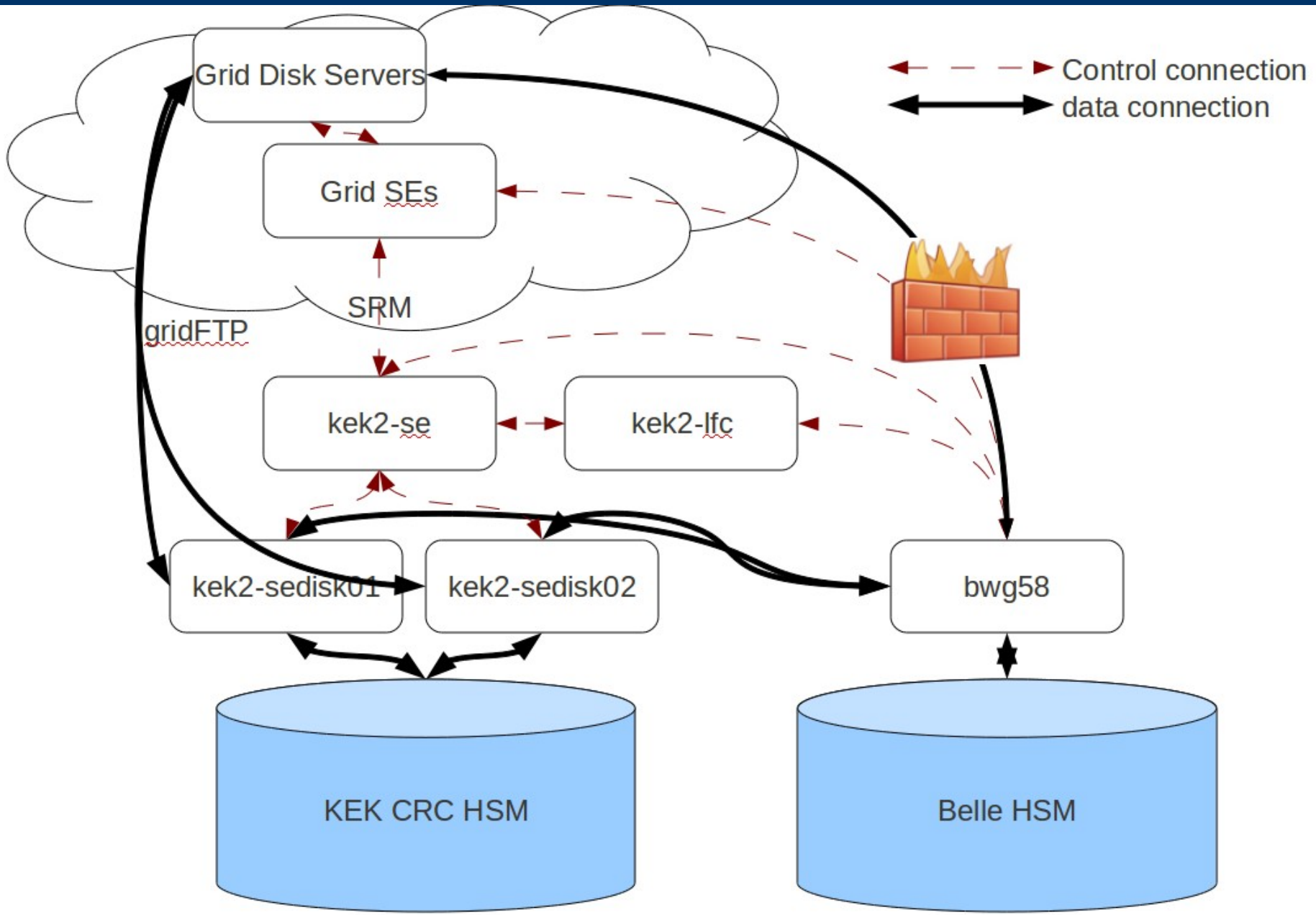
Tom Fifield
fifieldt@unimelb.edu.au

KEK Belle SE

The copy problem

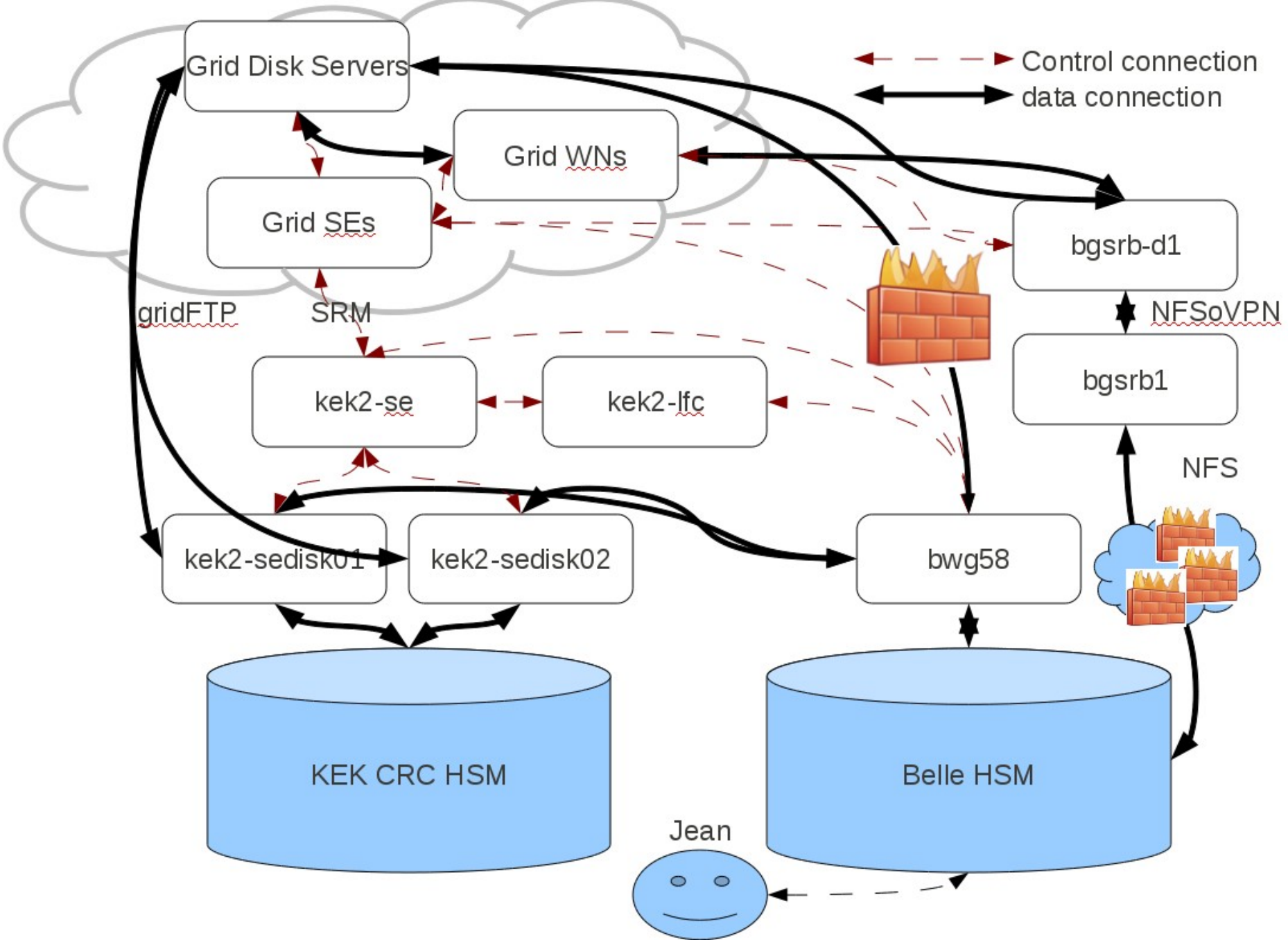


The copy problem

- Can't copy directly to BHSM
- BWG cannot copy from other grid sites
  - Firewall = poor network performance
- First replicate everything to KEK-SE
- KEK CRC HSM
  - 2 tape drives, 1: typical 40MB/s, max 100MB/s
  - Tape mount time 30-60secs ==> 20-25MB/s for 2GB file
  - Halts randomly
  - Requires a second verification that copy is OK
- Once on BHSM, not grid accessible

The copy problem

- Solutions
  - SRM-SRB
    - Has been difficult so far
  - Install a grid storage element on bcomp
- Results in:
  - Direct copy of MC results from grid
    - Saves **weeks** of my time!
  - Data being accessible by Belle members via grid and bcomp


Grid Disk Servers
Control connection
data connection
Grid WNs
Grid SEs
bgsrb-d1
gridFTP
SRM
NFSoVPN
bgsrb1
kek2-se
kek2-lfc
NFS
kek2-sedisk01
kek2-sedisk02
bwg58
KEK CRC HSM
Belle HSM
Jean

SE on B-computer

- StoRM
  - From INFN – Italian Tier 1
  - Light, scalable, filesystem-independent
  - Configured using gLite YAIM tools
  - Allows us to use existing NFS
    - Files automatically in SE

