Changes to RedHat 7.1

- RedHat 7.1 acts as base for new CLuEDØ dictribution
- Basic features unchanged
  - Linux kernel 2.4.2 (recompiled to turn off ReiserFS debug flag!)
  - GNOME 1.2 and KDE 2.1 (with KOffice)
  - XFree 4.0 (support for 3.3.6)
- New packages added
  - OpenPBS, acroread, RealPlayer, zephyr, lyx
  - OpenSSH replaced by kerberized SSH
  - CLuMP

CLuMP

- Use LDAP to store and distribute node configuration information
- NSS LDAP provides basic 'YP' interface
  - Users, groups and hosts
  - Autofs directly uses LDAP
  - SSL and Kerberos supported
- CLuMP manages this information
  - Python script with CLI to manage LDAP
  - Adds extra information to standard LDAP objects using its own schema

CLuMP

- Adds ability to store configuration files in LDAP
  - heirarchy support for Cluster, Netgroup and Node specific files
- Also supports storing compiled python objects
  - Dynamically generate configuration files
  - Automatically restart system services when config file changes
  - ...plus anything else you can do with python!
  - coming soon http://clump.sourceforge.net/ !

OpenPBS

- Free batch system from NASA
  - Almost identical syntax to NQS
  - Support for all UNIX platforms
- Centralized configuration
  - No need to add queues on each machine!
- Interfaces seamlessly to domino backend PCs
- Configurable scheduler
  - Start with default one using shares per institute based on contributed CPU MHz
  - If that fails possible to write our own to make institutes CPUs prefer their users!

Security

- Same security continues
  - Kerberos authentication (in FNAL.GOV)
  - Tripwire now in standard RedHat 7.1
  - Software firewall within kernel
    - increase security to only allowing incoming connections from cluster machines
- New security features
  - NIS dropped for LDAP
  - xinetd: more secure version of inetd
  - Login & web server will be separate from cluster server (so you have to hack two machines to get cluster root access)