



RAL PPD Computing

A tier 2, a tier 3 and a load of other stuff

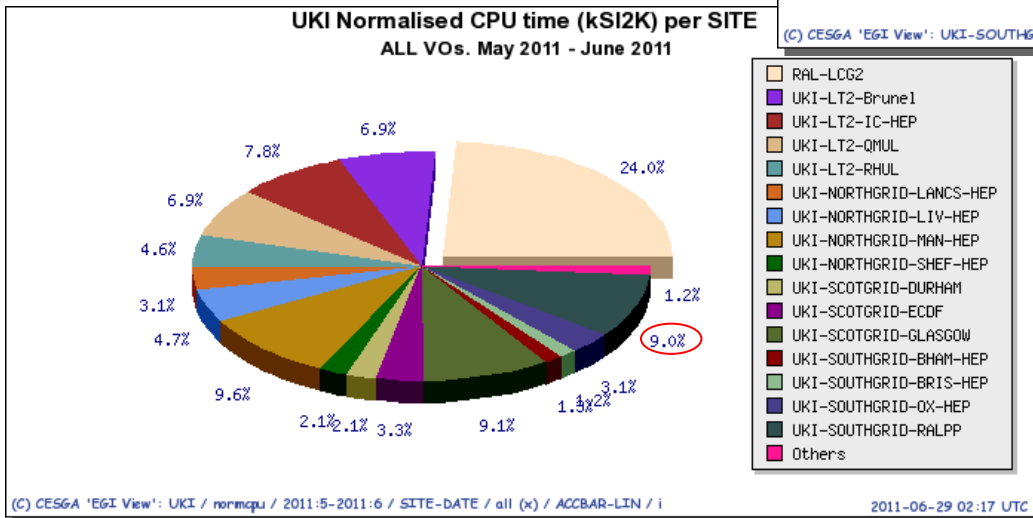
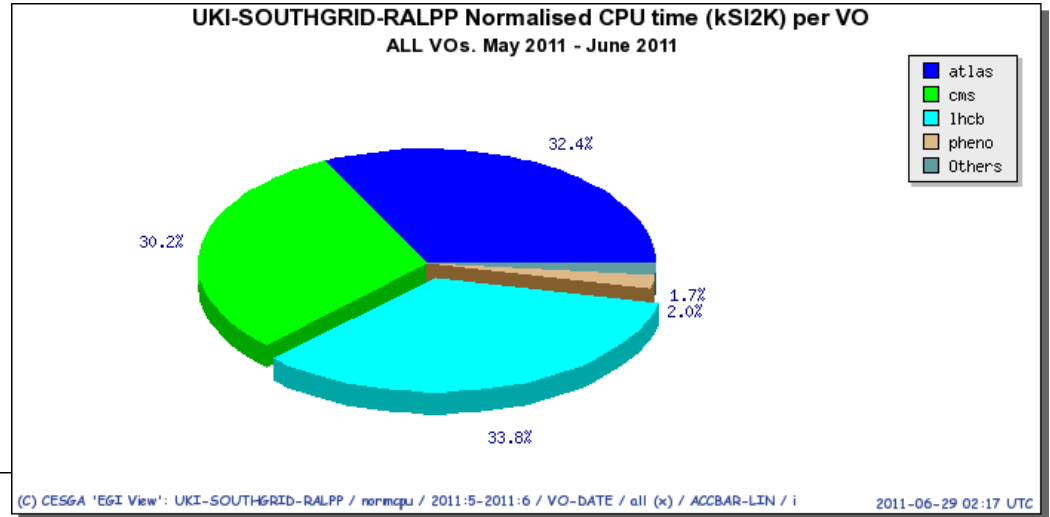
Rob Harper, June 2011

Hello. It'll be lunch soon.

