CMS dCache - Task #8928

Enhance procedure for adding new pools

05/26/2015 10:14 AM - Natalia Ratnikova

Status:	Resolved	**Start date:**	05/27/2015	
Priority:	Normal	**Due date:**	06/11/2015	
Assignee:	Natalia Ratnikova	**% Done:**	100%	
Category:		**Estimated time:**	10.00 hours	
Target version:		**Spent time:**	17.85 hours	

Description
Review current steps for adding new pools and include extra step for testing the hardware.

Related issues:			
Precedes CMS dCache - Task #8955: Add cmsstor409 and cmsstor410 in dCache Di...	**Resolved**	**06/12/2015**	**06/17/2015**
Precedes CMS dCache - Bug #8957: Follow the enhanced procedure for adding ne...	**Accepted**	**06/12/2015**	**06/16/2015**
Precedes (1 day) CMS dCache - Task #8910: Configure cmsstor108 and cmsstor11...	**Closed**	**08/11/2015**	**08/11/2015**

History

#1 - 05/26/2015 10:21 AM - Natalia Ratnikova

- File Gerards_nodes_testing_sketch.jpg added

- Status changed from New to Assigned

- Assignee set to Natalia Ratnikova

The idea is that from now on the DCSO will add pools to the test dCache instance, perform a "burning" procedure (similar to ECF-CIS?) and then move pools into production.

Another option would be to use a special group for test pools within the production instance.

Proposal sketch by Gerard is attached.

#2 - 05/27/2015 04:07 PM - Gerard Bernabeu Altayo

The procedure that we need to enhance is:

https://cmsweb.fnal.gov/bin/view/Storage/DCache22Procedures#Add_new_dCache_pool_procedure

Actually we should create a proper workflow that does:

1. https://cmsweb.fnal.gov/bin/view/Storage/DCache22Procedures#Add_new_dCache_pool_procedure to the TEST instance (of disk and/or tape), on a 'burnin poolgroup'

2. Start 'migration copy' processes so that all the pools receive and send data arround, we should copy a few (~5TB should be enough). Migrations should all succeed and have no errors for the pools to pass the acceptance test.
- Migrations should look like:
-- On all the 'permanent pools' we run: migration copy 'permanent pool with persistent data'->pgroup_burnin
-- On all the pools in pgroup_burnin we run: migration copy -persistent to prgroup_burnin. This will distribute files within the pgroup_burnin itself, causing data reads and writes on the new pools.

3. Stop all migration processes (in dCache test instance). Remove all data from the pools (there is a pool purge command that will do this, on the dCache CLI after you login to the pool cell).

4. Remove the pools from dCache test instance (PoolManager)

5. https://cmsweb.fnal.gov/bin/view/Storage/DCache22Procedures#Add_new_dCache_pool_procedure to the PRODUCTION instance (of disk and/or tape), on the right poolgroup

#3 - 05/27/2015 04:26 PM - Gerard Bernabeu Altayo

cmsstor409/410 already had a working XFS FS, not clear if this happened like this because ECF will create the partitions now or why. Email sent to ECF-CIS asking for that.

Our old procedure relies on DCSO creating the partitions, so to break the already done partitions I did:
cmsstor410.fnal.gov - dcachepooldisk/production (SLF 6.6)
16-core Opteron 6320 (H8DGU); 62.90 GB RAM, 20.00 GB swap

```
[root@cmsstor410 ~]# service puppet stop
Stopping puppet agent:                          [  OK  ]
[root@cmsstor410 ~]# service dcache-server stop
Stopping gridftp-cmsstor410Domain 0 done
Stopping w-cmsstor410-disk-disk2Domain 0 1 done
Stopping w-cmsstor410-disk-disk1Domain 0 1 done
[root@cmsstor410 ~]# umount /dev/sdc
[root@cmsstor410 ~]# umount /dev/sdb
[root@cmsstor410 ~]# dd if=/dev/zero of=/dev/sdc bs=10240 count=10000
10000+0 records in
10000+0 records out
102400000 bytes (102 MB) copied, 0.615781 s, 166 MB/s
[root@cmsstor410 ~]# dd if=/dev/zero of=/dev/sdb bs=10240 count=10000
10000+0 records in
10000+0 records out
102400000 bytes (102 MB) copied, 0.646658 s, 158 MB/s
[root@cmsstor410 ~]# mount -a
mount: special device LABEL=dcache-disk1 does not exist
mount: special device LABEL=dcache-disk2 does not exist
[root@cmsstor410 ~]#
```

#4 - 05/27/2015 04:31 PM - Gerard Bernabeu Altayo

- Precedes Task #8955: Add cmsstor409 and cmsstor410 in dCache Disk Production following new enhanced procedure added

#5 - 05/27/2015 04:32 PM - Gerard Bernabeu Altayo

- Due date set to 06/02/2015

- Start date changed from 05/26/2015 to 05/27/2015

- Estimated time set to 10.00 h

#6 - 05/27/2015 04:38 PM - Gerard Bernabeu Altayo

- Precedes Bug #8957: Follow the enhanced procedure for adding new pools on cmsstor112 and add it to dCache disk Test added

#7 - 05/27/2015 05:29 PM - Gerard Bernabeu Altayo

- Precedes Task #8910: Configure cmsstor108 and cmsstor110 to dCache-tape test stand added

#8 - 05/28/2015 08:21 PM - Natalia Ratnikova

- Created puppet branch natalia_burning_dcache_pools
  - added new group for burning pools
  - merged in Gerard's general-type changes from 4702b16f which remove Resilient pools related stuff and add readonlyPools group.
  - added cmsstor151 pools to readonlyPools group, as we already have cmsstor155 pools in the flush group.

