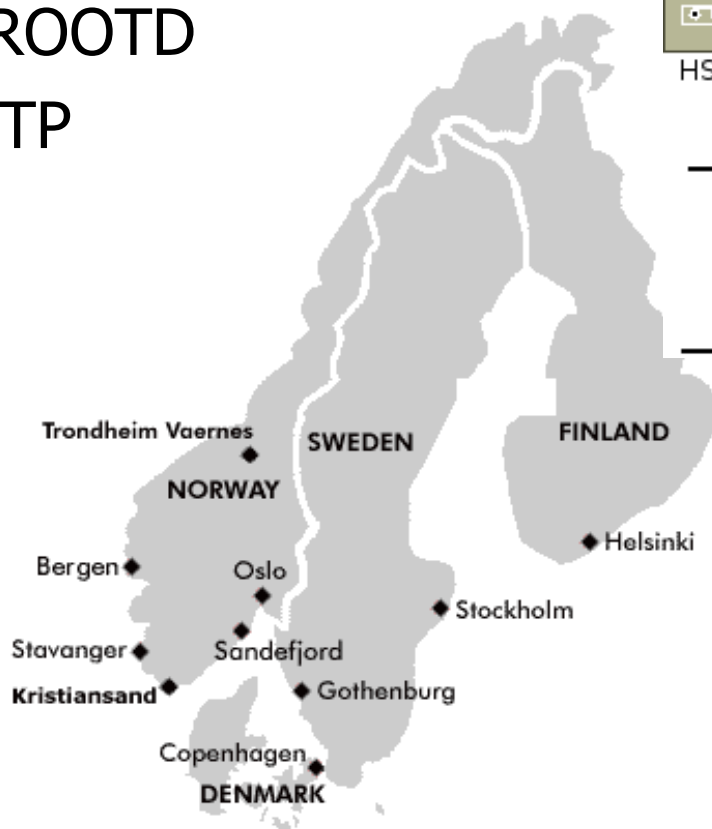
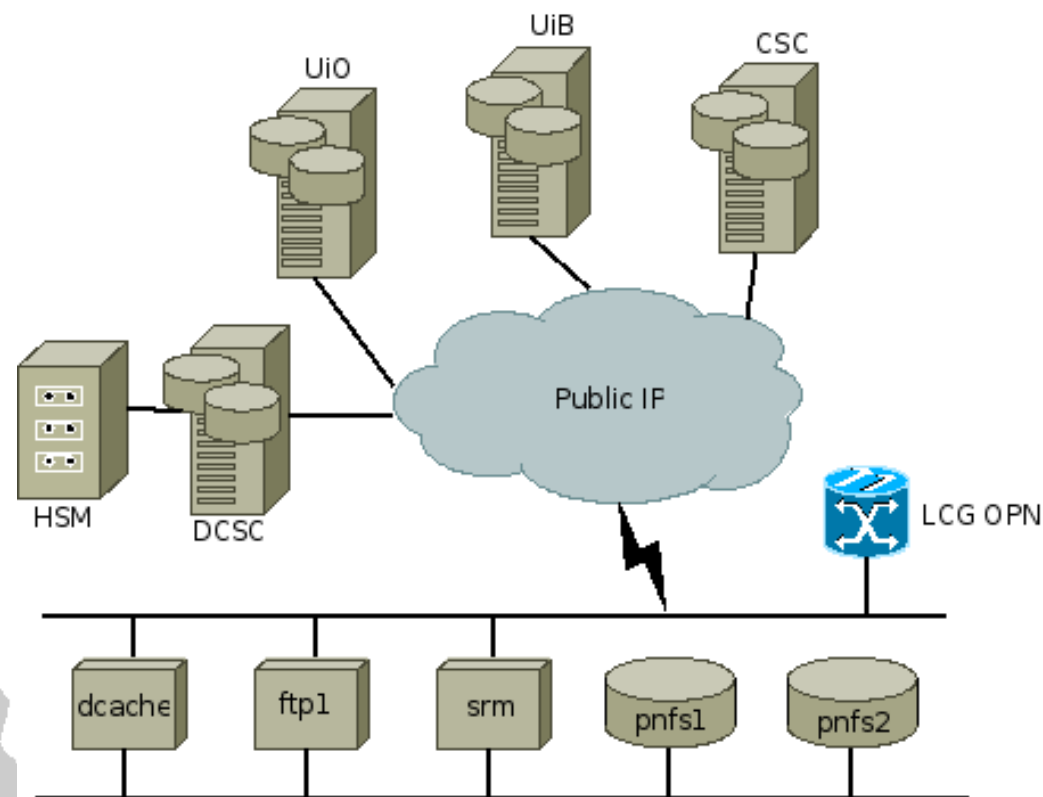




NDGF dCache 1.8 upgrade

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CERN

- 5 sites
UiB, UiO, NBI, CSC, HPC2N
- 56 pools on 15 hosts
- 243 TB
- SRM, XROOTD
- 2xGridFTP



- 08:00 downtime officially starts
- 08:30 dcache pools are set rdonly
- 09:00 we take down central dcache instance for upgrades
- 09:00 rls@uppsala shuts down and a database dump is created
- 09-10 while dcache is down, all pools stop and begin the upgrade
 - UiO replaced NIC with 10 Gig Ethernet
 - UiB reconfigured FC multipathing
- 11:00 testing of the central services at örestaden (dcache+rls)
- 12:00 rls and central dcache services online
- 12-16 pools coming online, by 16 enough should be online to accept writes
- 16-08 spare time for delays, rest of pools coming online
- 09:00 whole-system verification that everything works as intended
- 10:00 downtime officially over

- Most things went as planned!
- UiB had to delay Fibre Channel multipathing.
- UiO needed more time than expected for the NIC upgrade, but the pools were online around 1800.
- RLS required some additional configuration steps (authentication, setting auto-increment fields in the DB after import).
- dCache 1.8-0 FTP bug caused ARC client to fail. Was fixed within the hour and rolled out on the FTP doors. Fix is included in dCache 1.8-1.
- Initial problems at UiO with new Berkeley DB based repository code. Was eventually tracked down to a weird interaction between the Java GC and a some new caching code in dCache. The cache was removed, and everything works fine now.

- Initially not enabled, as the upgrade to dCache 1.8 was enough risk for one day.
- Will be enabled soon – likely this week – using implicit space reservations.
- Unsure whether we should create static DISK and TAPE reservations for Atlas:
 - How big should they be? Bear in mind that the reserved space will be unavailable for “old transfers”.
 - What exactly was the use case for those reservations (compared to having the disk/ and tape/ directories)?
 - Could ATLAS create those reservations themselves?
- ARC clients do not yet support SRM 2.2.