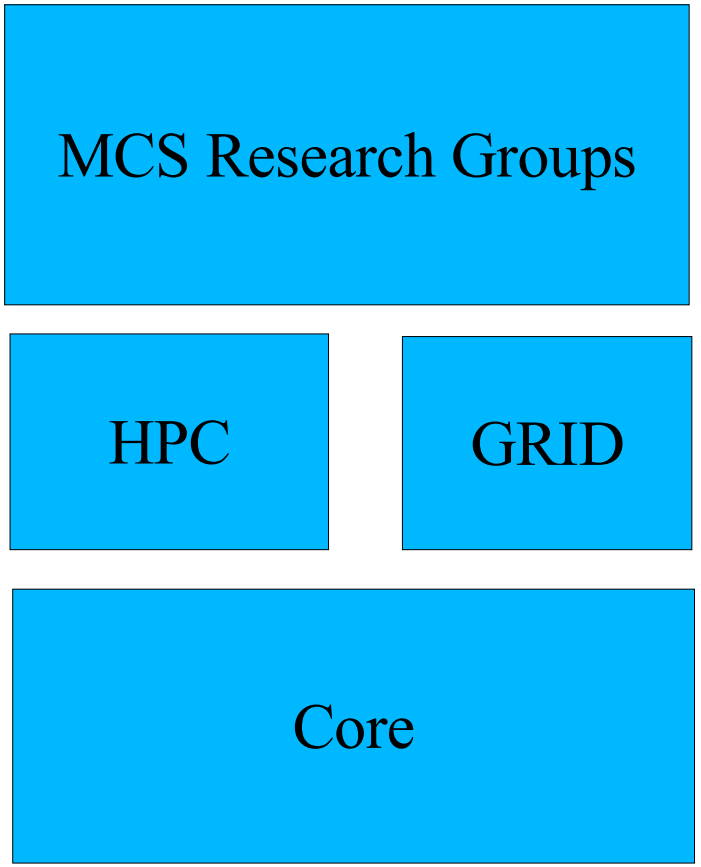
LANS System resources

Satish Balay
balay@mcs.anl.gov

How this started?



Resource Categories

- General Infrastructure
- NEOS/ADIC Servers
- Desktop Environment
- Development Hardware
- Development Software
- Development Testing
- Other tools

General Infrastructure

- Reliable email
- Off-site email access [without vpn/ssh]
- Dependable e-mail support [systems@mcs.anl.gov]
- Majordomo mailing lists [with archives]
- User support tools: req, bugzilla, roundup
- ftp.mcs.anl.gov [/nfs/ftp/]
- www-unix/www-fp [/nfs/www-unix, frontpage]
- External VPN/ssh access
- Network printers
- central authentication/nfs access

General Infrastructure cont...

- Wiki
- CVS/Subversion server [bitkeeper]
- Backup support
- Large file storage

- Sourceforge concept?
- Control for configuring services [bugzilla]

NEOS/ADIC Servers

- Web server support [www-neos/neos.mcs.anl.gov]
- http support for SSI, CGI, Servlets, PHP, webdav.
- MySQL server & client access from neos
- Open ports to the public [firewall rules]
- Separate pool of machines? [adic]
- condor

Desktop Environment

- General MCS linux build
- Windows
- Mac OS X?
- Unsupported [Laptops]

- Users might feel a need for favorite customizations
- Elevated privileges on Windows
- Student desktops

Development Hardware

- User desktop [red/green]
- MCS Linux build with access to most software
- Multiple compute nodes [crunch, terra]
- Mac OS X/ Windows

Development Software

- Most of the tools are available on MCS linux machines
- Compilers c/c++/f77/f90 [GNU, PGI, Absoft, Intel]
- Scripting Language support [python,perl, awk]
- emacs/xemacs/vi
- build tools [make, etc..]
- revision control [bitkeeper,cvs,subversion]
- debugging tools [gdb,valgrind,gcov]

Development Testing

- Various hardware/os/compiler combinations such as icrunch [Mac OS X], Atlantis [Solaris], opteron-ibm [Linux – X86_64]
- Perhaps some additional variations could be provided with vmware [primarily x86]?
- Windows MS compilers/cygwin
- Request for Power-5 based Linux workstation [IBM710]
- A mechanism for reserving zoo machines for benchmarking

Other tools

- basic install of blas/lapack on most machines
- Matlab/Mathematica
- TecPlot
- PAPI on all compute servers [requires perfctr kernel patch]
- Documentation [tex/pdflatex/docbook]
- Collaboration [jabber,mud]

Further Discussions?

Effort required
Reliability of services [Expectations]
Systems vs DIY