Welcome .....

Topics :

- Workshop details
- dCache Project internals

dCache.ORG

support and funding by

dCache.ORG

About the Workshop

Your host for today and tomorrow is

Martin Radicke

with massive help from

Paul, Owen, Tigran, Irina and Birgit

Workshop : What is this meeting about ?

dCache.ORG

- First and second step towards becoming a dCache expert.
- Help for non HEP communities in d-grid to install dCache as part of the reference installation.
- Organizing a dCache support structure.
  - Officially HGF
  - but as well DGI II

Workshop : Scientific Program

dCache.ORG

dCache.ORG

Today

Welcome

Introduction to dCache 13:15

Project overview

Technical intro to dCache

Publishing to the LCG Info System

Hands on training Block I 14:15

Unit I : Basic dCache installation w YAIM

Unit II : Multi VO support/ adding Pools

Coffee Break 17:00

Hands on training Block II 17:20

Status of GridFTP in dCache

Firewall considerations

Unit III : Third party transfers across sites

Dinner 20:00

Tomorrow

Hands on training Block III 9:00

Installation/Configuration beyond YAIM

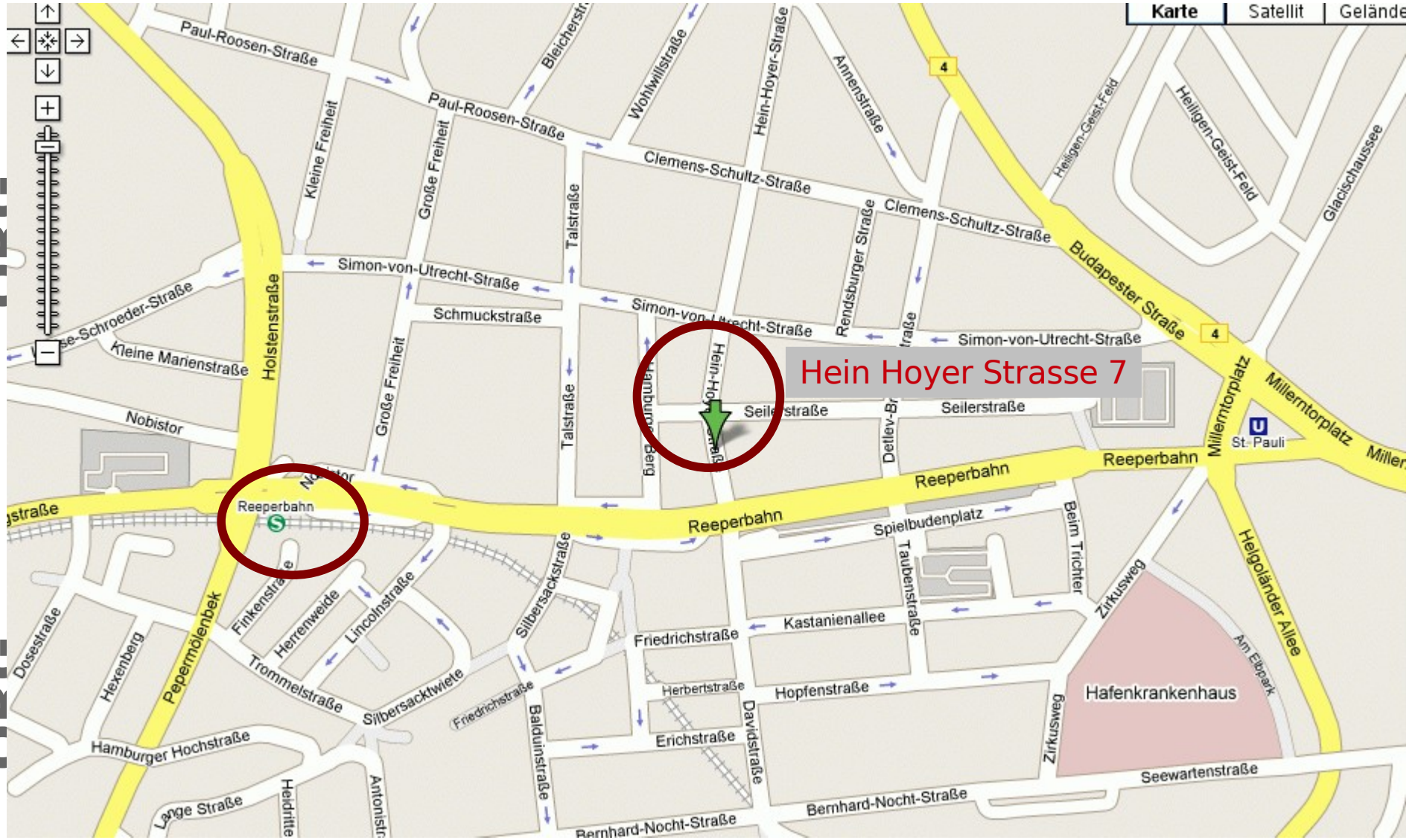
Unit IV : Error handling

Unit V : Manually separating SRM comp.