  Refer to dCache docs for groups/links setup instructions.

#9 - 05/28/2015 08:26 PM - Natalia Ratnikova

- Tested block of instructions for creating xfs/labeling data disks on cmsstor151 which already has dcache installed

```
[root@cmsstor151 ~]# service puppet stop
Stopping puppet agent:                          [  OK  ]
[root@cmsstor151 ~]# df
Filesystem      1K-blocks     Used   Available Use% Mounted on
/dev/sda3      222630532 13899504  197415368  7% /
tmpfs            8164516        0    8164516  0% /dev/shm
/dev/sda1         999320    60404     886488  7% /boot
/dev/sdd     11718276608    33188 11718243420  1% /storage/data3
/dev/sdb     11718276608    33188 11718243420  1% /storage/data1
/dev/sdc     11718276608    33188 11718243420  1% /storage/data2
[root@cmsstor151 ~]# xfs_admin -l /dev/sdd
label = "dcache-disk3"
[root@cmsstor151 ~]# xfs_admin -l /dev/sdb
label = "dcache-disk1"
[root@cmsstor151 ~]# xfs_admin -l /dev/sdc
label = "dcache-disk2"
[root@cmsstor151 ~]# dcache status
DOMAIN                  STATUS PID   USER
```

```
w-cmsstor151-disk_itb-disk1Domain running 24813 root
w-cmsstor151-disk_itb-disk2Domain running 24868 root
w-cmsstor151-disk_itb-disk3Domain running 24928 root
gridftp-cmsstor151Domain        running 24987 root
[root@cmsstor151 ~]# dcache stop
Stopping gridftp-cmsstor151Domain 0 done
Stopping w-cmsstor151-disk_itb-disk3Domain 0 done
Stopping w-cmsstor151-disk_itb-disk2Domain 0 done
Stopping w-cmsstor151-disk_itb-disk1Domain 0 done
[root@cmsstor151 ~]# mkfs.xfs /dev/sdb;
mkfs.xfs: /dev/sdb contains a mounted filesystem
Usage: mkfs.xfs
/* blocksize /        [-b log=n|size=num]
/ data subvol /       [-d agcount=n,agsize=n,file,name=xxx,size=num,
(sunit=value,swidth=value|su=num,sw=num),
sectlog=n|sectsize=num
/ inode size /    [-i log=n|perblock=n|size=num,maxpct=n,attr=0|1|2,
projid32bit=0|1]
/ log subvol /    [-l agnum=n,internal,size=num,logdev=xxx,version=n
sunit=value|su=num,sectlog=n|sectsize=num,
lazy-count=0|1]
/ label /       [-L label (maximum 12 characters)]
/ naming /      [-n log=n|size=num,version=2|ci]
/ prototype file /    [-p fname]
/ quiet /       [-q]
/ realtime subvol /   [-r extsize=num,size=num,rtdev=xxx]
/ sectorsize /    [-s log=n|size=num]
/ version */      [-V]
devicename
<devicename> is required unless -d name=xxx is given.
<num> is xxx (bytes), xxxs (sectors), xxxb (fs blocks), xxxk (xxx KiB),
xxxm (xxx MiB), xxxg (xxx GiB), xxxt (xxx TiB) or xxxp (xxx PiB).
<value> is xxx (512 byte blocks).
[root@cmsstor151 ~]# xfs_admin -L dcache-disk1 /dev/sdb;
xfs_admin: /dev/sdb contains a mounted filesystem

fatal error -- couldn't initialize XFS library
[root@cmsstor151 ~]# xfs_admin -l /dev/sdc
label = "dcache-disk2"
[root@cmsstor151 ~]# xfs_admin -l /dev/sdb
label = "dcache-disk1"
[root@cmsstor151 ~]# puppet agent -t
Info: Retrieving pluginfacts
Info: Retrieving plugin
Info: Loading facts in /var/lib/puppet/lib/facter/facter_dot_d.rb
Info: Loading facts in /var/lib/puppet/lib/facter/code_server.rb
Info: Loading facts in /var/lib/puppet/lib/facter/cvmfsversion.rb
Info: Loading facts in /var/lib/puppet/lib/facter/postgres_default_version.rb
Info: Loading facts in /var/lib/puppet/lib/facter/cvmfspartsize.rb
Info: Loading facts in /var/lib/puppet/lib/facter/certificate_facts.rb
Info: Loading facts in /var/lib/puppet/lib/facter/root_home.rb
Info: Loading facts in /var/lib/puppet/lib/facter/concat_basedir.rb
Info: Loading facts in /var/lib/puppet/lib/facter/ip6tables_version.rb
Info: Loading facts in /var/lib/puppet/lib/facter/puppet_vardir.rb
Info: Loading facts in /var/lib/puppet/lib/facter/os_maj_version.rb
Info: Loading facts in /var/lib/puppet/lib/facter/iptables_version.rb
Info: Loading facts in /var/lib/puppet/lib/facter/rsyslog_version.rb
Info: Loading facts in /var/lib/puppet/lib/facter/pe_version.rb
Info: Loading facts in /var/lib/puppet/lib/facter/iptables_persistent_version.rb
Info: Caching catalog for cmsstor151.fnal.gov
Info: Applying configuration version '1432862178'
Notice: /Stage[main]/Dcache/Service[dcache-server]/ensure: ensure changed 'stopped' to 'running'
Info: /Stage[main]/Dcache/Service[dcache-server]: Unscheduling refresh on Service[dcache-server]
Notice: Finished catalog run in 22.84 seconds
```

