



# Deployment: review and future

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# Overview

- Features and BUG fixes from last meeting to now
- FHS, none 'root' owned
- Upgrading from 1.9.5 or 1.9.12 to 2.2
- Release policy – the next 12 months.
- Packages we provide (RPM, Tar...)
- New Media (Customer information services)
- Summary

# Features and Bugs after dCache 1.9.12-1



# Features after 1.9.12-1

last Workshop to now

- **SRM**
  - Vacuum commands removed (Postgresql supports auto vacuuming) → postgresql 8.4 recommended
  - Prepare-to-put, prepare-to-get, bring online, and list
    - synchronous until srmGetReqSwitchToAsynchronousModeDelay
- **dcap, gsidcap, kerberosdcap**
  - dCap supports prestaging from tape → used to rely on dummy-prestager
  - Now – dCap door uses PinManager to trigger staging
- **WebDAV**
  - https-jglobus option (proxy certificate for client auth, /etc/grid-security)
  - Client: curl (proxy certificate), LFTP
- **Compatibility**
  - Improvements of compatibility with UberFTP and other FTP clients

# Features after 1.9.12-1

last Workshop to now



- **Info Provider**
  - Division in static and site specific data (/etc/dcache/info-provider.xml)
  - /opt/d-cache/share/defaults/info-provider.properties
- **Pinmanager faster**
  - Complete more performant redesign (new schema created at first startup)
- **Poolmanager (speedup file OPEN)**
  - Correctness of file location verified by doors rather than poolmanager
- **NFS3 support in NFS41 door**
  - Support for both at the same time,
  - NO I/O operations for NFS3 → only supports namespace operations

# Features - Scripts

last Workshop to now

- **Scripts**
  - “dcache pool ls”
  - dcache pool create (layout file entry)
  - “dcache status” command ... PID, user running domain
  - “dcache services” command ... all services, domains, logs
  - “dcache check-config” command ... detects faulty config, shows use of deprecated properties
  - “dcache database” command (ls; PinManager: update, tag, rollback tag or date, listLocks, releaseLocks,doc)
  - install.sh removed, /opt/d-cache/install/ moved to /opt/d-cache/libexec/
  
- “man dcache” will tell you more

# Bug fixes

last Workshop to now

- Improvements to migration script
  - Several improvements
  - e.g. dcache script checks for non-migrated configuration and fails to start dcache
- URL handling in SRM (UTF-8 support)
  - Allowing spaces and escaped characters
  - Also in WebDAV and FTP door
- service: info, multi-homed machines fix
  - When having several network interfaces with the same DNS name (key) dcache-info-provider would fail to provide hostname
  - Each network interface now gets unique name used as key

# Bug fixes

last Workshop to now

- **Bulk staging of files already on disk (PoolManager)**
  - Cost calculation in pool manager would malfunction
  - Bring-online was treated as read (increased cost on the pool) - other request would fail (due to high cost)
- **Mixup of TCP port HTTP and xrootd**
  - This would only happen with sites using both protocols on the same pools (ports were hard coded) → now one port per server
  - Also fixed timeout issues (mixup in the timeout values ms vs. s)
- **Broken DN banning in gPlazma**
  - Discovered during WLCG security drill



# Bug fixes

last Workshop to now

- Staging problem (-10)
  - Leaving behind repository entry in state D...deleting for failed staging
  - File was still marked as open in the pool even though it was deleted
- Pin Manager OOM exception
  - The only real issue with the redesigned pin manager
  - When PinManager was offline (pins expired)
- Chimera – failing to move directory
  - Move would leave the file
  - Not move A → B if B had size > 0
- FTP write mover timeout
  - Caused stream of transfer failures under load (too aggressive timeout)

# FHS and none 'root' dCache



# FHS, none 'root' owned

move towards standards

- FHS → towards standard distribution
  - EMI, epel
  - Easier to install via known OS (yum, apt)
  - You know the OS! you know where to look for dCache files
  - <http://www.pathname.com/fhs/>
- None root → security
  - dCache script drops user to dcache
  - only component that still needs root, is internal port mapper that uses port below 1024
  - Starting RHEL 6.2 → native portmapper configurable

→ Starting dCache 2.2.0 FHS only packaging

# Upgrading dCache

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## Upgrading from 1.9.5 or 1.9.12

