



**DE·CIX**

**Where networks meet**

# DE-CIX update

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**SwiNOG 23**

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Where networks meet



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## Agenda

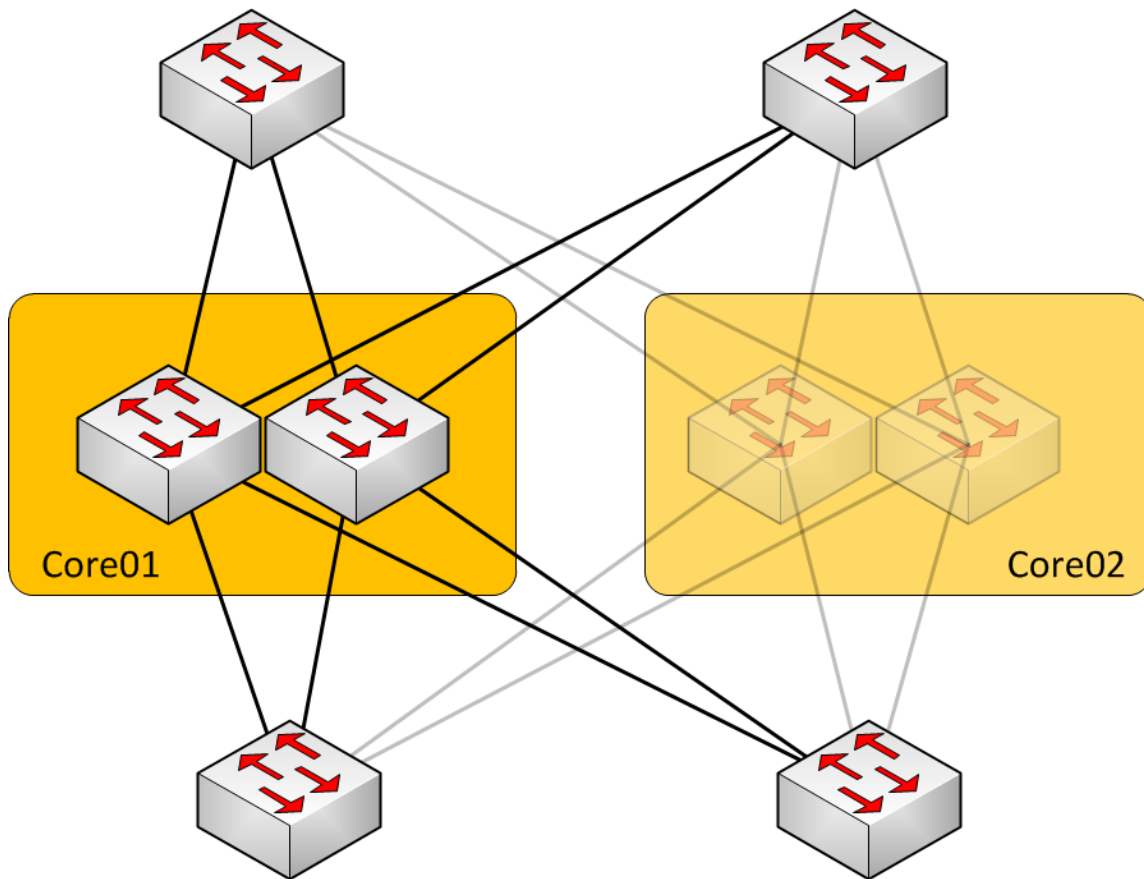
- Next Generation Network Design Principles
- Update on other sites
  - DE-CIX Düsseldorf
  - DE-CIX Hamburg
  - DE-CIX Munich
- Reseller Programme



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## DE-CIX – Current Topology