#10 - 05/28/2015 08:32 PM - Natalia Ratnikova

- Stop dcache and break the file system on the disks to simulate uninitialized state, see Gerard's hints above.

```
[root@cmsstor151 ~]# dcache stop
Stopping gridftp-cmsstor151Domain 0 done
Stopping w-cmsstor151-disk_itb-disk3Domain 0 1 done
Stopping w-cmsstor151-disk_itb-disk2Domain 0 1 done
Stopping w-cmsstor151-disk_itb-disk1Domain 0 1 done
```

```
[root@cmsstor151 ~]# umount /dev/sdb
[root@cmsstor151 ~]# umount /dev/sdc
[root@cmsstor151 ~]# umount /dev/sdd
[root@cmsstor151 ~]# df
Filesystem     1K-blocks     Used Available Use% Mounted on
/dev/sda3     222630532 13899712 197415160   7% /
tmpfs          8164516        0  8164516   0% /dev/shm
/dev/sda1       999320    60404   886488   7% /boot
[root@cmsstor151 ~]# dd if=/dev/zero of=/dev/sdb bs=10240 count=10000
10000+0 records in
10000+0 records out
102400000 bytes (102 MB) copied, 2.38226 s, 43.0 MB/s
[root@cmsstor151 ~]# dd if=/dev/zero of=/dev/sdc bs=10240 count=10000
10000+0 records in
10000+0 records out
102400000 bytes (102 MB) copied, 2.27509 s, 45.0 MB/s
[root@cmsstor151 ~]# dd if=/dev/zero of=/dev/sdd bs=10240 count=10000
10000+0 records in
10000+0 records out
102400000 bytes (102 MB) copied, 2.26636 s, 45.2 MB/s
[root@cmsstor151 ~]# mount -a
mount: special device LABEL=dcache-disk3 does not exist
mount: special device LABEL=dcache-disk1 does not exist
mount: special device LABEL=dcache-disk2 does not exist
```

#11 - 05/28/2015 09:13 PM - Natalia Ratnikova

Follow steps at:
https://cmsweb.fnal.gov/bin/view/Storage/DCache22Procedures#Add_new_dCache_pool_procedure

push ENC change: e3c1987f796dac2a242352f7876c203e3197004d .

On the node:

```
[root@cmsstor151 ~]# modprobe qla2xxx;
[root@cmsstor151 ~]# yum install -y xfsprogs;
Loaded plugins: priorities, security
Setting up Install Process
7749 packages excluded due to repository priority protections
Package xfsprogs-3.1.1-16.el6.x86_64 already installed and latest version
Nothing to do
[root@cmsstor151 ~]# mkfs.xfs /dev/sdb;
meta-data=/dev/sdb            isize=256    agcount=32, agsize=91565344 blks       =                sectsz=512   attr=2, projid32bit=0
data     =                    bsize=4096   blocks=2930090880, imaxpct=5      =           sunit=32     swidth=98304 blks
naming   =version 2           bsize=4096   ascii-ci=0
log      =internal log        bsize=4096   blocks=521728, version=2         =           sectsz=512   sunit=32 blks, lazy-count=1
realtime =none                extsz=4096   blocks=0, rtextents=0
[root@cmsstor151 ~]# xfs_admin -L dcache-disk1 /dev/sdb;
writing all SBs
new label = "dcache-disk1"
[root@cmsstor151 ~]# mkfs.xfs /dev/sdc;
meta-data=/dev/sdc            isize=256    agcount=32, agsize=91565344 blks       =                sectsz=512   attr=2, projid32bit=0
data     =                    bsize=4096   blocks=2930090880, imaxpct=5      =           sunit=32     swidth=98304 blks
naming   =version 2           bsize=4096   ascii-ci=0
log      =internal log        bsize=4096   blocks=521728, version=2         =           sectsz=512   sunit=32 blks, lazy-count=1
realtime =none                extsz=4096   blocks=0, rtextents=0
[root@cmsstor151 ~]# xfs_admin -L dcache-disk2 /dev/sdc;
writing all SBs
new label = "dcache-disk2"
[root@cmsstor151 ~]# mkfs.xfs /dev/sdd;
meta-data=/dev/sdd            isize=256    agcount=32, agsize=91565344 blks       =                sectsz=512   attr=2, projid32bit=0
data     =                    bsize=4096   blocks=2930090880, imaxpct=5      =           sunit=32     swidth=98304 blks
naming   =version 2           bsize=4096   ascii-ci=0
log      =internal log        bsize=4096   blocks=521728, version=2         =           sectsz=512   sunit=32 blks, lazy-count=1
realtime =none                extsz=4096   blocks=0, rtextents=0
[root@cmsstor151 ~]# xfs_admin -L dcache-disk3 /dev/sdd;
writing all SBs
new label = "dcache-disk3"
[root@cmsstor151 ~]#
```

Run puppet twice: first run mounts the pools and starts dcache; second run is clean.

Move cmsstor151 from "unconfigured" into "dCache test" group in Zabbix.

On the admin node check old configuration:

```
[cmsstor152.fnal.gov] (PoolManager) admin > psu ls pgroup
flushPools
[cmsstor152.fnal.gov] (PoolManager) admin > psu ls link
flush-link
Resilient-link
[cmsstor152.fnal.gov] (PoolManager) admin > psu ls pool
w-cmsstor155-disk_itb-disk1
w-cmsstor151-disk_itb-disk2
w-cmsstor151-disk_itb-disk3
w-cmsstor155-disk_itb-disk2
w-cmsstor151-disk_itb-disk1
w-cmsstor155-disk_itb-disk3
```

In ENC : move admin node cmsstor152 to natalia_burning_dcache_pools branch.

Stop puppet on the admin node.

push ENC changes.

