## Goal of Unit I

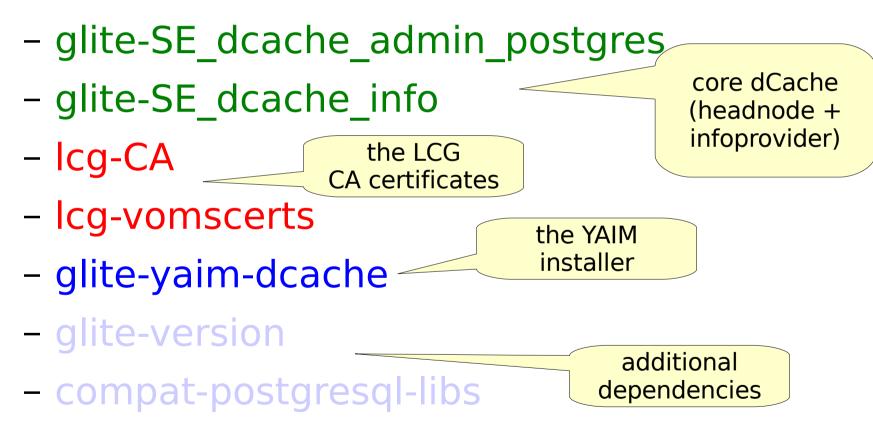
- complete all-in-one-node dCache instance installed via YAIM
  - the so called "headnode"
  - PoolManager, SRM, Infoprovider, 2 pools, various doors (dcap, gsidcap, gsiftp, xrootd)
  - one VO supported (dteam) an your 1<sup>st</sup> DN authorized
- testing your instance
  - basic transfers using srmcp, globus-url-copy, dccp
- getting in touch with administration
  - web- and ssh-interface, billing

# Getting started

- preparation (see handout for details)
  - login from your laptop to the UI (1<sup>st</sup> account)
  - from there you should have password-less root access to your personal VM (the first in the list)
- on your personal VM you will find:
  - "naked" SL4, 512 MB RAM
  - host certificate in /etc/grid-security
  - yum repositories are already setup
    - official scientific linux repos
    - Cern CA repo
    - Cern Glite 3.1 repos
    - dCache.org repos (latest versions of dCache, YAIM)

#### Installation

yum install the following packages



# Special steps required by workshop environment

- each group got 2 test certificates, which are unknown to the VOMS server
  - -> no VOMS-based authz during workshop
- setting up dCache authorization without VOMS requires following steps
  - install additional, gridmap-specific RPMs
  - YAIM merges the testusers (YOU from the local gridmap file) and the offical dteam-users into a global gridmap-file and a dCache kpwd-file
  - dCache (gPlazma) will be made aware of new kpwd file
    - -> you don't have to do all this with certificates of real users signed by real CAs

# Configuration

- take the default schema for local users and groups from the YAIM examples
- setup site-info.def based on the template

## Your site-info.def

MY\_DOMAIN=desy.de

Home of JDK, NOT JRE

JAVA\_LOCATION="<yourJDKHomePath>"

specifies the headnode

DCACHE ADMIN="<yourHeadNode>.desy.de"

DCACHE\_POOLS="<yourHeadNode>.desy.de:7:/pools/1 <yourHeadNode>.desy.de:7:

DCACHE DOOR SRM="<yourHeadNode>.desy.de"

DCACHE DOOR GSIFTP="<yourHeadNode>.desy.de"

DCACHE\_DOOR\_GSIDCAP="<yourHeadNode>.desy.de"

DCACHE DOOR DCAP="<yourHeadNode>.desy.de"

DCACHE\_DOOR\_XROOTD="<yourHeadNode>.desy.de'

DCACHE\_DOOR\_LDAP="<yourHeadNode>.desy.de"

2 pools on the headnode

all kinds of doors, SRM

RESET DCACHE CONFIGURATION=yes

RESET\_DCACHE\_PNFS=yes

RESET\_DCACHE\_RDBMS=yes

VOS="dteam"

we only support one VO so far

recreate dCache conf files, databases and PNFS the infoprovider host

#### Run YAIM

- run YAIM to configure and start dCache, based on your site-info.def
  - this may a few minutes..
- as soon as YAIM completes, you should have a complete dCache instance up and running!!

#### edit /etc/grid-security/storage-authzdb

```
# authzdb for dteam001 added by dcacheVoms2Gplasma
```

- authorize dteam001 read-write 18118 2688 / / /
- # authzdb for sgmdtm01 added by dcacheVoms2Gplasma
- authorize sgmdtm01 read-write 60501 2690 / / /
- # authzdb for prddtm01 added by dcacheVoms2Gplasma
- authorize prddtm01 read-write 50501 2689 / / /
- restart core-dCache:
  - /opt/d-cache/bin/dcache-core restart

# Check what is running

- check in the CLI that all Domains (=java processes) are up
- check which components (=cells) registering themselves in the webinterface
- try filesystem-commands on the exported PNFS namespace (like cd, ls)
- don't cp directly into PNFS, the file then goes as a BLOB into the database!!!

### test basic transfers

- local Dcap transfer into dCache, using the exported (mounted) PNFS namespace
- from the UI
  - plain dcap, gsiDcap, GridFtp, SRM copy
- plain dCap should fail from the UI

Why?

## The ssh-interface to dCache

login into dCache

exercise:

find the pool where a certain file resides on (a file which you have written into your dCache before)