Questions/Experience 12:00

Summary 12:30

Workshop : Dinner



dCache.ORG

And now for dCache ...

Who is doing the work : The Team

dCache.ORG

Head of dCache.ORG

Patrick Fuhrmann

Core Team (Desy and Fermi)

Andrew Baranovski
Gerd Behrmann, NDGF
Bjoern Boettscher
Ted Hesselroth
Alex Kulyavtsev
Iryna Koslova
Dmitri Litvintsev
David Melkumyan
Paul Millar
Dirk Pleiter
Martin Radicke
Vladimir Podstavkov
Owen Synge
Neha Sharma

Head of Development DESY :

Tigran Mkrtchyan

Head of Development FNAL :

Timur Perelmutov

External Developmen t

Jonathan Schaeffer, IN2P3

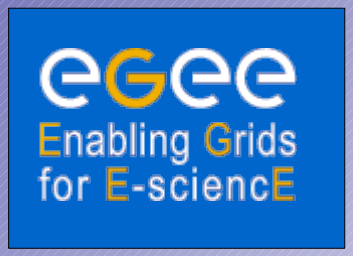
Support and Help

German Support Team (HGF, DGI)

Abhishek Singh Rana, SDSC
Greig Cowan, gridPP
Stijn De Weirdt (Quattor)
Maarten Lithmaath, CERN
Flavia Donno, CERN

Who is paying ?

