# DLS: Supporting Science with Spectrum Scale





SCIENTIFIC COMPUTING

# Introduction to Diamond

- Slides presented at SSUG redacted due to copyright.
- Visit https://www.diamond.ac.uk/Public/How-Diamond-Works.html to see equivalent content.

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# HPC

- 241 RHEL7 nodes attached to "GPFS02"
- 167 RHEL7 and 4 RHEL8 nodes attached to "GPFS03"
- Spectrum Scale 5.1.3.x
- Infiniband networking for Spectrum Scale access
- Parallel access from MPI jobs

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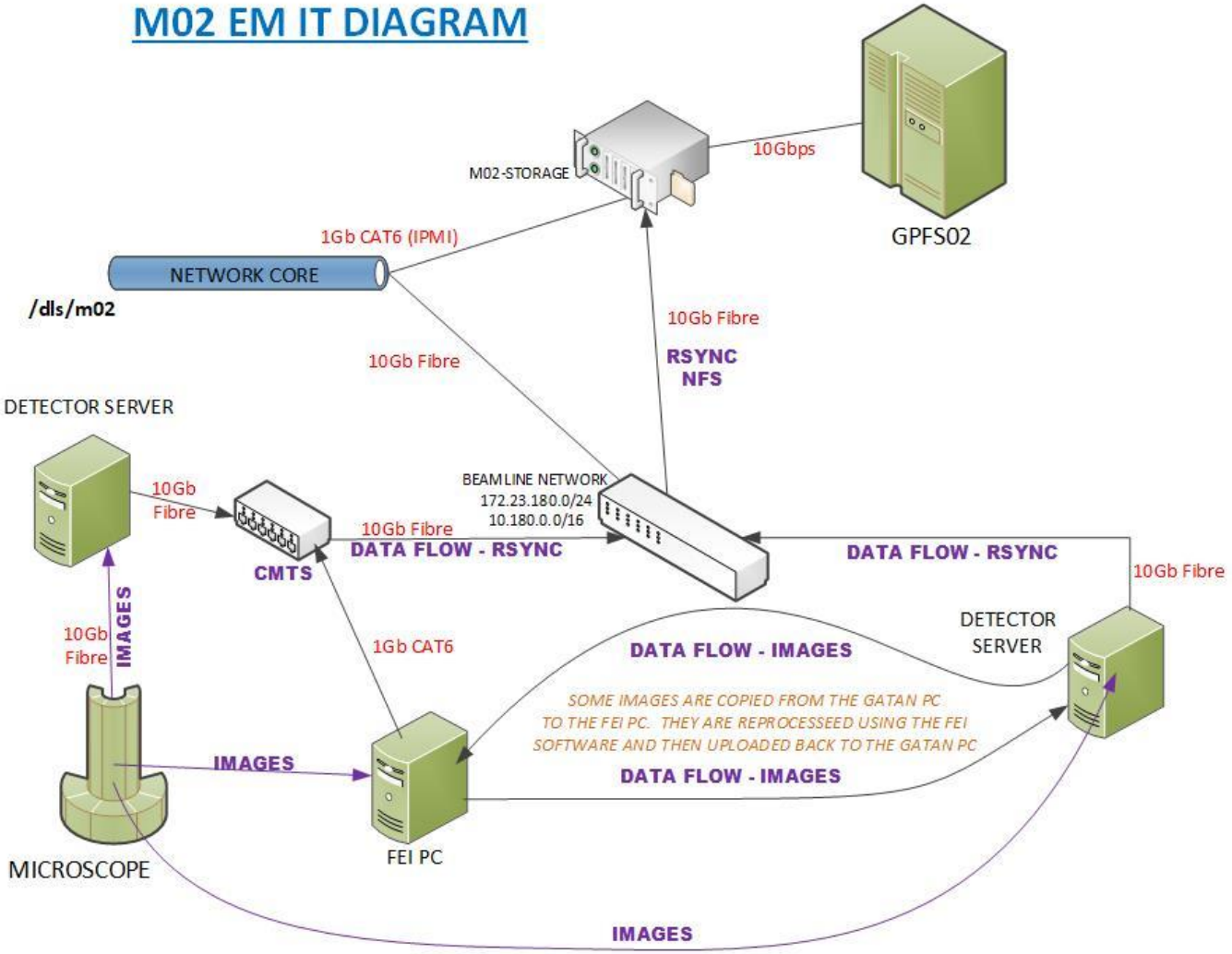
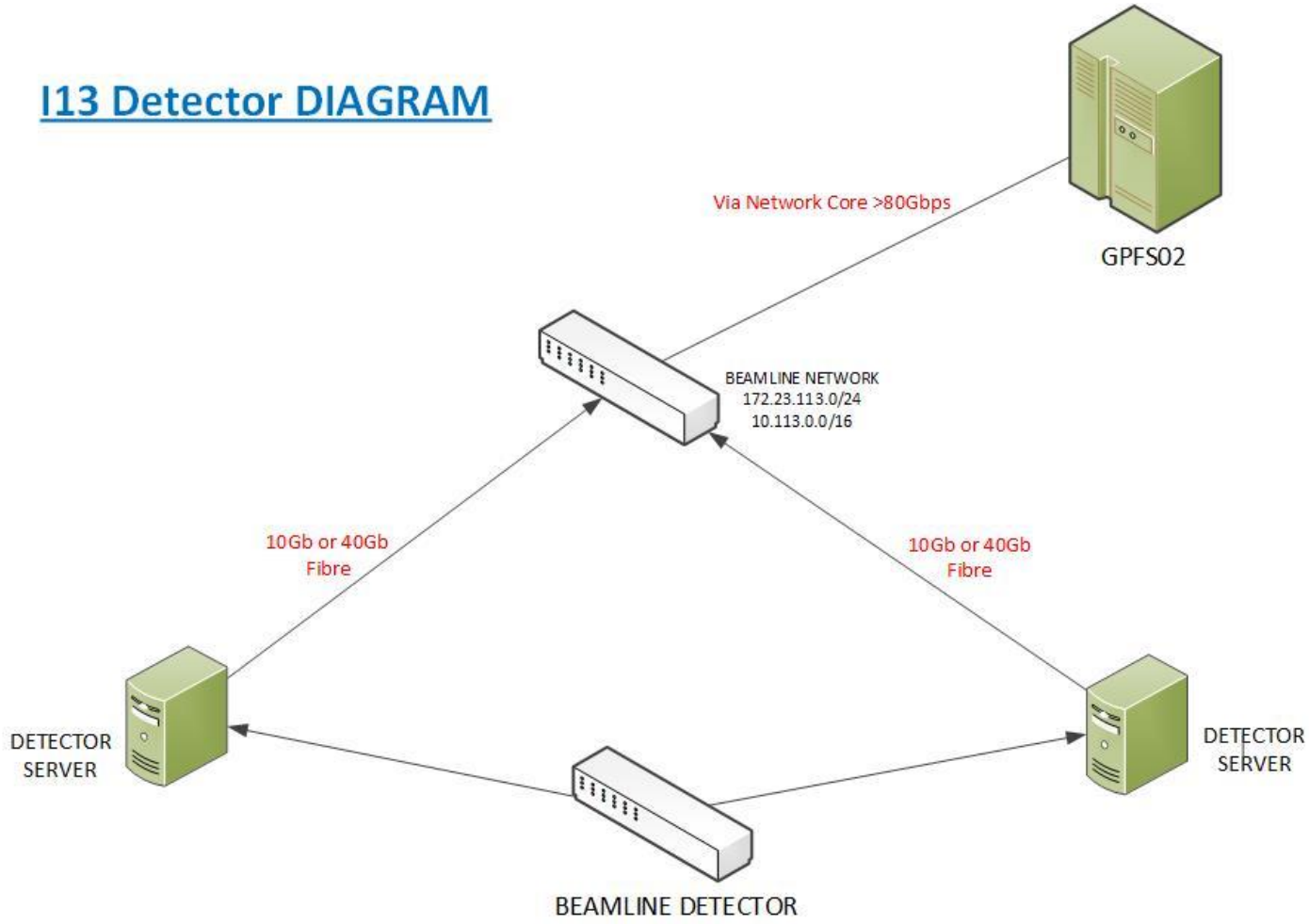
# ‘eBIC’ Windows Detector



# ‘Beamline’ Windows detector



# Getting data to Spectrum Scale

Microscope Data:
Average ‘movie’ of images is 300MB, and the microscope generates 600 per hour. For a 2 day ‘visit’ would expect 42 hours of imaging.
25,000 movies, ~8TB of data to send to central storage

Cygwin via NFS to the SS client

SMB

Spectrum Scale client direct to file system

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# Issues?

- Holds up Windows OS Upgrades due to longevity of detector installations
- Holds back progression of GPFS configuration due to minimum release levels – currently at 5.0.2.0

# Other Issues

SSSD authentication

Our friend SAMBA

Future Challenges :

Diamond II

40/100gb networking

Larger file sets

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# QUESTIONS?

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