

RDA



globus

NCAR Global File Systems and Data Transfer Services Integration

Globus World

21 April 2016

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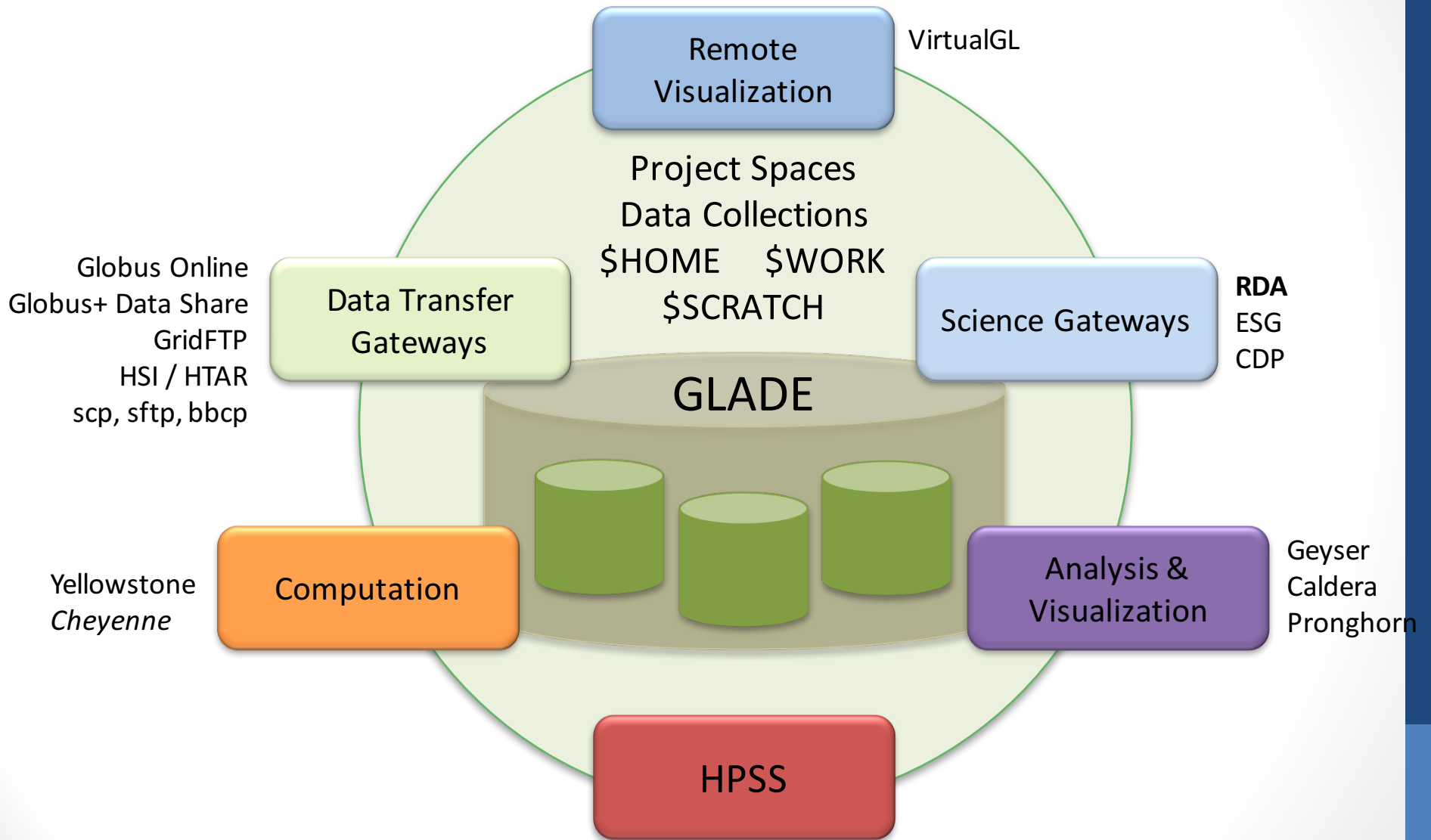


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GLADE

GLobally Accessible Data Environment



GLADE Today

- 90 GB/s bandwidth
- 16.4 PB useable capacity
- 76 IBM DCS3700
- 6840 3TB drives
 - shared data + metadata
- 20 GPFS NSD servers
- 6 management nodes
- File Services
 - FDR
 - 10 GbE

Expansion Fall 2016

- 200 GB/s bandwidth
- 21.5 PB useable capacity
- 4 DDN SFA14KX
- 3360 8TB drives
 - data only
- 48 800GB SSD
 - Metadata
- 24 GPFS NSD servers
- File Services
 - EDR
 - 40 GbE