Run puppet with --noop - everything looks fine run puppet again to load modifications to poolmanager.conf.

Check the effect from the admin interface:

```
[cmsstor152.fnal.gov] (PoolManager) admin > psu ls pgroup
flushPools
burningPools
readonlyPools
[cmsstor152.fnal.gov] (PoolManager) admin > psu ls link
flush-link
burning-link
readonly-link
[cmsstor152.fnal.gov] (PoolManager) admin > psu ls pool
w-cmsstor155-disk_itb-disk1
w-cmsstor151-disk_itb-disk2
w-cmsstor151-disk_itb-disk3
w-cmsstor155-disk_itb-disk2
w-cmsstor155-disk_itb-disk3
w-cmsstor151-disk_itb-disk1
[cmsstor152.fnal.gov] (PoolManager) admin > psu ls pool -l w-cmsstor151-disk_itb-disk2
w-cmsstor151-disk_itb-disk2  (enabled=true;active=23;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
linkList   :
[cmsstor152.fnal.gov] (PoolManager) admin > psu ls pool -l w-cmsstor155-disk_itb-disk2
w-cmsstor155-disk_itb-disk2  (enabled=true;active=29;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
linkList   :
[cmsstor152.fnal.gov] (PoolManager) admin > psu ls pgroup -l readonlyPools
readonlyPools
linkList :
readonly-link  (pref=5/0/0/0;flush-section;ugroups=3;pools=1)
poolList :
[cmsstor152.fnal.gov] (PoolManager) admin > psu ls pgroup -l flushPools
flushPools
linkList :
flush-link  (pref=10/0/10/10;flush-section;ugroups=3;pools=1)
poolList :
w-cmsstor155-disk_itb-disk1  (enabled=true;active=3;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
w-cmsstor151-disk_itb-disk2  (enabled=true;active=12;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
w-cmsstor151-disk_itb-disk3  (enabled=true;active=12;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
w-cmsstor155-disk_itb-disk2  (enabled=true;active=10;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
w-cmsstor155-disk_itb-disk3  (enabled=true;active=25;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
w-cmsstor151-disk_itb-disk1  (enabled=true;active=12;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
```

#12 - 05/28/2015 09:48 PM - Natalia Ratnikova

Added cmsstor410 and cmsstor409 to disk_itb instance burning group via puppet commit: 0bffd062c5d024bc52d550329ef7da2ee23794e4 .

Check that it takes effect:

```
[cmsstor152.fnal.gov] (PoolManager) admin > psu ls pgroup -l burningPools
burningPools
linkList :
burning-link  (pref=10/0/10/10;flush-section;ugroups=3;pools=1)
poolList :
w-cmsstor410-disk_itb-disk1  (enabled=true;active=6;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
w-cmsstor409-disk_itb-disk2  (enabled=true;active=10;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
w-cmsstor410-disk_itb-disk2  (enabled=true;active=6;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
```

w-cmsstor409-disk_itb-disk1 (enabled=true;active=10;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)

Leave these two pools in dcache-pool group in Zabbix for now, since they will be eventually moved there anyway.

Updated twiki instructions: added start puppet step on the pool, once the work is complete.

Fixed formatting broken by Gerard's previous editing.

#13 - 05/28/2015 09:49 PM - Natalia Ratnikova

- % Done changed from 0 to 30

#14 - 06/01/2015 05:16 PM - Natalia Ratnikova

===== Current space usage status =====

```
- 860Gb of data on the whole instance according du on the namespace:
 - dCache monitoring stats page shows:  879.661 MB
 - spacecount run on the dump of the namespace:  922 391 818 304 Byte = 859.044 323 03 Gigabyt
```

-bash-3.2$ spacecount posix --dump ~/T1_US_FNAL_DISK_ITB.1430760780.txt --level 3
upload parameter: strict > 0
upload parameter: /pnfs/dcache/uscms_test > 922391818304
upload parameter: timestamp > 1430760780
upload parameter: node >
upload parameter: /pnfs > 922391818304
upload parameter: /pnfs/dcache > 922391818304
total number of records: 6

=== Mount nfs v3 on cmsstor155 pool ===

This is only for convenience to check the contents.
Use non-standard mount point:

```
mkdir  /dcache_itb
 mount -o nfsvers=3,intr,hard,rw,noac,noacl,noatime,nodiratime cmsstor153:/dcache /dcache_itb
```

==== Create directory for test data ====

dCache itb instance re-uses disk instance authentication/authorization,
cmsphedex role is mapped to cmsprod and is allowed to write. normal users can only read.

[natasha@cmslpc23 natasha]$ voms-proxy-init -voms cms:/cms/Role=cmsphedex
....
[natasha@cmslpc23 ~]$ voms-proxy-info -all | grep phedex
attribute : /cms/Role=cmsphedex/Capability=NULL
[natasha@cmslpc23 ~]$ srmmkdir 'srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning'

srmmkdir 'srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning'

==== Create data files ======

[natasha@cmslpc23 natasha]$ pwd
/uscmst1b_scratch/lpc1/3DayLifetime/natasha
[natasha@cmslpc23 natasha]$ dd if=/dev/zero of=1g.burningtest bs=1 count=0 seek=1G
0+0 records in
0+0 records out
0 bytes (0 B) copied, 0.000171006 s, 0.0 kB/s

same for 2,3,4 GB...