- Tier 2 (and 3)
- Other Linux and networky things
- Windows, desktops, etc



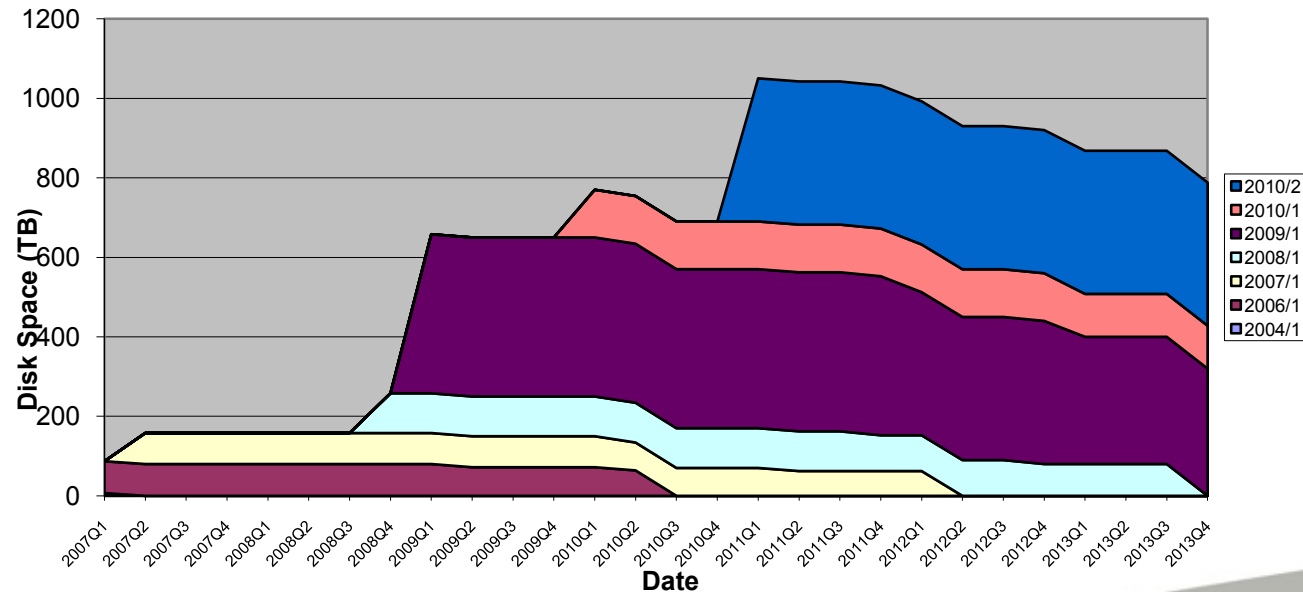
We have kit and it does stuff



And we store stuff too

PoolGroup	Total Space/MB	Free Space/MB	Precious Space/MB	Layout (precious/used/free)
atlas-hotdisk-pgroup	9533440	5365078	0	
atlas-pgroup	180244445	57384605	2067041	
cms-pgroup	722217559	141588687	783888	
gen-pgroup	18882560	12413675	345615	

Evolution of RALPP Disk resources



The Cluster

- Nominally 2052 CPU cores
 - Generally just short of 2000 job slots
 - We've been full most of the time for the last month or so
- 1130 TB disk storage
 - Some being decommissioned
 - What can you do with a rack full of 500GB HDDs?