→ 1.9.5 no longer supported

→ Upgrade path: 1.9.5 → 1.9.12 → 2.2.x

- Mixing pool nodes 1.9.5 to 1.9.12 is fine
- Do not mix head nodes and doors → upgrade all to 1.9.12
- 1.9.12 releases can be mixed
- No separate Chimera script in 1.9.12
- PinManager needs PostgreSQL 8.3 (but recommended  $\geq 8.4$ )
- Database schema of pinmanager changed
- Glue1.3 and Glue2.0 can be published simultaneously
- See migration hands on for details:  
<http://trac.dcache.org/wiki/Migrating%20Hands%20on>

# Upgrading from 1.9.12 to 2.2

1.9.12 to 2.2.0

- Backup your databases
- Change in the Postgres stored procedures  
→ rerun `psql -U chimera chimera -f pgsql-procedures.sql`
- 2.0 changes to PoolManager CLI result in need for rewriting the PoolManager.conf (with `>=1.9.12-9` or `>=1.9.13-3`)
- 2.1 some properties marked immutable (check your configuration files)

Pool Node Compatibility	1.9.12	1.9.13
1.9.12	OK	OK
2.2	<code>&gt;=1.9.12-11</code>	<code>&gt;=1.9.13-3</code>

# The packages we provide

→ Starting dCache 2.2.0 FHS only packaging

Package type		Location: /usr	Location: /opt
RPM		X	X
DEB		X	X
Binary tgz dcache.org	EMI	X	X
Solaris		X	X
src.tar.gz	EMI	X	
srpm	EMI-2	X	

# Move from /opt to /usr

	/opt	/usr
dcache.conf	/opt/d-cache/etc/	/etc/dcache/
HoppingManager	/opt/d-cache/config/	/var/lib/dcache/config/
PoolManager.conf (poolmanager.conf)	/opt/d-cache/config/	/var/lib/dcache/config/
ssh keys	/opt/d-cache/etc/  server_key* host_key* ssh_host_dsa_key*	/etc/dcache/admin/
dcachesrm- gplazma.policy	/opt/d-cache/etc/	/etc/dcache/
users	/opt/d-cache/etc/users	/etc/dcache/admin/users
property files		/usr/share/dcache/defaults
layouts	/opt/d-cache/	/etc/dcache/layouts/
authorized_keys	/opt/d-cache/etc/ authorized_keys*	/etc/dcache/admin/
Log files	/var/log/	/var/log/dcache/

Steps to move are depicted here:  
<http://trac.dcache.org/wiki/optToUsr>



# Move from /opt to /usr

	/opt location	/usr location
etc (configuration)	/opt/d-cache/etc/	/etc/dcache/
jars	/opt/d-cache/classes	/usr/share/dcache/classes /
services (batch files)	/opt/d-cache/config/	/usr/share/dcache/services/
scripts	/opt/d-cache/libexec/	/usr/share/dcache/lib/
sql	opt/d-cache/libexec/	/usr/share/dcache/
billing	/opt/d-cache/billing/	/var/lib/dcache/billing
Info-provider		/usr/share/dcache/info-provider