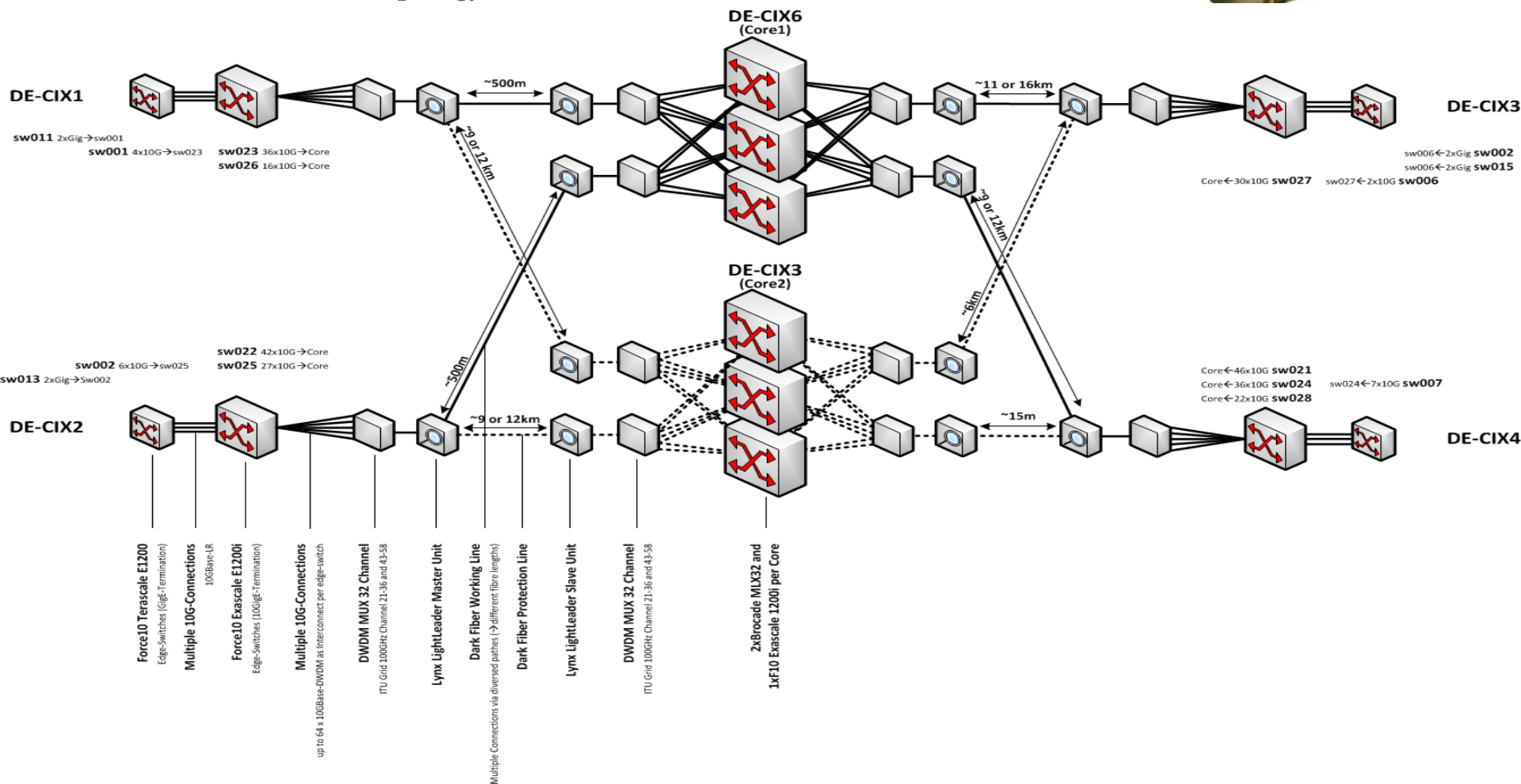
- Resilient Star
- Dual Core
- Layer 1 Redundancy
- 600 links have to be switched during failover
- Traffic still growing massively, now peaking at 1.6Tbps