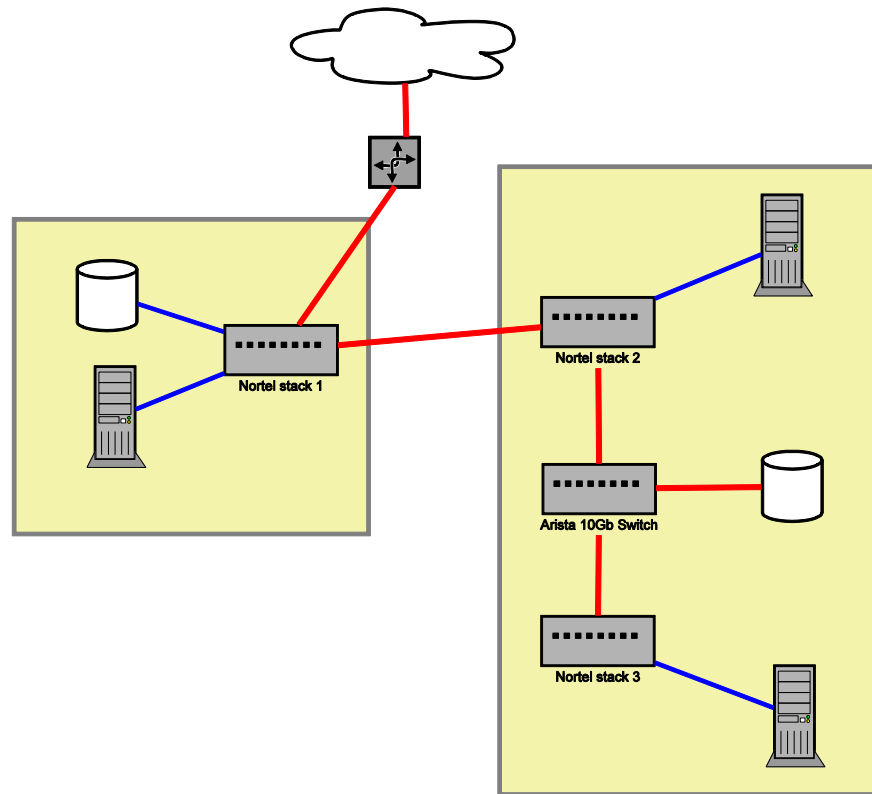


~~NIS~~ LDAP

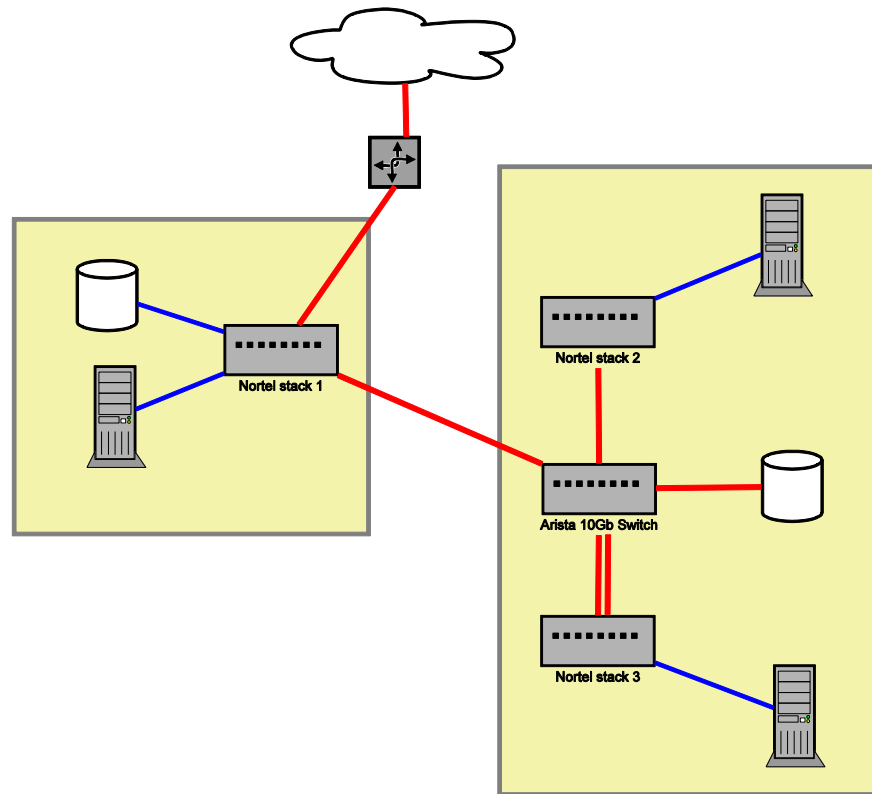
- Local user account management and authentication moved from NIS to LDAP
- LDIF changes more complicated than previous, but updating user management scripts
- Benefits include
 - Security (e.g. NIS sending out full shadow file)
 - Flexibility (can store more useful metadata)



