Computing at MPI

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ATLAS, OPAL

Computing commission, chairman

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Personell C/N Group

Head of group: Leupold, U.

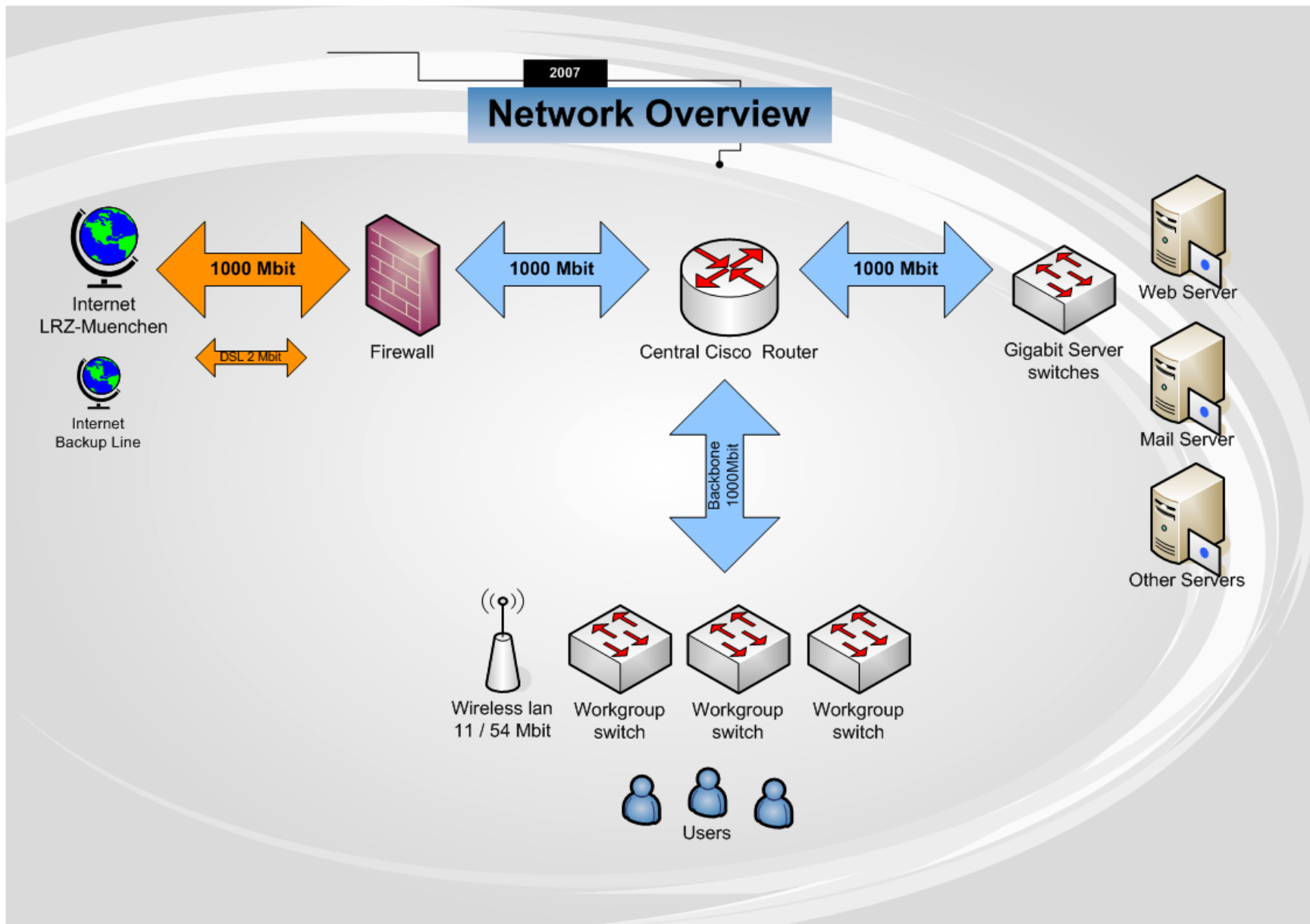|	Linux	MS	SW	LAN	HW	Pr	Grid
Leupold, U.	x	x	x	x	x		
Kriesel, A.	x(reg.)			x	x	x	
Kraemer, M.				x			
Pan, Y.	(x)	x					
Salihagic, D.	x		x				x
Vidal, M.	x(AIX)		x		x		
Krebs, K.				x			

Hardware Overview

- Central servers
  - batch farm (15 dual CPU servers), condor
  - 18 fileservers with 38 TB
  - mail, web, DNS, accounts, backup
- Experimental and engineering groups
  - > 300 PCs, 2/3 Linux, 1/3 MS, Intel and AMD, partially condor
- Theory group
  - ~80 PCs (Linux), Intel and AMD, condor

Hardware News

- Homedirectory servers (ATLAS)

  - keep home directories on central nfs

- Oracle 10 Servers (MDT, cms)

  - database services

- Restructering of central services

  - new racks, better cabling, partial server replacement

LAN

Software overview

- OS
  - Linux (MPI, Debian (ATLAS), peb (theory))
  - AIX (going fast), Solaris (Elektronik)
    - MacOSX, VMS without C/N support
  - MS Windows (Admin, Labs, h1win, thwin)

- Applications/libraries
  - Mathematica, Maple, Portland pgf compiler, IDL, NAG, Matlab (Theory); xlf on OSX (Exp.)
  - OSS in consultation with C/N group

MPI computing commission

- Subcommittee of IA

  – Members: Bethke, Hahn, Kluth, Leupold, Wagner, (Schieck), (Reimann)

- Mandate

  – oversight of C/N operations

  – medium- and longterm planning

- Please consult before buying hardware or requiring services

Rahmenverträge

- MPG joined procurement contracts for IT

  – Hardware, LAN, software, services

  – order without tendering procedure

  – competetive prices (still check F&L prices)

  – FSC, HP(LAN), Acer, IBM, Dell, ...

- Experience

  – Good for standard orders

  – Companies respond well

Current activities and plans

- Hardware replacements

  – new servers for mail, web, h1win, thwin, indico, backup

  – new WLAN access points (54 Mb/s)

  – begin replacement of 100 Mb/s edge switches

  – 2nd Oracle server ATLAS/MDT

- Software

  – Migrate ATLAS to Debian 4.0

  – ...

Computing at RZG

- ## MPP Linux cluster at RZG

    - 9 IBM BladeCenter, 126 servers

        - HS20 dual Xeon 3/3,2 Ghz, 4 GB RAM

        - HS21 dual Xeon quad-core, 16 GB RAM

    - ca. 60 TB Fileserver

    - SLES9, SGE, LCG3/glite, mr-afs, dcache

- ## New hardware for christmas

    - 4 BladeCenter with HS21

    - 14 storage server with 250 TB

Computing at RZG

- Operation

  – Main users ATLAS (WLCG), MAGIC

  – Open for all MPI groups (10% share)

- Usage

  – need RZG account (vie web-form)

  – direct access e.g. "ssh s01.t2.rzg.mpg.de"

  – direct access to dcache storage

Computing at RZG Experience

- Hardware

  – CPU Server: no failures

  – Fileserver: stable this year (all disks replaced)

- Software

  – install dcache (ATLAS/glite/LCG)

- Operation

  – usually efficient, 5x8 support

  – support@rzg.mpg.de

Computing at RZG

- Major expansion ongoing
  - ATLAS Tier-2/3 and MDT calibration centre
  - MAGIC analysis centre
  - Other MPI groups?
- Other tasks possible at RZG
  - AIX (xlf)
  - Parallel computing