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# DE-CIX – Current Topology

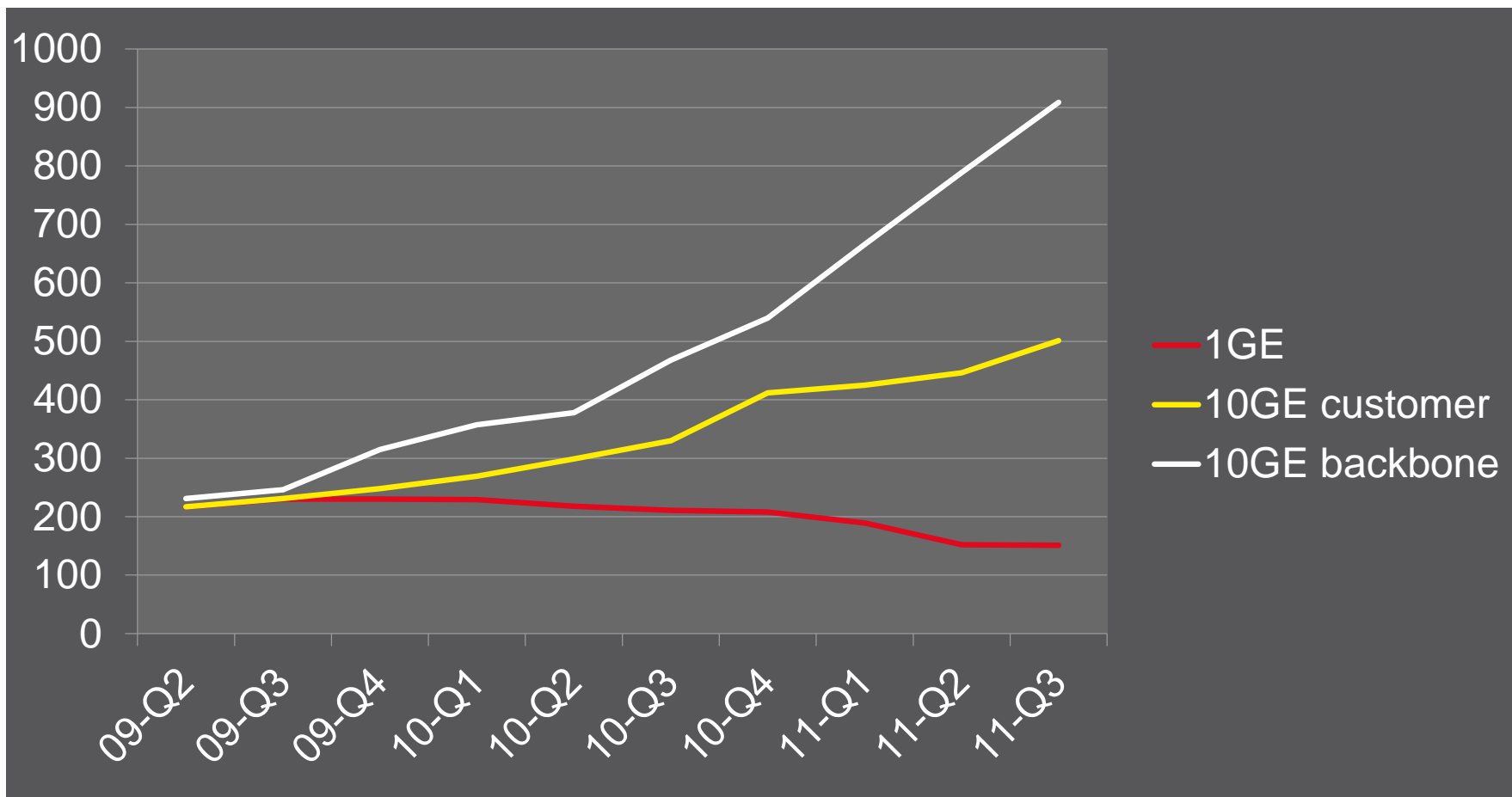




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### Port growth Q2-2009 – Q3-2011