http://storm.forge.cnaf.infn.it

SE on B-computer

- Ready soon...
  - Here's your sneak-preview:

```
$ lcg-cp -v -b -T srmv2 srm://bgsrb-d1.kek.jp:8444/srm/managerv2?
SFN=/belle/mcprod/dat/e000015/evtgen/charm/13/all/0807/on_resonance/06/evtgen-charm-13-all-e000015r000611-
b20030807_1600.mdst test.mdst
VO name: belle
Checksum type: None
Trying SURL
srm://bgsrb-d1.kek.jp:8444/srm/managerv2?
SFN=/belle/mcprod/dat/e000015/evtgen/charm/13/all/0807/on_resonance/06/evtgen-charm-13-all-e000015r000611-
b20030807_1600.mdst ...
Source SE type: SRMv2
Source SRM Request Token: d57f41aa-e76e-4852-b85c-1090aed52d3c
Source URL:srm://bgsrb-d1.kek.jp:8444/srm/managerv2?
SFN=/belle/mcprod/dat/e000015/evtgen/charm/13/all/0807/on_resonance/06/evtgen-charm-13-all-e000015r000611-
b20030807_1600.mdst
File size: 324223344
Source URL for copy: gsiftp://bgsrb-
d1.kek.jp:2811//bhsm/h216/mcprod/dat/e000015/evtgen/charm/13/all/0807/on_resonance/06/evtgen-charm-13-all-
e000015r000611-b20030807_1600.mdst
Destination URL: file:/bwf/g58home/fifieldt/test.mdst
# streams: 1
            0 bytes      0.00 KB/sec avg      0.00 KB/sec inst
```

THE UNIVERSITY OF
MELBOURNE

© Copyright The University of Melbourne 2010