



Nikhef Site Report

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Outline

- Storage
- Windows
- Network
- Linux
- Virtualization
- Data Center
- LCG-Tier 1

Storage Situation

- Backup
 - TSM
 - @SARA
 - NFS
 - Windows ACL's
 - NDMP
 - Duration
 - Extending Volume
 - HSM
 - Active on FC
 - Inactive on SATA
 - Access Date
 - Transparent for Users
- Disaster Recovery
 - TSM Restore
 - Replica @SARA

Storage Hardware 1

- EMC NS502
 - 4 TB
 - FC
 - SATA
 - 4 Years
 - Maintenance Costs
- EMC NS120
 - 20 TB
 - FC
 - SATA
 - Snapshots
 - 7 daily
 - 4 weekly

Storage Hardware 2

- iSCSI
 - Infortrend
 - EonStor A16E-G2130-4 (1)
 - EonStor S16E-G1130 (2)
 - 16 TB
 - /data
 - NFS VM
 - Performance
 - Read
 - Write

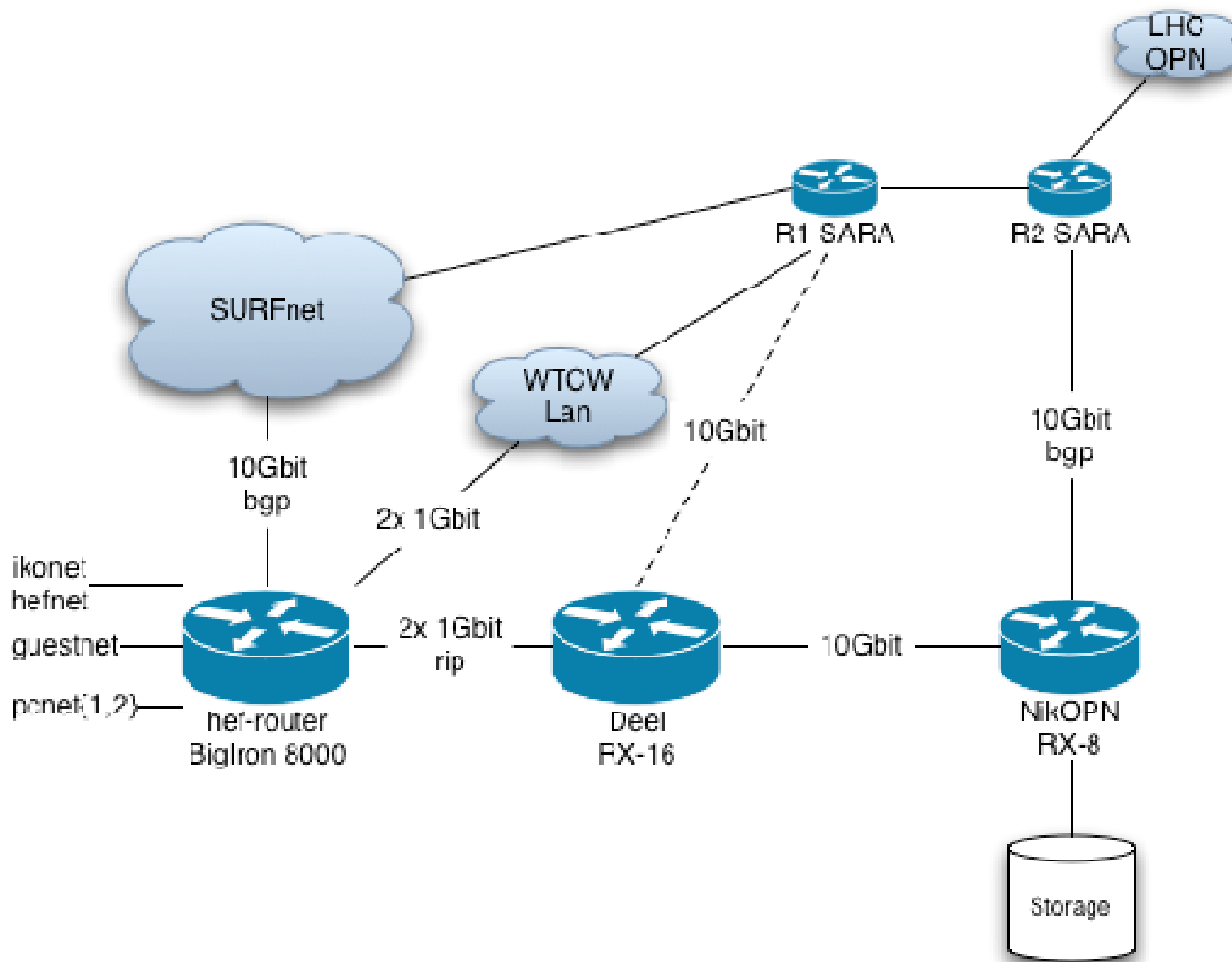
Windows

- Symantec AntiVirus 11
 - Server Database
 - Corruption
 - Replicated
 - Tools
- Windows 7
 - Not yet
 - Laptops

Network 1

- Foundry BigIron 8000
 - 10 Years
 - Spare Parts
- Foundry NetIron MLX-8
 - 10 Gb
 - GRID
 - Servers / Switches
 - Firewall
 - Performance
 - Group Policy
 - ACL
- Wireless
 - 802.11n (Cisco AIR-AP 1252AG)