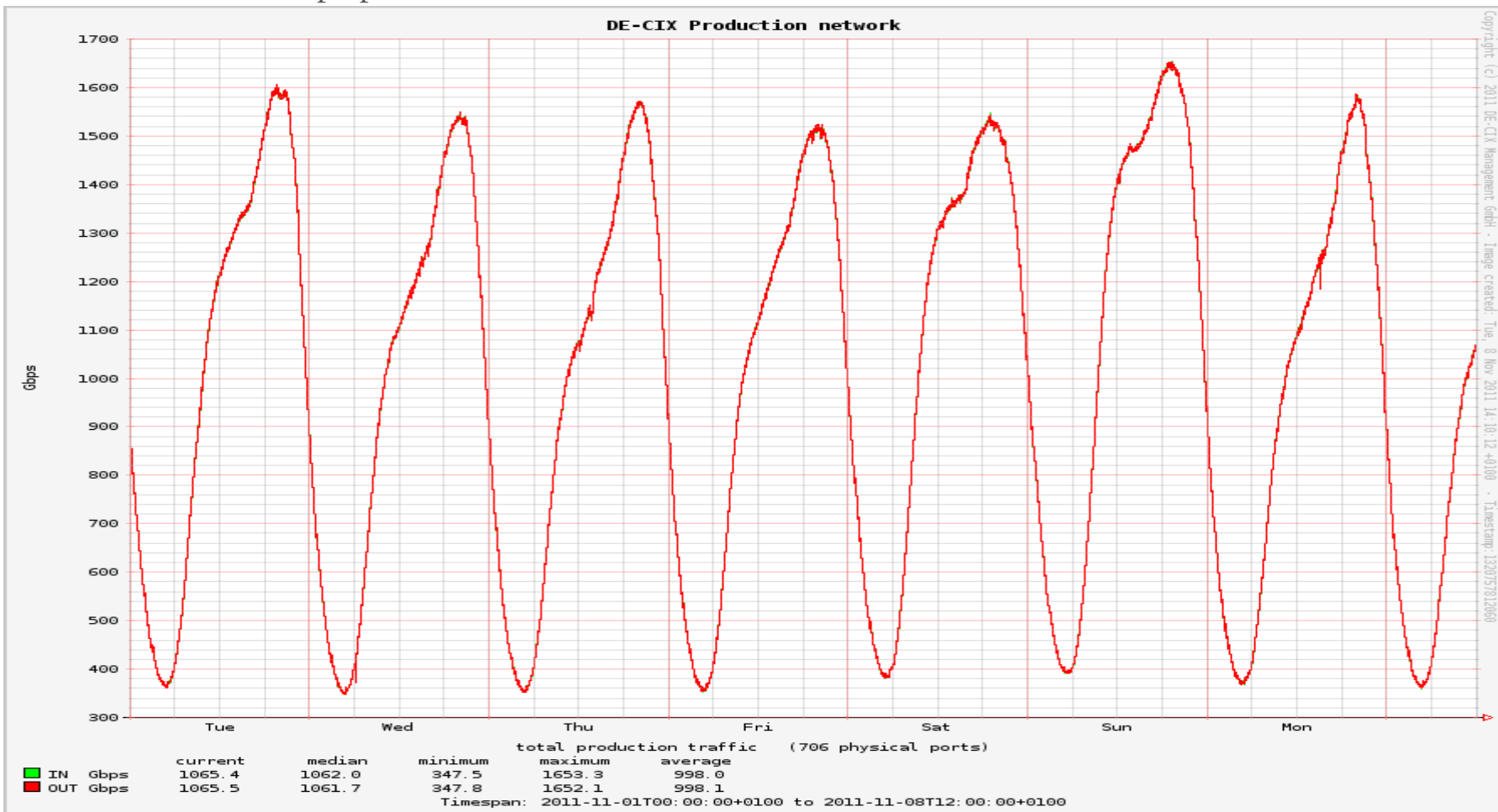




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Traffic - 1,65 Tbps peak traffic