# Release Policy



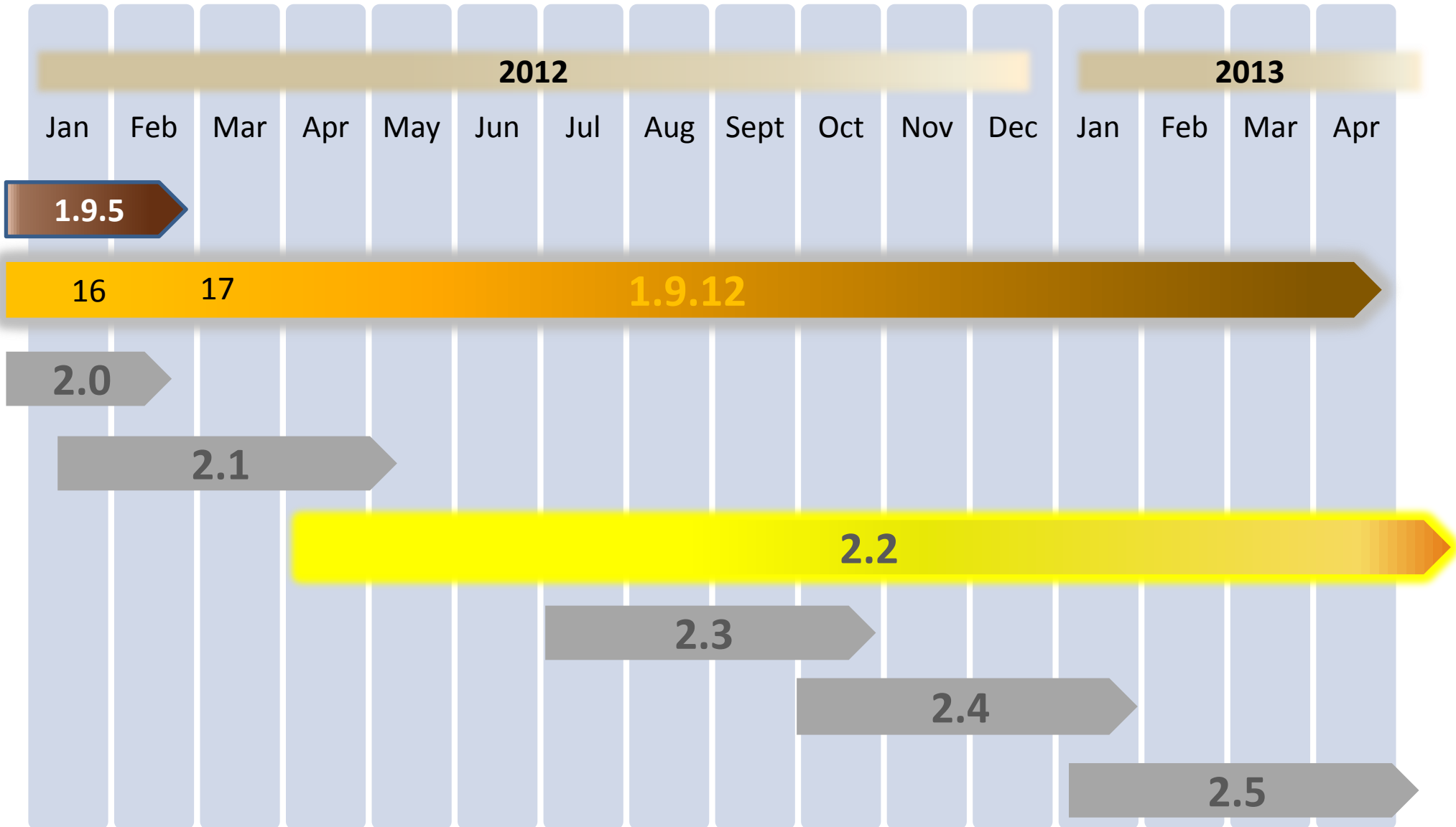
# Release policy

next 12 months

- Every 3 months a new feature release
- Minor releases: only bug fixes and emergency feature requests
- GOLDEN RELEASE – 2 year support period
  - current Golden Release = 2.2
- Support for 1.9.5 OFFICIALLY ended
- not supported: Upgrade from 1.9.5 to 2.2.0
  - migration script does not exist in 2.2

