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Bulk Data Transfer Hardware

HEPiX Rome

April 6, 2006

DESY



Outline



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- **Objective**
- **Reply activity**
- **Common setups**
- **Common Issues**

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Objective



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- sketch out what HEP sites uses in order to transfer bulk data to other sites.
- only 60% replied, ~40% with content
- see what we got (and understand ;-)

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Commonalities (in history)



- **Sites have dedicated (specially configured) hardware in place in the past.**
 - **mostly this is no longer required**
 - mainly due to ‘better’ software (DM, IO, LB)
 - setup is much simpler

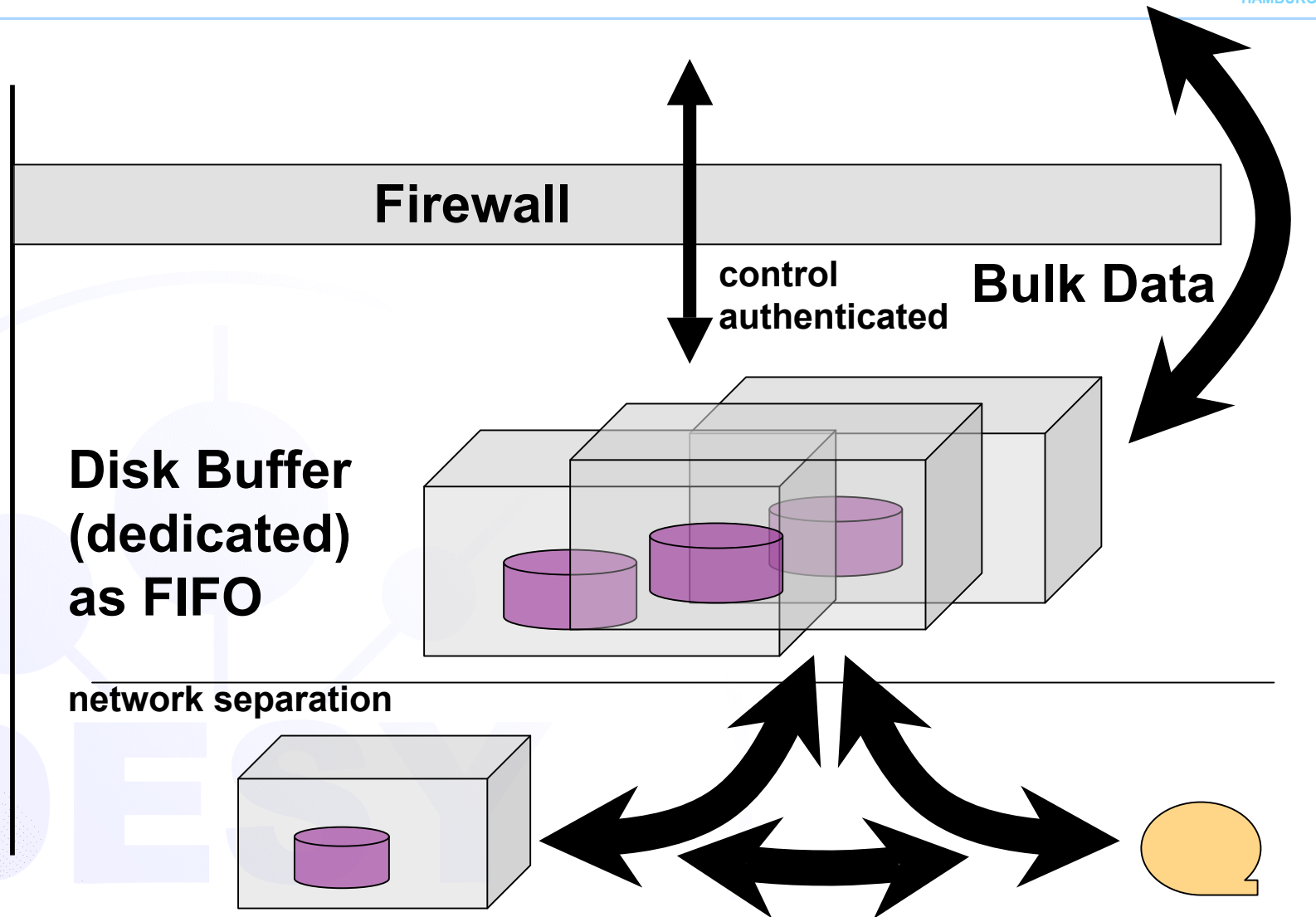
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simple minded setup



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Installed Hardware components



- **Linux machines (i386 & x86_64)**
 - mostly as 'Storage in a Box' configuration
 - external (SAN connected) Disk Systems in mind
 - second level disk store also Cluster-FS (GPFS)
- **GigE network**
 - some sites do bonding (2 way)



Commonalities - Issues



- **How to deal with security without having the Security Officer as enemy**
 - reach scaling limits on
 - NATs (table too big)
 - VPN
 - Firewall
 - (nearly) everyone bypass
 - BNL has second DNS space generating 2 distinct worlds
- **Handle contention on disks used as FIFO**
 - especially when new Tape drives used (≥ 100 MB/s)
 - only software can help here



Online Query - from the audience



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Anybody in the audience has more/additional facts ?

talk now or be quite forever ;-)