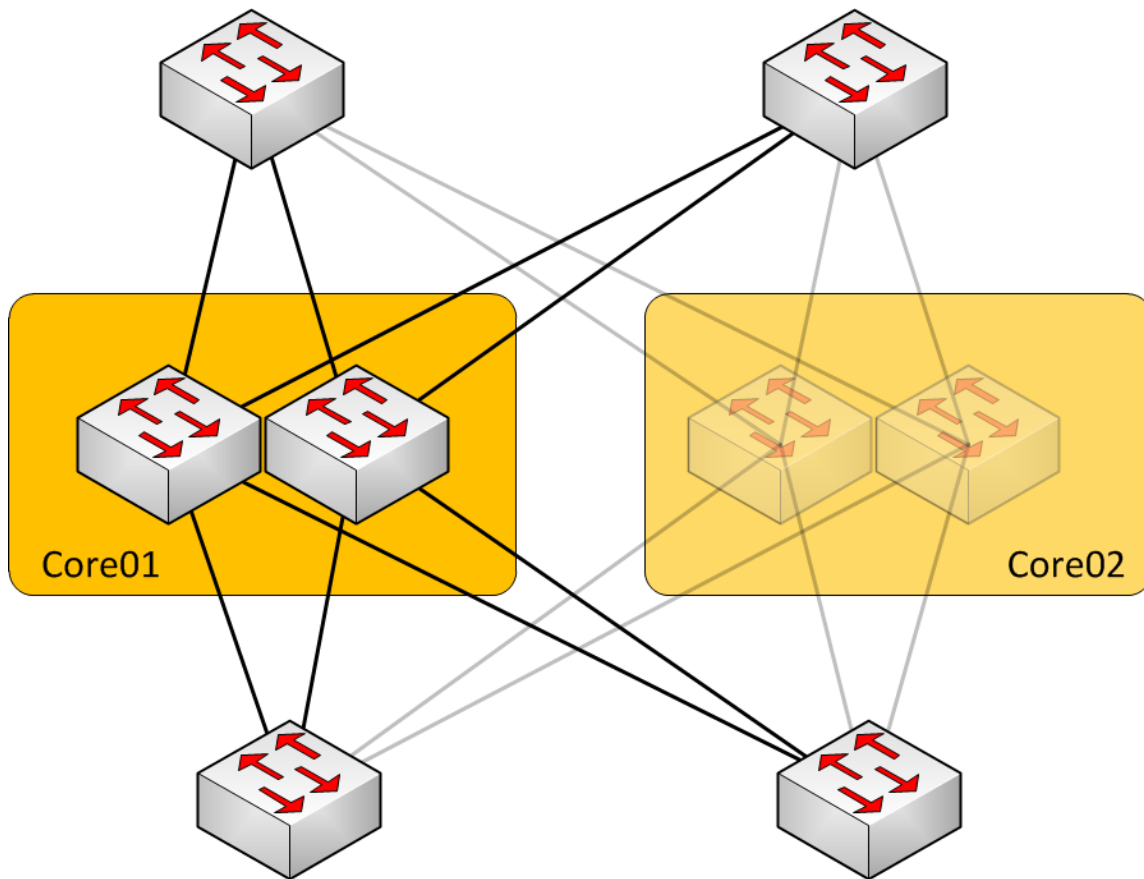




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## DE-CIX – Current Issues



