

# WLCG & IPv6

## Next Steps

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IPv6 pre-GDB, CERN

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# Next testing

- Continue the file-transfer testbed
  - PhEDEx: More storage options to be tested (few sites)
  - GridFTP: All Tier 1s involved?
  - GridFTP: How many more Tier 2s? (Open invitation)
  - Can we transfer USEFUL data?
- FTS3 pilot and IPv6
  - Taken forward by FTS3 pilot, experiments, Ops

# Experiments

- Dual-stack WNs at first
- ATLAS
  - Imperial to test BigPanda instance
  - Panda Dev instance at CERN to be dual-stack
- CMS
  - Test dual-stack glideinWMS
  - Dashboard monitoring
  - Test CRAB3 and WMAgent

# Expts (2)

- LHCb job submission
  - All DIRAC internal communication is authenticated
  - Some complex interactions
  - All communication needs to be tested (on separate VMs, starting June 2014)
  - Tests started on lxplus-ipv6 (dual-stack)
    - Works to IPv4
    - Next – tests on IPv6-only

# Data Management

- ATLAS, CMS and LHCb will all use FTS3
  - GridFTP, xrootd and http
- ATLAS already doing IPv4 stress tests of Rucio
  - Could also do IPv6 stress testing
- CMS
  - Test a few endpoints of each storage technology
  - Next – test AAA with IPv6
    - Nebraska will enable IPv6 access to their xrootd
    - Requires update to new xrootd client

# Other services

- ATLAS – AMI – metadata interface
  - Make dual-stack web front ends for testing
- CMS – more permanent cmsweb instance for testing
- Squid 3.x is IPv6 compliant but has other problems
  - Can affect performance
  - CVMFS should work
- Would be interesting to test IPv6-only WN
  - With dual-stack Squid (e.g. for Panda)



# Alastair's summary slide

# ALICE

- Show two slides – central and site
- Monitoring tests
  - Full test suite like IPv4
- IPv6-only WN at CERN needs
  - Upgrade Perl in AliEn
  - Switch to xrootd 4
  - EOS to move to xrootd or access via local IPv4
  - Need one copy of data on IPv6 before can support IPv6 only WN (not all sites supporting IPv6)



# Other issues

- What if anything does the IPv6 testbed need to do for Experiment testing?
- Should we push sites to deploy IPv6?
- If so, by when?
- Or just allow market forces?

# IPV6 Network Monitoring

- PerfSONAR monitoring
- As we turn on production dual-stack
  - We need to collect monitoring data
- A good way for a new site to get started
  - Ask Imperial to add to dashboard
- NAGIOS and other monitoring
  - Deploy new plugins to test IPv6 services

# Dual-stack production

- What and when?
- Drive according to Experiment use-cases for IPv6-only WN?

# Discussion ?