[natasha@cmslpc23 natasha]$ dd if=/dev/zero of=4g.burningtest bs=4 count=0 seek=1G
[natasha@cmslpc23 natasha]$ ls latr
total 10485856
drwxrwxrwt 386 root   root   59392 Jun 1 14:49 ..
-rw-r--r-- 1 natasha us_cms 1073741824 Jun 1 14:54 1g.burningtest
-rw-r--r-- 1 natasha us_cms 2147483648 Jun 1 14:56 2g.burningtest
-rw-r--r-- 1 natasha us_cms 3221225472 Jun 1 14:56 3g.burningtest
-rw-r--r-- 1 natasha us_cms 4294967296 Jun 1 14:56 4g.burningtest
drwxr-xr-x 2 natasha us_cms   2048 Jun 1 14:57 .
bash-4.1$ for f in *.burningtest; do srmcp file:///`pwd`/$f srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/$f; done

check namespace on cmsstor155:
drwxrwxrwx 110 root   root   512 Jun 1 16:33 ..
-rw-rw-rw- 1 cmsprod us_cms 1073741824 Jun 1 17:11 1g.burningtest

rw-rw-rw   1 cmsprod us_cms 2147483648 Jun 1 17:12 2g.burningtest
rw-rw-rw   1 cmsprod us_cms 3221225472 Jun 1 17:13 3g.burningtest
rw-rw-rw   1 cmsprod us_cms 4294967296 Jun 1 17:14 4g.burningtest

#15 - 06/01/2015 07:05 PM - Natalia Ratnikova

Start and monitor data migration on the burning pools.

The srmcp-ed data were written to the burning pools as well. To fix this:
set affected pools in readonly state, migrate move data onto flushPools group.
Get dump of files will locations on the pools

Add four more files 1,2,3,4 GB size.
Get dump again.
Tomorrow - clarify Gerard's idea of continuous migration - what options need to be used ..

#16 - 06/02/2015 04:52 PM - Natalia Ratnikova

- Status changed from Assigned to Accepted

[cmsstor152.fnal.gov] (PoolManager) admin > psu ls pool -l
w-cmsstor410-disk_itb-disk1 (enabled=true;active=0;rdOnly=false;links=0;pgroups=1;hsm=[];mode=disabled(store,stage,p2p-client))
linkList :
w-cmsstor409-disk_itb-disk2 (enabled=true;active=17;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
linkList :
w-cmsstor155-disk_itb-disk1 (enabled=true;active=8;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
linkList :
w-cmsstor410-disk_itb-disk2 (enabled=true;active=12;rdOnly=false;links=0;pgroups=1;hsm=[];mode=disabled(store,stage,p2p-client))
linkList :
w-cmsstor409-disk_itb-disk1 (enabled=true;active=17;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
linkList :
w-cmsstor151-disk_itb-disk2 (enabled=true;active=8;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
linkList :
w-cmsstor151-disk_itb-disk3 (enabled=true;active=5;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
linkList :
w-cmsstor155-disk_itb-disk2 (enabled=true;active=3;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
linkList :
w-cmsstor155-disk_itb-disk3 (enabled=true;active=0;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
linkList :
w-cmsstor151-disk_itb-disk1 (enabled=true;active=0;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
linkList :
[cmsstor152.fnal.gov] (PoolManager) admin > man psu set

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[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor410-disk_itb-disk2
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk2) admin > pool enable
Pool w-cmsstor410-disk_itb-disk2 enabled
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk2) admin > ..

   1. Repeat the same for w-cmsstor409-disk_itb-disk1

[cmsstor152.fnal.gov] (local) admin > cd PoolManager
[cmsstor152.fnal.gov] (PoolManager) admin > psu ls pool -l
w-cmsstor410-disk_itb-disk1 (enabled=true;active=23;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
linkList :
w-cmsstor409-disk_itb-disk2 (enabled=true;active=10;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
linkList :
w-cmsstor155-disk_itb-disk1 (enabled=true;active=1;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
linkList :
w-cmsstor410-disk_itb-disk2 (enabled=true;active=5;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
linkList :
w-cmsstor409-disk_itb-disk1 (enabled=true;active=10;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
linkList :
w-cmsstor151-disk_itb-disk2 (enabled=true;active=1;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
linkList :
w-cmsstor151-disk_itb-disk3 (enabled=true;active=28;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
linkList :
w-cmsstor155-disk_itb-disk2 (enabled=true;active=26;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
linkList :
w-cmsstor155-disk_itb-disk3 (enabled=true;active=23;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
linkList :
w-cmsstor151-disk_itb-disk1 (enabled=true;active=23;rdOnly=false;links=0;pgroups=1;hsm=[];mode=enabled)
linkList :

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[cmsstor152.fnal.gov] (w-cmsstor155-disk_itb-disk1) admin > migration copy ~~target=pgroup~~ burningPools
[1] INITIALIZING migration copy ~~-target=pgroup -~~ burningPools
[cmsstor152.fnal.gov] (w-cmsstor155-disk_itb-disk1) admin > ..
[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor155-disk_itb-disk2
[cmsstor152.fnal.gov] (w-cmsstor155-disk_itb-disk2) admin > migration copy ~~target=pgroup~~ burningPools
[1] INITIALIZING migration copy ~~-target=pgroup -~~ burningPools
[cmsstor152.fnal.gov] (w-cmsstor155-disk_itb-disk2) admin > ..
[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor155-disk_itb-disk3
[cmsstor152.fnal.gov] (w-cmsstor155-disk_itb-disk3) admin > migration copy ~~target=pgroup~~ burningPools
[1] INITIALIZING migration copy ~~-target=pgroup -~~ burningPools
[cmsstor152.fnal.gov] (w-cmsstor155-disk_itb-disk3) admin > ..

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Some p2pserver and p2pclient transfers are showing in the pool queue monitoring.

Now start permanent migration on the burning pools to the burning group.