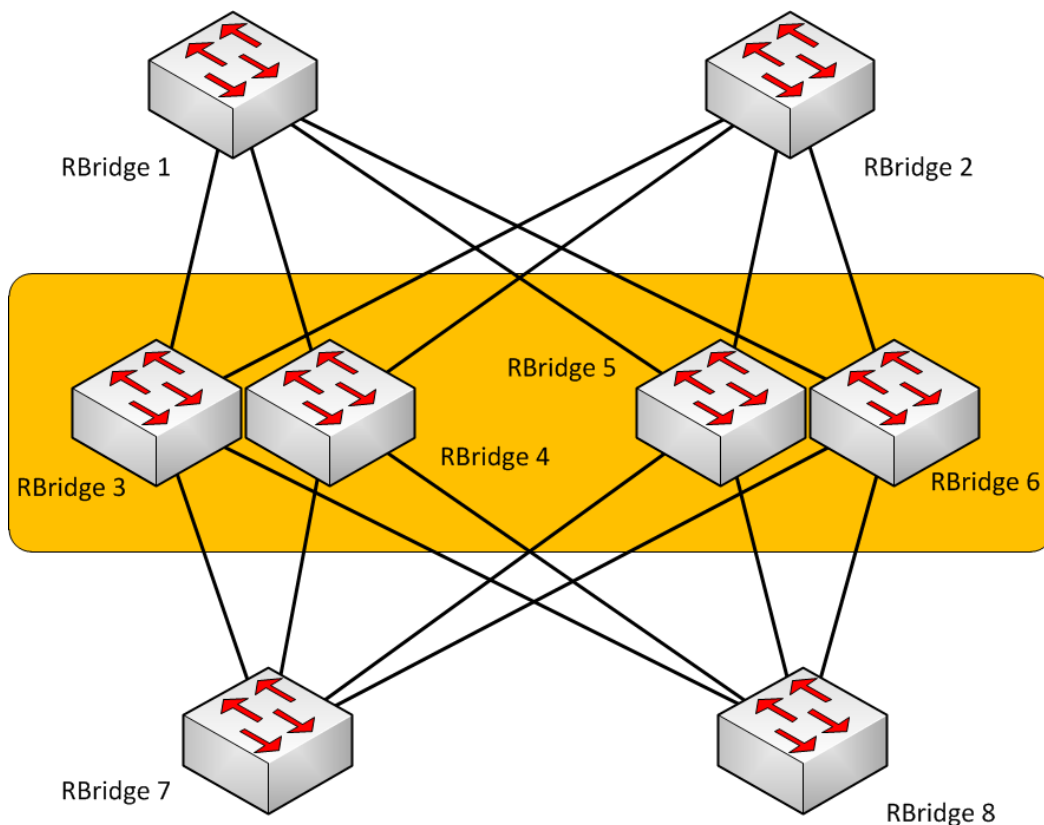
- No LACP
- MAC learning problems
- Blackholing
- No solution for loadbalancing and redundancy above Layer 1



