daniel Melzer