Repeat the following for the four pools in testing:

[cmsstor152.fnal.gov] (w-cmsstor409-disk_itb-disk1) admin > migration copy ~~permanent -target=pgroup~~ burningPools
[1] INITIALIZING migration copy ~~-permanent -target=pgroup -~~ burningPools
[cmsstor152.fnal.gov] (w-cmsstor409-disk_itb-disk1) admin > migration ls
[1] RUNNING   migration copy ~~permanent -target=pgroup -~~ burningPools
[cmsstor152.fnal.gov] (w-cmsstor409-disk_itb-disk1) admin > migration info 1
Command   : migration copy ~~permanent -target=pgroup -~~ burningPools
State   : RUNNING
Queued   : 2293
Attempts   : 135
Targets   : w-cmsstor410-disk_itb-disk1,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk2
Completed : 134 files; 607972874 bytes; 5%
Total   : 11016105508 bytes
Concurrency: 1
Running tasks:
[134] 0000B7300BD669C34542958F4BFDFA7C7F0C: TASK.Copying -> [w-cmsstor410-disk_itb-disk2@local]
[cmsstor152.fnal.gov] (w-cmsstor409-disk_itb-disk1) admin > ..

#20 - 06/02/2015 05:57 PM - Natalia Ratnikova

- % Done changed from 30 to 60

Cancel migration on one of the pools and start a new one with extra options (checked with Gerard).

This can be done later on all pools pools, also including the source ones with persistent data , especially the permanent option, which will migrate newly added files.

[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk2) admin > migration copy ~~verify -concurrency=10 -tmode=cached -pins=keep -permanent -target=pgroup burningPools~~
[2] INITIALIZING migration copy ~~-verify -concurrency=10 -tmode=cached -pins=keep -permanent -target=pgroup -~~ burningPools
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk2) admin > migration info 2
Command   : migration copy ~~verify -concurrency=10 -tmode=cached -pins=keep -permanent -target=pgroup -~~ burningPools
State   : RUNNING
Queued   : 13785
Attempts   : 2259
Targets   : w-cmsstor410-disk_itb-disk1,w-cmsstor409-disk_itb-disk2,w-cmsstor409-disk_itb-disk1
Completed : 2249 files; 10203962639 bytes; 14%
Total   : 72793408884 bytes
Concurrency: 10
Running tasks:
[14855] 00007AE58B46679A4E7BAC9ED6F489837CCA: TASK.Copying -> [w-cmsstor409-disk_itb-disk2@local]
[14857] 00002C481976419D45BCAA795A46C49B6DC6: TASK.Copying -> [w-cmsstor409-disk_itb-disk1@local]
[14860] 00006A76679D124E4EE9AC9D39E8AF6F7C1F: TASK.Copying -> [w-cmsstor409-disk_itb-disk1@local]
[14861] 00001990CC860D3F468698E67282EC2508D3: TASK.Copying -> [w-cmsstor409-disk_itb-disk1@local]
[14862] 0000CB573030608D47E59A28F62170974039: TASK.Copying -> [w-cmsstor409-disk_itb-disk2@local]
[14863] 000017E76068339E46738974996B37B64493: TASK.Copying -> [w-cmsstor409-disk_itb-disk1@local]
[14864] 000072F71632319F4C6483870DE39A3B7AA3: TASK.Copying -> [w-cmsstor410-disk_itb-disk1@local]
[14865] 0000AAF9392C975541FF993DF67F36EECDBD: TASK.Copying -> [w-cmsstor409-disk_itb-disk1@local]
[14866] 000097020C79D7AB4B5C876B7C55EA3C11B9: TASK.UpdatingExistingFile -> [w-cmsstor409-disk_itb-disk2@local]
[14867] 00009AE2FE8868A44F908B689564A4D055B7: TASK.GettingLocations
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk2) admin > ..

#21 - 06/02/2015 05:58 PM - Natalia Ratnikova

- % Done changed from 60 to 70

test time log

#22 - 06/02/2015 05:58 PM - Natalia Ratnikova

- % Done changed from 70 to 60

#23 - 06/03/2015 05:45 PM - Natalia Ratnikova

Run storage dump on cmspnfs1 again - most burning files have migrated to other pool.
Not every pool has every file, but they are more or less evenly distributed among all pools:

```
[root@cmspnfs1 chimera-list]# for p in `grep burning  chimera_2015-06-03_1608 | awk '{print $NF}' | tr ',' "\n" | sort -u `; do echo $p; grep burning
chimera_2015-06-03_1608| grep -c $p  ; done
/mnt/dcache/uscms_test/burning
1
w-cmsstor155-disk_itb-disk1
2
w-cmsstor155-disk_itb-disk2
2
w-cmsstor155-disk_itb-disk3
5
w-cmsstor409-disk_itb-disk1
4
w-cmsstor409-disk_itb-disk2
5
w-cmsstor410-disk_itb-disk1
4
w-cmsstor410-disk_itb-disk2
5
```

#24 - 06/03/2015 05:49 PM - Natalia Ratnikova

ADMIN interface :

Two pools have locked files errors (PNFS IDs are for the test files):

```
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk1) admin > migration info 2
Command    : migration copy permanent  target=pgroup  burningPools
State      : SLEEPING
Queued     : 0
Attempts   : 103033
Targets    : w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk2,w-cmsstor409-disk_itb-disk1
Completed  : 103020 files; 474632812306 bytes; 100%
Total      : 474632812306 bytes
Concurrency: 1
Running tasks:
Most recent errors:
18:03:52 [29185] 00006CBC9BCB10F84E3284BFB42B33AD18D2: Replica is locked on target pool
[...]
```

Two other errors:

```
17:51:08 [32735] 00001CF3A4708D7D431587F4B980ADED405D: Replica is locked on target pool
18:03:49 [40476] 0000904DC5D8386A48D89F9EC3E6A7F75929: PnfsManager failed (Unexpected reply: )
18:06:49 [40462] 00006CBC9BCB10F84E3284BFB42B33AD18D2: Pool [w-cmsstor410-disk_itb-disk1@local] failed (no response)
```

In the logs : no messages except for pool size adjustment message, which is normal.