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## TRILL @ DE-CIX

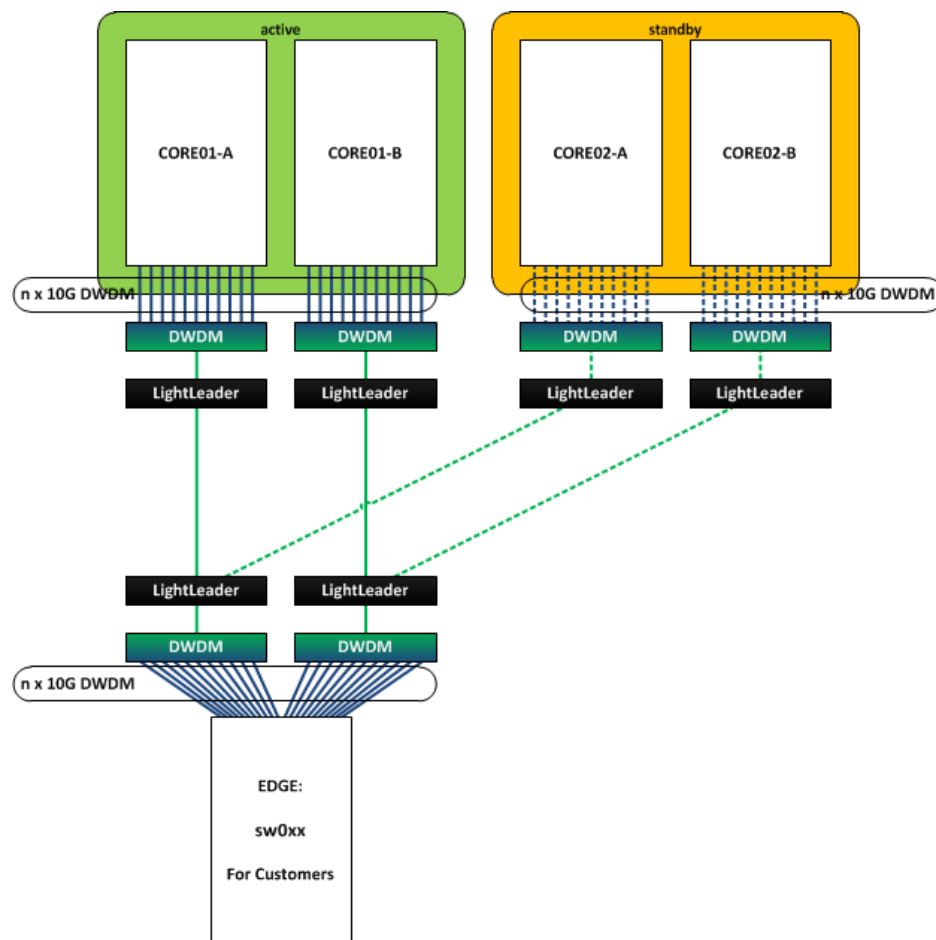


- All devices TRILL enabled
- No unused redundant links
- ECMP load balancing
- Big Edge switches
- Small core switches



## DE-CIX Production Network 2011

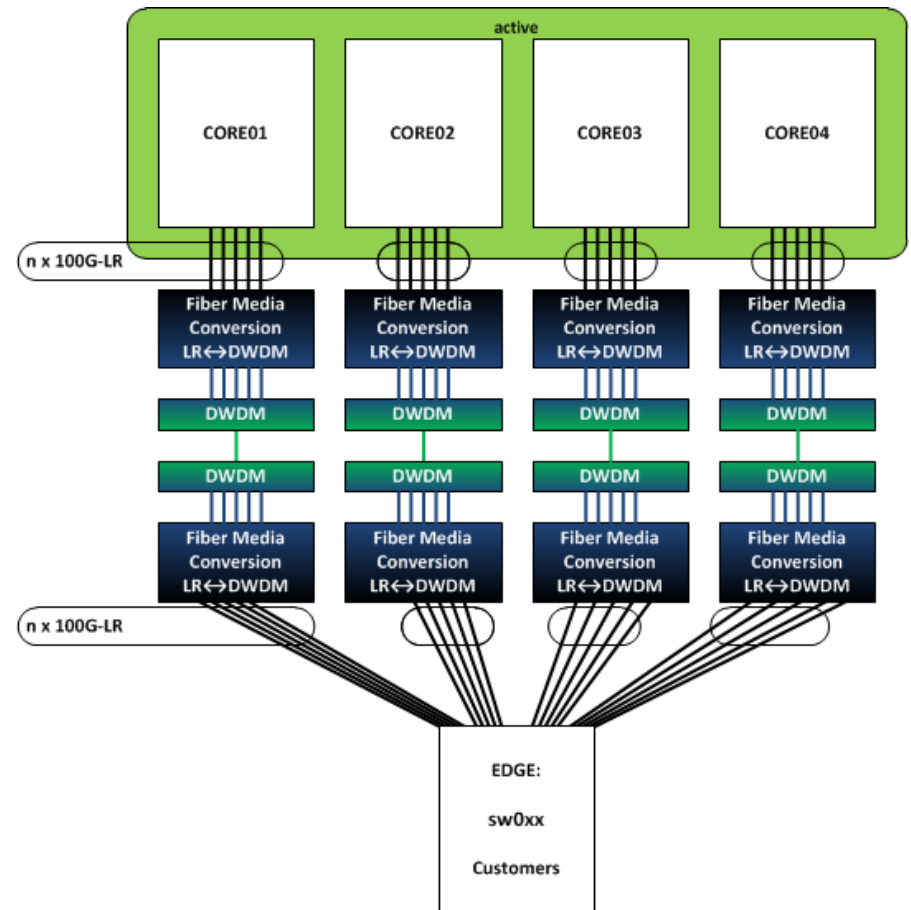
- Passive DWDM equipment with up to 32 channels
- DWDM-XFP optics used at Core and Edge Switches
- failover is done by fast, mechanical optical switches (Lynx Lightleader)
  - in case s.th. breaks
  - scheduled every two months
  - post processing is more and more time consuming (adjusting light levels)
- provisioning of additional links can not be fully tested on the standby links