Network 2



Linux

- Desktop/Server
 - SLC3
 - Fased out (almost)
 - SLC4
 - Some Experiments
 - SL(C)5
 - 64 Bit
 - Firefox Plugins
 - Adobe Flash
 - Adobe Acrobat Reader (32 Bit only)

Virtualization

- Dell 1000e Blade Enclosure
 - 16 Blade
 - 2 Quad Core
 - 16 GB RAM
 - Internal Switches
 - VLAN
- Xen
 - Services
 - YP, DNS, HTTP, login
 - One per server

Data Center 1

- Build Inside
 - 2nd Floor
 - Library
 - 150 M² / 47 Racks
 - 400 KW
- Redundancy
 - Cooling
 - Valve
 - Alarms
 - Electricity
 - UPS Circuit Failure
 - PDU Readout
 - Feed A + B < 16A

Data Center 2

- Migration
 - Nikhef
 - 5 racks
 - 1 Evening
 - Core Services Interdependent
 - Servers not connected
 - GRID
 - 15 racks
 - 2 weeks

Data Center 3



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HEPiX

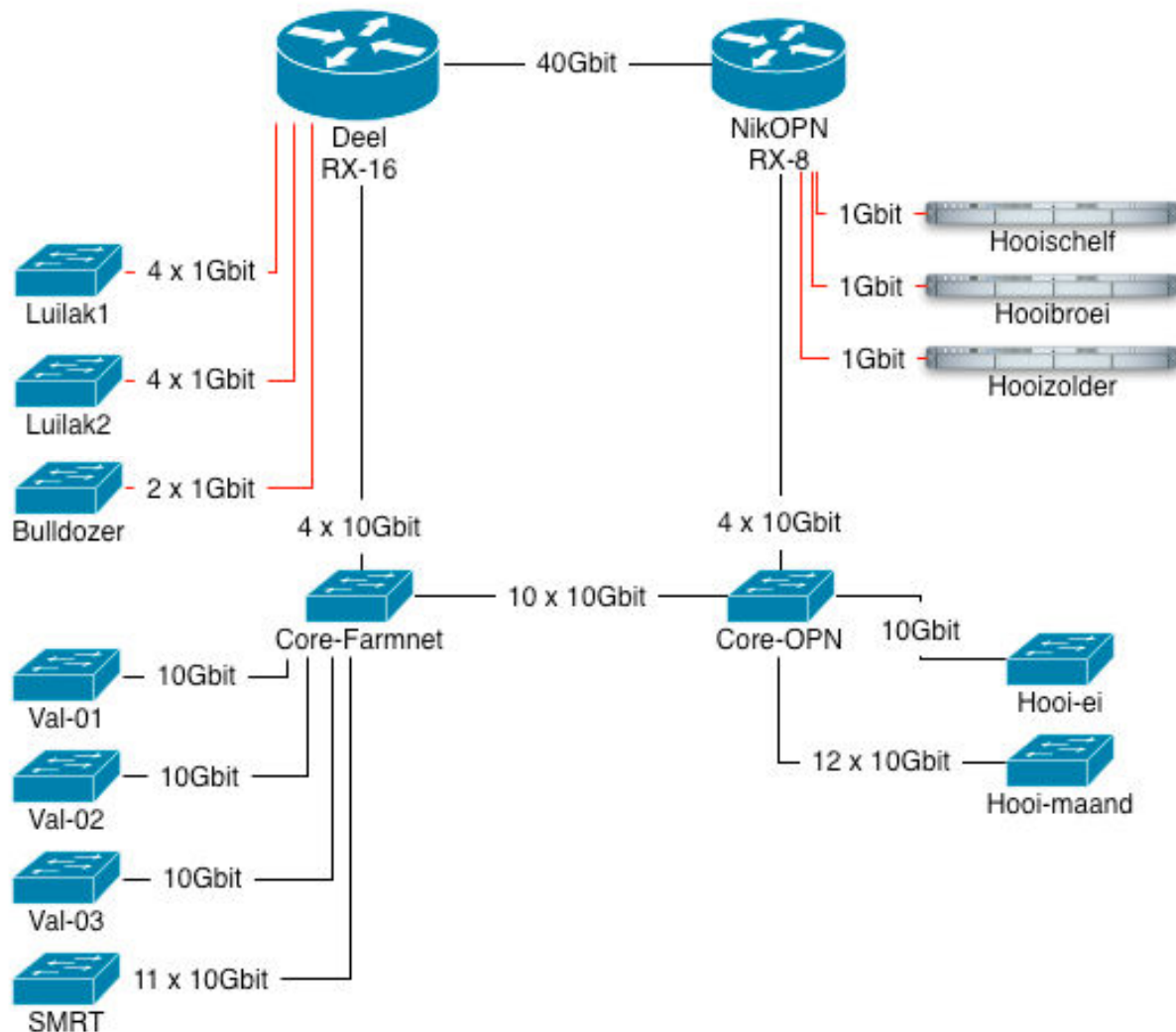
Berkeley, USA

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LCG-Tier 1

- Compute Clusters
 - HP Blade
 - 176 dual quad core L5520
- Storage Clusters
 - 12 Dell Servers
 - 936 TB DDN Infiniband
- Network
 - Arista 7148SX 48-port 10GbE
 - 16x10Gb/s Interconnect

LCG-Tier 1 Network



Questions?