IBM
GPFS

DDN[®]
STORAGE



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Data Transfer Today

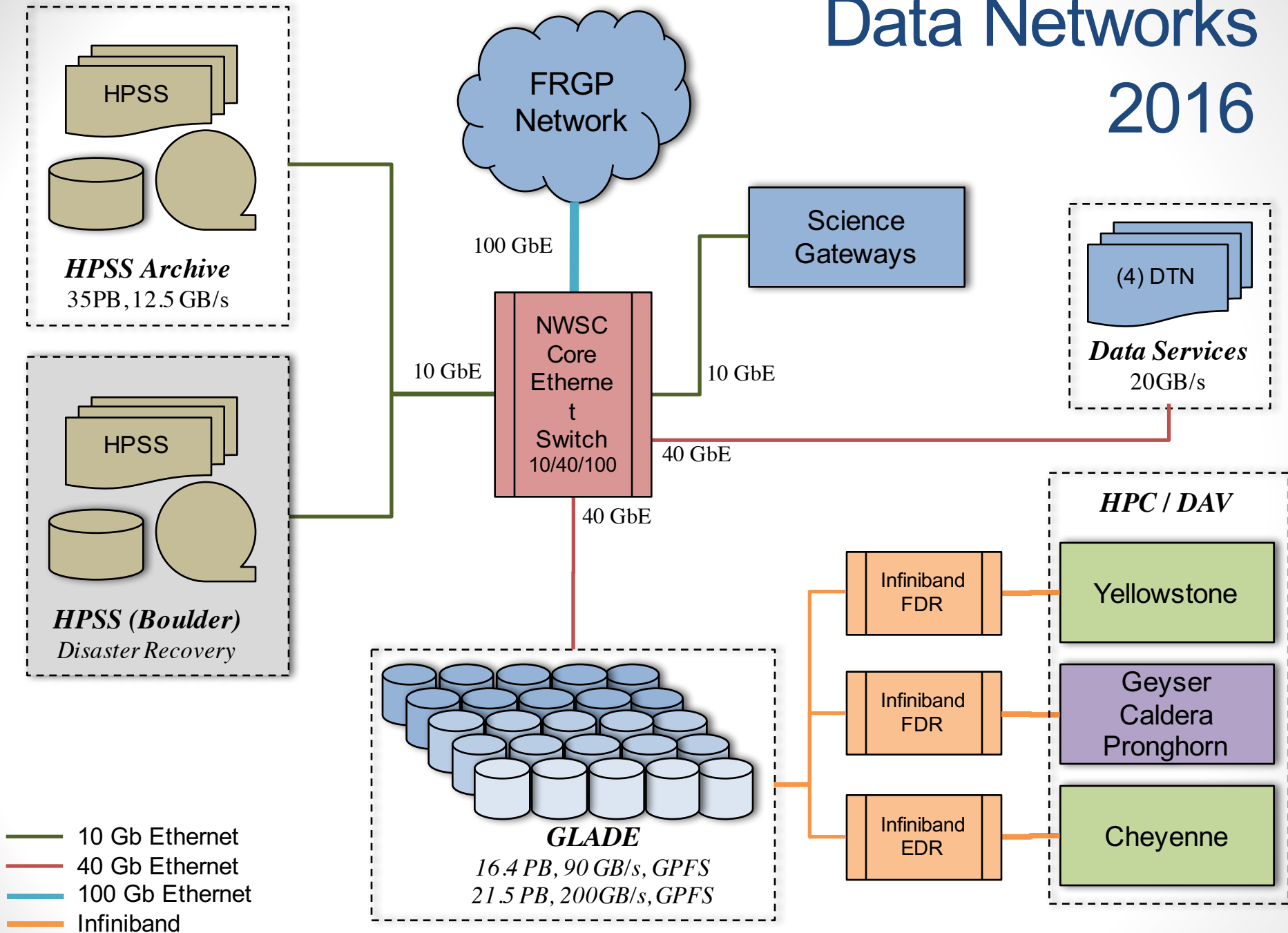
- *4 data transfer nodes*
 - *(8) 10 GbE connections*
- *80 Gb/s site bandwidth*
 - *10 GB/s*
- *20 Gb/s external link*
 - *2.5 GB/s*

Upgrade May 2016

- *4 data transfer nodes*
 - *(4) 40 GbE connections*
- *160 Gb/s site bandwidth*
 - *20 GB/s*
- *100 Gb/s external link*
 - *12 GB/s*



Data Networks 2016





NCAR Data Transfer Services

- *Globus Online Endpoints*
 - *launch and forget data transfers*
 - *Access with users UCAS account and token*
 - **NCAR GLADE**
 - *Access with users XSEDE Account*
 - **XSEDE NCAR GLADE**
 - *Web UI, CLI, REST API*
 - *globus-url-copy*
 - *Globus Connect for transfer to/from your desktop*
- *gridftp, scp/sftp, bbcp*
- *HSI/HTAR for HPSS access through LSF*
- *Integrated with the GLADE Storage cluster*



NCAR Data Sharing Services



- **NCAR Data Sharing Service**
 - *Data sharing allocations for self-publishing or data delivery*
 - *Dedicated data sharing file space provided on GLADE*
 - *small data set sharing for transient data*
 - *data delivery to colleagues*
- **NCAR HPC Benchmarks**
 - *Public shared space*
- **NCAR GLADE**
 - *Ability to share from large GLADE project spaces*
 - *larger data collection sharing for science gateways*
 - *longer term collaboration for project teams*



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QUESTIONS?



21 April 2016