

Advanced LIGO & IRIS

IRIS TWG F2F

23rd January 2019

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What has been done over last two years:

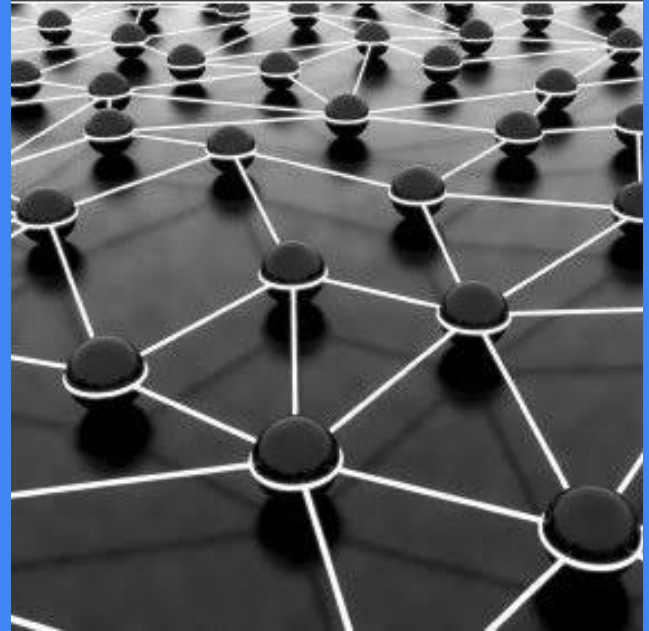
- Total of 390M core hours for LIGO and Virgo computing
- 20M core hours have been delivered on Cardiff LIGO cluster
 - 1440 Haswell Cores
 - 660 Westmere Cores
 - Dedicated login node
- 6M core hours have been delivered via OSG
 - Including 100k core hours on RAL

Imminent Cardiff LIGO Upgrade for O3

- 35x Compute Nodes Dual 2.4 GHz Gold 6148 = 40 cores
192GB RAM = 4.9 per core
- 1x GPU Node Dual 2.4 GHz Gold 6148 = 40 cores
NVIDIA P100 GPU
384GB RAM
- 1x Login Node Dual 2.1 GHz Gold 6152 = 44 cores
768 GB RAM
- Infiniband EDR
- 500GB per user NFS /home
- Lustre /scratch
- 80TB LIGO Data Storage using Stash Cache “Cache” accessible to world

Grid Computing

“this is an necessary goal,
long-term, and we're overdue to
start working on it”



Plans for LIGO on IRIS

1. Continue to support OSG workflows on RAL etc.
2. Burst suitable jobs out of Cardiff cluster onto IRIS resources
3. Duplicate or replace UK cluster on IRIS
 - Long lived permanent fixtures + short lived compute nodes
 - Bare metal or virtual
 - Software via CVMFS
 - Data via Large Scale Data CVMFS
 - HTCondor Scheduler
 - Web Server to view results with LIGO Shibboleth authentication
 - JupyterLab Service with “LIGO” kernels
 - Shared file system

Thanks!