#25 - 06/03/2015 06:03 PM - Natalia Ratnikova

On cmslps24 open screen session with
screen -S burning_test

```
cd  /uscmst1b_scratch/lpc1/3DayLifetime/natasha
[natasha@cmslpc24 natasha]$ ls latr
total 11993216
drwxrwxrwt 386 root   root      59392 Jun  1 14:49 ..
-rw-r--r-  1 natasha us_cms 1073741824 Jun  1 14:54 1g.burningtest
-rw-r--r-  1 natasha us_cms 2147483648 Jun  1 14:56 2g.burningtest
-rw-r--r-  1 natasha us_cms 3221225472 Jun  1 14:56 3g.burningtest
-rw-r--r-  1 natasha us_cms 4294967296 Jun  1 14:56 4g.burningtest
drwxr-xr-x   3 natasha us_cms      2048 Jun  3 09:55 .
```

Now copy every file via srmcp into 4 fileswith a different name (total 16):

for i in {2..5}; do for f in *.burningtest; do srmcp file:///`pwd`/$f
srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/$f-$i; done; done

Detach from screen and leave it run for a while.

ONce arrive in the system, files are expected to get distributed over all pools, including burning pools group.
Then migration jobs should replicate them further.

#26 - 06/03/2015 06:05 PM - Natalia Ratnikova

For the record , the resulting copy commands are:

bash-4.1$ for i in {2..5}; do for f in *.burningtest; do echo srmcp file:///`pwd`/$f
srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/$f-$i; done

    done

srmcp file:////uscmst1b_scratch/lpc1/3DayLifetime/natasha/1g.burningtest
srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/1g.burningtest-2
srmcp file:////uscmst1b_scratch/lpc1/3DayLifetime/natasha/2g.burningtest
srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/2g.burningtest-2
srmcp file:////uscmst1b_scratch/lpc1/3DayLifetime/natasha/3g.burningtest
srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/3g.burningtest-2
srmcp file:////uscmst1b_scratch/lpc1/3DayLifetime/natasha/4g.burningtest
srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/4g.burningtest-2
srmcp file:////uscmst1b_scratch/lpc1/3DayLifetime/natasha/1g.burningtest
srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/1g.burningtest-3
srmcp file:////uscmst1b_scratch/lpc1/3DayLifetime/natasha/2g.burningtest
srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/2g.burningtest-3
srmcp file:////uscmst1b_scratch/lpc1/3DayLifetime/natasha/3g.burningtest
srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/3g.burningtest-3
srmcp file:////uscmst1b_scratch/lpc1/3DayLifetime/natasha/4g.burningtest
srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/4g.burningtest-3
srmcp file:////uscmst1b_scratch/lpc1/3DayLifetime/natasha/1g.burningtest
srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/1g.burningtest-4
srmcp file:////uscmst1b_scratch/lpc1/3DayLifetime/natasha/2g.burningtest
srm://cmsstor153.fnal.gov:8443/srm/managerv?SFN=/dcache/uscms_test/burning/2g.burningtest-4
srmcp file:////uscmst1b_scratch/lpc1/3DayLifetime/natasha/3g.burningtest
srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/3g.burningtest-4
srmcp file:////uscmst1b_scratch/lpc1/3DayLifetime/natasha/4g.burningtest
srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/4g.burningtest-4
srmcp file:////uscmst1b_scratch/lpc1/3DayLifetime/natasha/1g.burningtest
srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/1g.burningtest-5
srmcp file:////uscmst1b_scratch/lpc1/3DayLifetime/natasha/2g.burningtest
srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/2g.burningtest-5
srmcp file:////uscmst1b_scratch/lpc1/3DayLifetime/natasha/3g.burningtest
srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/3g.burningtest-5
srmcp file:////uscmst1b_scratch/lpc1/3DayLifetime/natasha/4g.burningtest
srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/4g.burningtest-5

#27 - 06/05/2015 04:59 PM - Natalia Ratnikova

Check locations of data added to the migration.

Some files landed only on cmsstor155 - the permanent pool, see dump in [*] below.

Check migration status: all migrations on cmsstor155 have finished, see admin interface output in [**].

Now we want to start permanent migration on the "source" pool (repeat for all three pools):

[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor155-disk_itb-disk1
[cmsstor152.fnal.gov] (w-cmsstor155-disk_itb-disk1) admin > migration copy verify concurrency=10 tmode=cached pins=keep permanent
-target=pgroup burningPools
[2] INITIALIZING migration copy -verify -concurrency=10 -tmode=cached -pins=keep -permanent -target=pgroup - burningPools

Check data volume :
flushPools group ~ 0.9 TB
burningPools group ~ 1.8 TB

Add more data into the system:
IN screen on cmslpc24 => create long-living proxy, just in case. And run this:

```
for i in {6..100}; do for f in *.burningtest; do srmcp debug file:///`pwd`/$f
srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/$f$i; done; done
```

