Failure data

Links found by students of the dependability modeling measurement for infrastructure components.

Links found by students

HW components

- Cisco networking components.
  http://www.cisco.com/univercd/cc/td/doc/product/cable/ubr10k/ubr10012/hig/u10kspec.htm#wp1009804
- Cisco Catalyst switch: MTBF ~ 200.000 hours
  http://www.cisco.com/en/US/products/hw/switches/ps628/products_data_sheet09186a008033a436.html
- Cybernetics iSCSI tape drive: MTBF 400.000 hours
  http://www.cybernetics.com/backup_solutions/ait/d05_itape.htm
- Fujitsu Serial Attached SCSI (SAS) hard drive: MTBF 1.4 million hours
  http://www.fujitsu.com/us/news/pr/fcpa_20050308-01.html
- HP Proliant servers: MTBF for SAS drives
  https://h30046.www3.hp.com/campaigns/2006/events/proliant_solutions_tour/images/ProLiant%20Servers_14July_v3-part1.pdf
- Alactritech iSCSI accelerator: MTBF 250.000 hours
  http://www.alacritech.com/html/iscsi_accelerator.shtml
- IBM IBM S/390 mainframe: MTTF 45 years
  http://www.research.ibm.com/journal/rd/435/spainhower.html
- HP Ultrium tape drive: MTTF 250.000 hours with 24 hours load
  http://www.managementsoftware.hp.com/products/datapro/twp/datapro_twp_backup_disk_perf.pdf

Applications

- Windows XP: MTTF 608 hours
  eTesting Labs: „Microsoft: Windows XP Reliability Study”, 2001
  Not free but referenced, for example here:
  http://www.enel.ucalgary.ca/People/far/Lectures/SENG635/PDF/Sample_reliability_measures.doc
- A longitudinal survey of Internet host reliability: In 1995 1170 computers Internet accessible were monitored for 3 months, average MTTF ~ 16 days:
  http://citeseer.ist.psu.edu/long95longitudinal.html
- Microsoft Solution for Internet Business, Performance and Capacity Planning:
  http://www.microsoft.com/technet/itsolutions/citsrv/ib/msib2tca.mspx
- Planning for Reliability and High Availability: Microsoft Commerce Server 2000
  http://msdn2.microsoft.com/en-us/library/ms942932.aspx
- Implementing Systems for Reliability and Availability: best practices and case studies for Windows NT. Some MTTF values at the beginning.
  http://www.microsoft.com/technet/archive/winntas/deploy/highaval.mspx?mfr=true
- Availability Modeling for the Sun™ Java System Application Server Enterprise Edition 7:
  http://www.sun.com/software/products/appsrvr/AS7EEHA0504.pdf

- Availability, Usage, and Deployment Characteristics of the Domain Name System: DNS servers
  http://www.cs.cmu.edu/~aditya/papers/p123-pang.pdf

Links found by us

- Maximizing Availability on the Windows Server 2003 Platform: Windows Server 2003 availability using measurements on 300 servers: 99.99%. Interesting diagram on page 5.
  http://www.microsoft.com/windowsserver2003/techinfo/overview/reliability.mspx
- A. Ganapathi and D. Patterson: „Crash Data Collection: A Windows Case Study",
  http://ieeexplore.ieee.org/iel5/9904/31476/01467802.pdf
- Event Log based Dependability Analysis of Windows NT and 2K Systems: 3 year, logs for 133 machines. Average availability: 95.42%
  http://ieeexplore.ieee.org/iel5/8447/26604/01185651.pdf?arnumber=1185651
- Measurement-Based Analysis of Networked System Availability: Unix workstations and Windows NT machines. Average availability: 99.35%, minimum: 89,39%, maximum: 99.99%
  http://www.springerlink.com/index/7RP6LN7DML7J2DEC.pdf
- Networked Windows NT System Field Failure Data Analysis: errors, faults, MTBF and MTTR values
  http://citeseer.ist.psu.edu/xu99networked.html
- Reliability of Internet hosts: a case study from the end user's perspective: availability of 100 web pages
  http://doi.ieeecomputersociety.org/10.1109/ICCCN.1997.623345

(Articles on Springer and IEEE pages are accessible from BME network, sometimes through the OMIKK E-journal pages:
http://www.omikk.bme.hu/main.php?folderID=27&articleID=48&ctag=articlelist&iid=1)