

DPM on IPv6

Experiences and Future Look

DPM / IPv6 Setup

- DPM itself is perfectly IPv6 compliant out of the box.
- YAIM config needs hacks (as it relies on IPv4 behaviour of `hostname -f`)
- Globus libs (SRM, Gridftp) need changes to `/etc/gai.conf` to get them to bind to IPv6.
- MySQL needs to be v5.5+ for IPv6 hostnames.
 - Use MariaDB, or use `localhost` loopback for older MySQLs.

Ancillary items

- Several services outwith the DPM itself benefit from being dual-stack, rather than pure IPv6.
- The site BDII should be dual-stack, especially if the DPM is to be IPv6 only.
- (fetch-crl can also have issues, if bound to IPv6 rather than IPv4).

Protocols + Future

- srm / gridftp (Globus-based)
 - dependant on Globus libs being properly IPv6
 - Third-party gridftp over IPv6 needs some standards agreement.
- xrootd
 - xrootd4 supports IPv6... but is not xrootd3 API compatible.
 - (an xroot4-compatible dpm-xrootd is in testing)
- http(s)
 - works (with little testing)

References

- User experience of IPv6 DPM
- <http://gridpp-storage.blogspot.co.uk/2014/02/setting-up-ipv6-only-dpm.html>