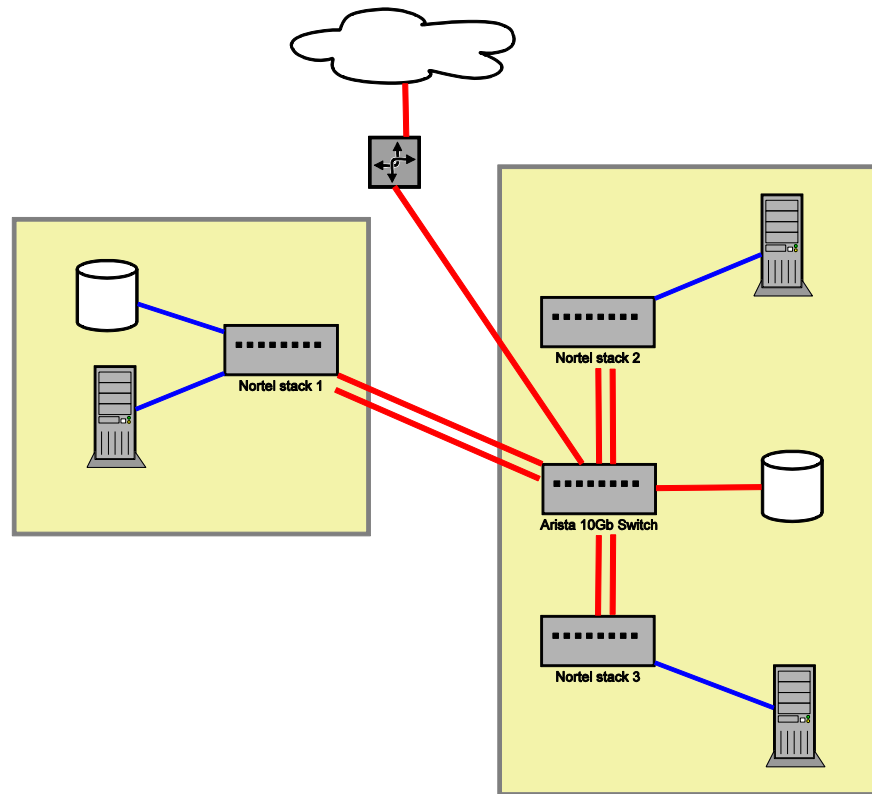
Networking: The Old Tier 2...



Networking: Now...



Networking: Brave New World...



Infrastructure Refresh

- DHCP, software mirrors, PXE/TFTP, file servers, logging, squids, etc...
- Some services moved to shiny new hardware
- Some services moved to old WNs



Other Linux Things

- Many services running on Xen VMs
 - Infrastructure needs overhauling/improving
- Scientific Linux 6
 - Bye-bye to cfEngine v2, hello Puppet (maybe)
- Linux desktops
 - Slow progress, but there are several out there.
 - Desktop OS is SL5, not ideal but provides grid UI



Windows

- Dell hardware
- Windows 7 on desktops and laptops
 - Check Point Endpoint encryption (Pointsec) for laptops
 - 120 / 185 PCs now on Windows 7 (the rest mostly XP)
- Windows 2008 on Servers
- Services include DHCP, printing, backup (Symantec), Terminal Services, WSUS, DFS (with replication), Sophos, ISS, WebDav, ...
- All connected by Nortel switch stacks



Some Cool Windows Stuff

- “Windows Deployment” for Windows 7 Pro
 - One 8GB image used for desktops and laptops, we install via USB sticks, but can be set up for net install.
- DFS & WebDav
 - Replicated DFS server with manual failover
 - External access to the DFS through web browser and WebDAV
- Terminal Services
 - Remote apps run from client desktop

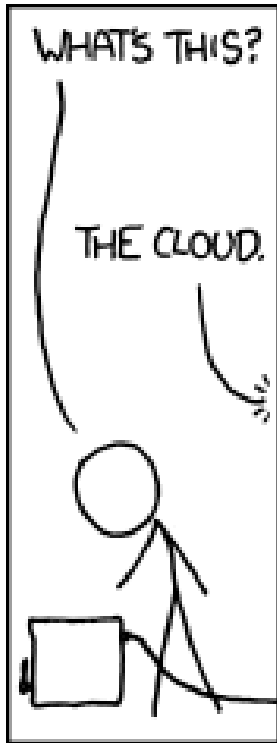


More Cool Windows Stuff

- Backup
 - Staged to iSCSI storage after much wrestling with the set up and discovering a problem with the Windows initiator software
- Nice Windows 2008 tools
 - Windows Shadow Copy (filesystem snapshots)
 - Windows Quota



And Finally...



xkcd.com

- RALPP \neq RAL-LCG2
- Some stuff on its way...
 - ssh bastion service
 - Decommissioning lcg-CEs
 - New hardware
 - Spiceworks
 - More infrastructure improvements
 - (Cloud?)
 - Preparation for the zombie apocolypse