SuGI



Support

Development

Development

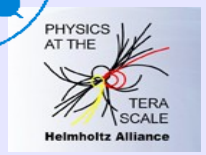
Integration

Development

DGI

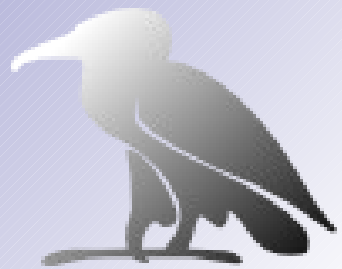
Development
Support

Integration



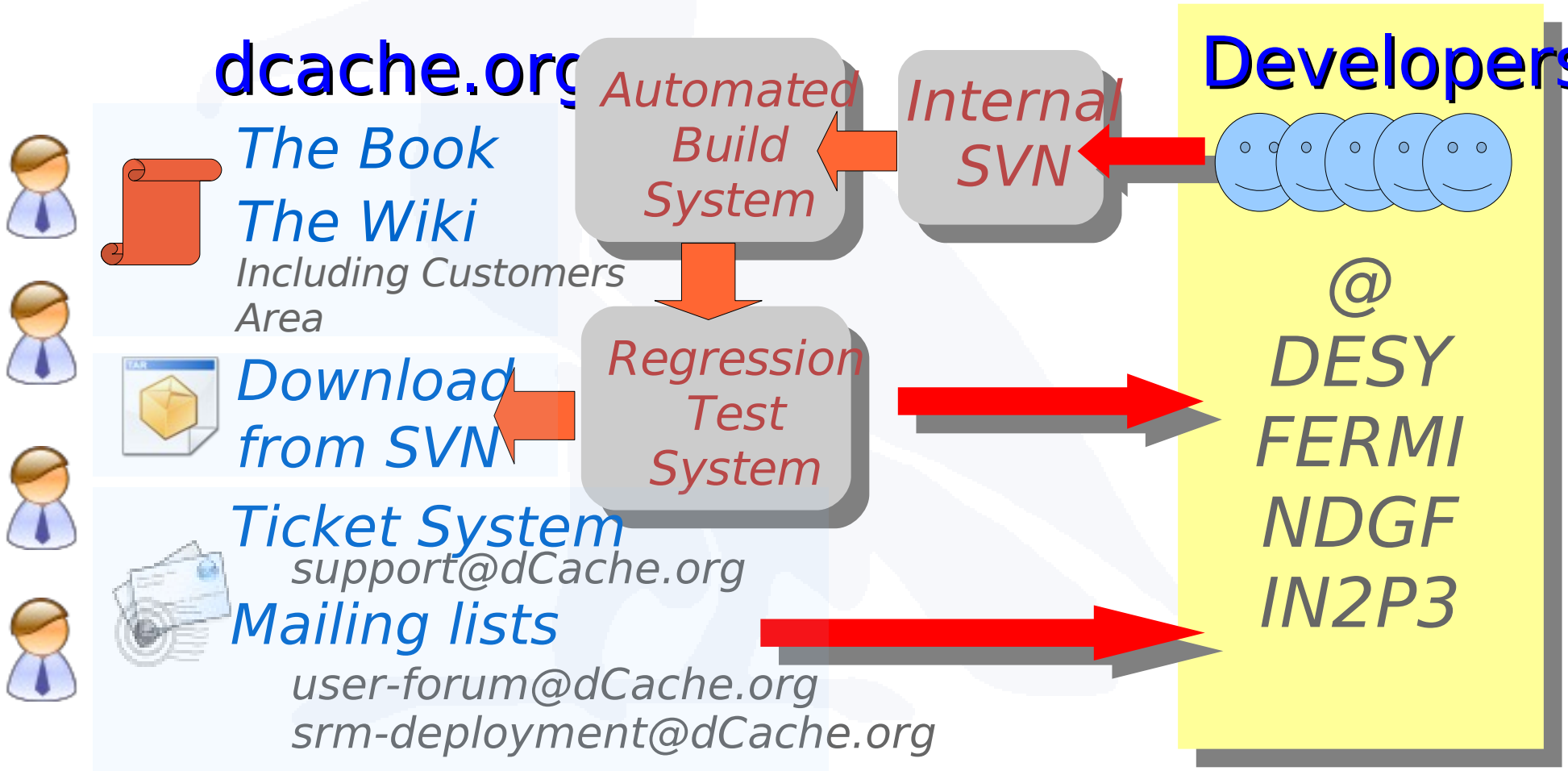
Development
Support

Development



What is dCache.org ?

- dCache.ORG is the door into the dCache team
- dCache.ORG is an infrastructure



dCache.org is operated by DESY and funded by EGEE and d-Grid

dCache in use ...

dCache will hold the *largest share of LHC data* outside CERN.

There are *70 dCache* LCG Storage Elements installed in *22 countri*

dCache covers *9 Tier I's*.

There are *11 dCache* LCG Storage Elements installed in *Germany*

- *RWTH Aachen*
- *Uni Dortmund*
- *Freiburg*
- *Wuppertal*
- *LRZ Munich*
- *DESY HH & Zeuthen*

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Which communities are using dCac

dCache is mainly a HEP Storage Element :

LHC, Hera(h1,zeus,hermes,herab), Tevatron(cdf,DZero), RHIC(bn

Why :

- Access protocols have been especially designed for HEP. No 'real posix' accesses.
- HTTP in read only mode w/o ssl.
- Authentication : X509 and Kerberos only.
- Authorization : basic unix permissions only. No sophisticated ACL's.
- But as well : Communities have their own framework already established which is hard

Future : (based on HGF Allianz and DGI 2 funding)

- Real posix ACL's (already in beta testing)
- http(s) in read and write mode (3Q 2008, maybe ealier based on 3. party funding)
- NFS4 which allows standard real posix I/O from all OS's which can be used by any application w/o special treatment (End of 2008)
- Local File Catalogs (LFC) integrated into the dCache name space engine.

dCache.ORG

Help and support

dCache.org provides support through *support@dCache.org* (ticket system) preferred for funding groups.

dCache.org frequently organizes generic *workshops* and *tutorials* specialized for groups or communities, e.g. :

- Generic (DESY) : June 2006
- NDGF : Mar 2007
- UK/gridPP : Nov 2007
- HGF Allianz : Jan 2008

dCache.org organizes weekly phone conferences with selected LCG Tier I's and with the CERN LCG storage support group.

dCache.org offers phone conferences and meeting to advise and consult groups or communities on the possibility of adopting dCache.

Famous last words ...