# Release policy (new and deprecated)

next 12 months



# Information Sources



# New Media – For your information

## Customer information services

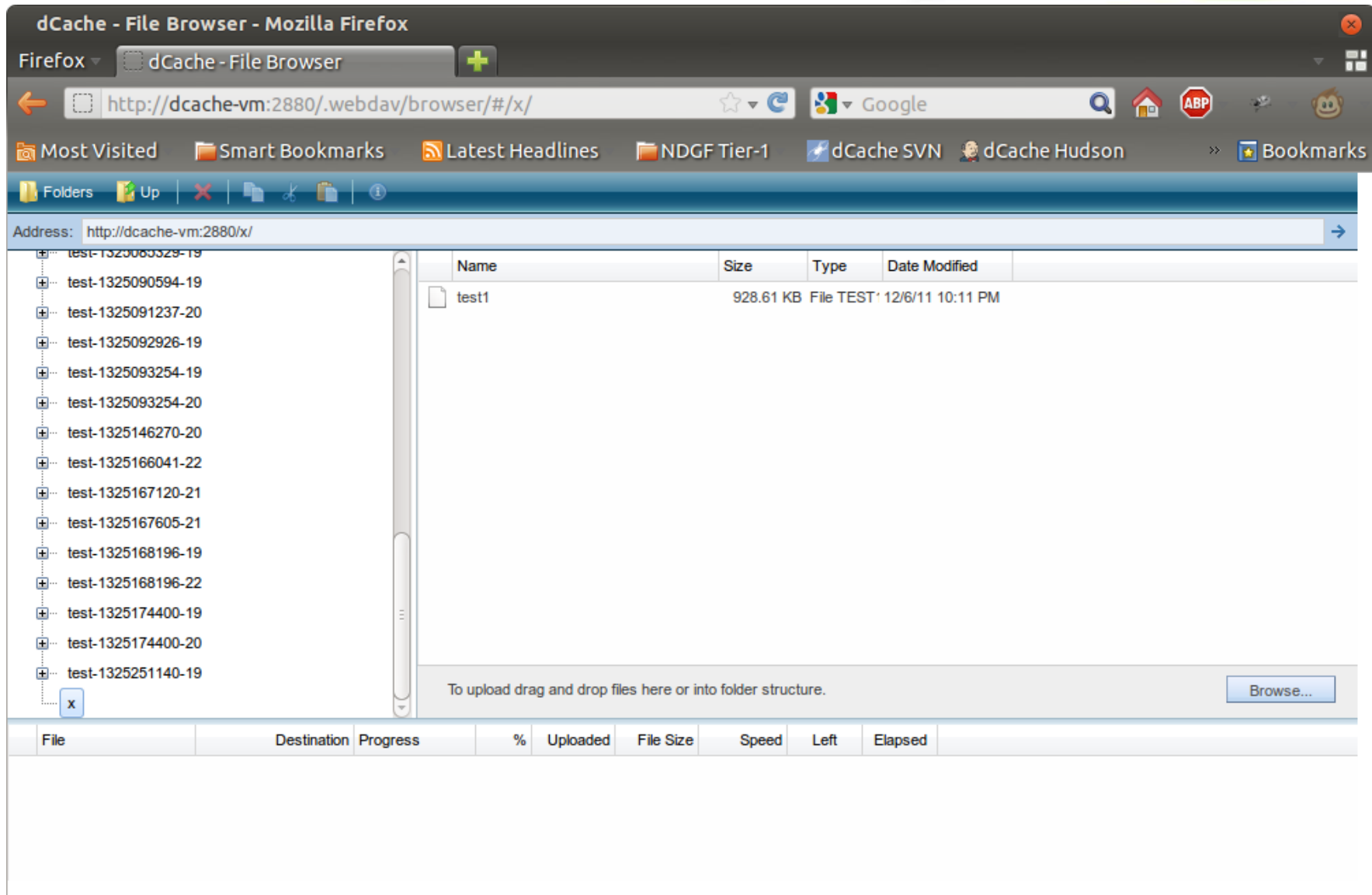
### Survey – please fill it !!!

- Twitter: <https://twitter.com/#!/dcacheorg>
- RSS Feed: <http://www.dcache.org/downloads/1.9/rss-all-releases.xml>
- Google Plus: <https://plus.google.com/106301747498127518233/posts>
- User Forum: <mailto:sympa@dcache.org?subject=“subscribe user-forum”>
  
- What sources of information is , are lacking?

# Summary

- Bugfixes
- More frequent feature releases
- srpm in EMI

# WebDAV client - ITHIT



The screenshot shows a Mozilla Firefox browser window titled "dCache - File Browser - Mozilla Firefox". The address bar contains "http://dcache-vm:2880/.webdav/browser/#/x/". The browser interface includes a toolbar with "Folders", "Up", and other navigation icons. The main content area displays a file list with columns for Name, Size, Type, and Date Modified. A file named "test1" is listed with a size of 928.61 KB and a date of 12/6/11 10:11 PM. Below the file list, there is a message: "To upload drag and drop files here or into folder structure." and a "Browse..." button. At the bottom of the browser window, there is a table with columns: File, Destination, Progress, %, Uploaded, File Size, Speed, Left, and Elapsed.

Name	Size	Type	Date Modified
test1	928.61 KB	File TEST	12/6/11 10:11 PM

File	Destination	Progress	%	Uploaded	File Size	Speed	Left	Elapsed
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# Upgrading from 1.9.5 or 1.9.12

- Steps to migration:
  - Backup config and etc files, database
  - Install the new version of dcache (1.9.12)
  - Run `/opt/d-cache/libexec/migrate-from-1.9.5.sh`
  - Fix errors that the script issues, have a look at warnings (to check for errors: `/opt/d-cache/bin/dcache check-config`)
  - Chimera does not need the namespace to be mounted