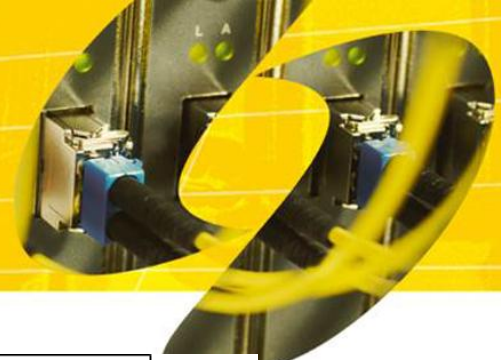




## Optical Network Design

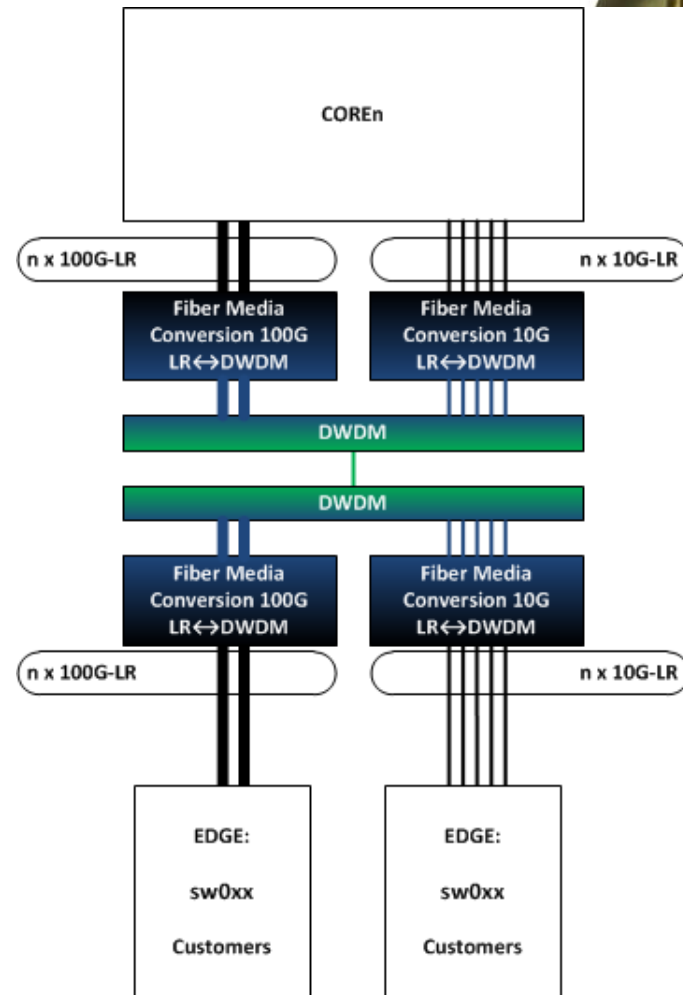
- Using 100G connections instead of 10G connections
- active DWDM equipment to be more flexible on client side
- new DWDM equipment with up to 80 x 100G connections per Dark Fiber
- all links permanently active





## Possible Set-Up at DE-CIX

- usage of active DWDM
  - 10G and 100G in parallel for smooth transition





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## Update on other sites / AOB

- Creating a single brand
- Renaming exiting sites
  - WORK-IX → DE-CIX Hamburg
  - ALP-IX → DE-CIX Munich
  - New site: DE-CIX Düsseldorf
  - All products will be available at a single portal (<https://www-beta.de-cix.net/products-services/>)
- Reseller Programme
  - More info available at <https://www-beta.de-cix.net/products-services/de-cix-reseller/>



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Thank you

Join DE-CIX now!

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