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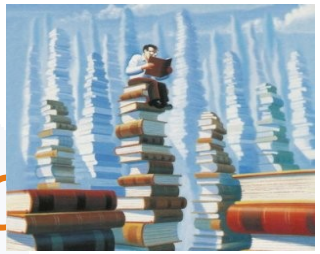
Further reading

www.dCache.ORG



Support for funding group

support@dCache.ORG

Users help users

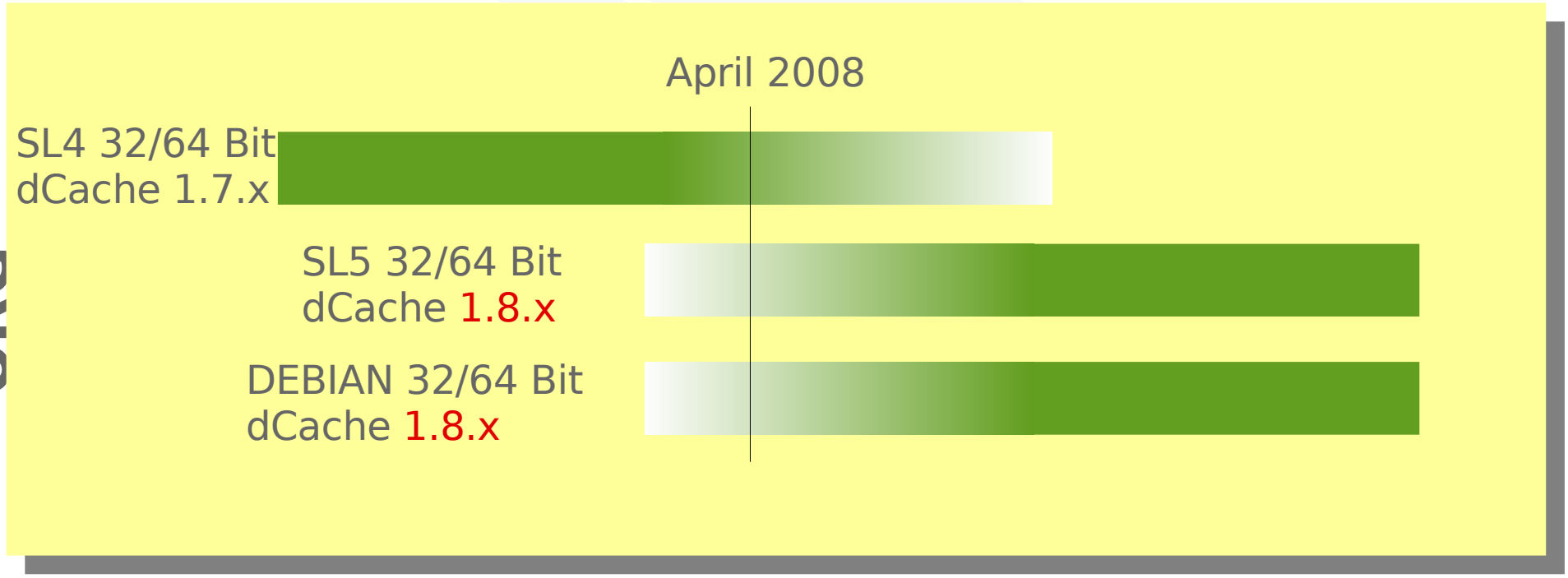
user-support@dCache.OR

Wiki

trac.dCache.ORG

Installation Road-map

- dCache should be installed by YAIM for small to medium (standard) installations.
- dCache should be installed manually for large, highly customized installations.
- The d-grid (dgi) reference installation is based on YAIM
- Instructions are available at d-grid.org and further details at dCache.ORG.
- dCache 1.8 is currently deployed at the LCG Tier I centers (manual installation).
- dCache 1.8 with YAIM will become the reference installation within the coming m
- Please refer to support at dCache dot org for further details and status.



Improvements in 1.8.x

- Cimera
  - High performance file name space engine.
  - True Database based. Allows for sophisticated queries.
  - Java based : platform independed
  - Optional in 1.8.x (conversion scripts from pnfs to chimera included)
- SRM 2.2
  - Mandatory for LCG Tier I/II
  - Enriched feature set
  - Space Manager (including space types TxDx and Tokens)
- Support for FTP protocol II
  - Allows direct pool to pool transfers between sites.
- Federated dCache support
  - dCache instance can span sites.
  - Nordic data grid : dCache spans 4 countries.
  - Supports different Tape storage system at different sites.

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The integration of NFS4.1 and HTTP(S) makes dCache an industry standard and with that very attractive for non HEP communities.