[*]
```
[root@cmspnfs1 chimera-list]# grep burning  chimera_2015-06-05_1606
4M.burningtest   00006500B72CC40345F0B012352E668D735F   03c00001   4194304   1433189301
w-cmsstor155-disk_itb-disk3,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk1
/mnt/dcache/uscms_test/burning
1g.burningtest   000056542939ECAC4AE4B65837E95EEC7E79   c02d0001   1073741824   1433196695
w-cmsstor155-disk_itb-disk2,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk1
1g.burningtest-1  00008B0D2E76D6F54DCEA2996BE3D1A2AF8F   c02d0001   1073741824   1433202894
w-cmsstor155-disk_itb-disk1,w-cmsstor410-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
1g.burningtest-2  0000B29829D3503748F2B7E4EE98BABC0851   c02d0001   1073741824   1433372235   w-cmsstor155-disk_itb-disk3
1g.burningtest-3  0000709AD38722DA4068A13577AB59824B83   c02d0001   1073741824   1433372473
w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk1
1g.burningtest-4  0000CBD8C97C803F48088B484D2BD349E639   c02d0001   1073741824   1433372643
w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk2
1g.burningtest-5  000032FB7480FC6C455090209381507C2EB1   c02d0001   1073741824   1433372804
w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk2
2g.burningtest   00000A09D788C87A4FABB7F01AD0EF279892   80690001   2147483648   1433196734
w-cmsstor155-disk_itb-disk3,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk1
2g.burningtest-1  0000CF79AAE9371045A88E7F674ED500F755   80690001   2147483648   1433202922
w-cmsstor155-disk_itb-disk3,w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
2g.burningtest-2  000083D169DC09EA44AEA747CA177319FC37   80690001   2147483648   1433372275
w-cmsstor409-disk_itb-disk1,w-cmsstor409-disk_itb-disk2
2g.burningtest-3  00004200F5FDF5B34F939169E406ACE46825   80690001   2147483648   1433372498
w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
2g.burningtest-4  0000EBE3B7A4871049D9B23204369C25FF17   80690001   2147483648   1433372663
w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
2g.burningtest-5  0000845B0200115749A3A1D585280026E71D   80690001   2147483648   1433372825
w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
3g.burningtest   000000BC6E780FC1472DA52FF1A50AE70FC2   40a50001   3221225472   1433196797
w-cmsstor155-disk_itb-disk3,w-cmsstor409-disk_itb-disk1,w-cmsstor409-disk_itb-disk2
3g.burningtest-1  0000B41911047FA046EEA021115E2D089235   40a50001   3221225472   1433202962
w-cmsstor155-disk_itb-disk3,w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
3g.burningtest-2  0000C00652BD62F94EB9AD63DB97EC422865   40a50001   3221225472   1433372335
w-cmsstor410-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
3g.burningtest-3  00004FE1C12D0FB04CB7AB6BEA758E9F85CE   40a50001   3221225472   1433372533   w-cmsstor155-disk_itb-disk3
3g.burningtest-4  0000DFEE466CDA974A7286A36AC5E5CF01C1   40a50001   3221225472   1433372698   w-cmsstor155-disk_itb-disk1
3g.burningtest-5  00007C45836252A8471B8F72B028A0BD9CE3   40a50001   3221225472   1433372860   w-cmsstor155-disk_itb-disk2
4g.burningtest   00008DD4DBB180364478B9BC55547019EB38   00e10001   4294967296   1433196881
w-cmsstor155-disk_itb-disk3,w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
4g.burningtest-1  0000E5D22106D8B84501924680AAF38CFD96   00e10001   4294967296   1433203023
w-cmsstor155-disk_itb-disk2,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk2
4g.burningtest-2  00007D88F64C4A454928BE5A402C9A74CEEE   00e10001   4294967296   1433372418
w-cmsstor409-disk_itb-disk1,w-cmsstor409-disk_itb-disk2
4g.burningtest-3  000072515886E060447D8768CF74FB86116C   00e10001   4294967296   1433372587   w-cmsstor155-disk_itb-disk1
4g.burningtest-4  0000B97D2A915462453D98A813B2D8AEBF80   00e10001   4294967296   1433372752
w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk1
4g.burningtest-5  0000C29A9454867F467685C95C86AF755935   00e10001   4294967296   1433372913
w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk1
[root@cmspnfs1 chimera-list]#
```

[**]
```
[cmsstor152.fnal.gov] (w-cmsstor155-disk_itb-disk3) admin > migration ls
[1] FINISHED     migration copy target=pgroup  burningPools
[cmsstor152.fnal.gov] (w-cmsstor155-disk_itb-disk3) admin > ..
[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor155-disk_itb-disk2
[cmsstor152.fnal.gov] (w-cmsstor155-disk_itb-disk2) admin > migration ls
[1] FINISHED     migration copy target=pgroup  burningPools
[cmsstor152.fnal.gov] (w-cmsstor155-disk_itb-disk2) admin > ..
[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor155-disk_itb-disk1
[cmsstor152.fnal.gov] (w-cmsstor155-disk_itb-disk1) admin > migration ls
[1] FINISHED     migration copy target=pgroup  burningPools
[cmsstor152.fnal.gov] (w-cmsstor155-disk_itb-disk1) admin > ..
[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor410-disk_itb-disk1
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk1) admin > migration ls
[2] SLEEPING     migration copy permanent  target=pgroup  burningPools
[1] FINISHED     migration move target=pgroup  flushPools
```

#28 - 06/05/2015 05:04 PM - Natalia Ratnikova

Check that new data files (*burningtest-6 and higher) start arriving into the system :

```
[root@cmsstor155 ~]# ls /dcache_itb/uscms_test/burning/
1g.burningtest    2g.burningtest    3g.burningtest    4g.burningtest
1g.burningtest-1  2g.burningtest-1  3g.burningtest-1  4g.burningtest-1
1g.burningtest-2  2g.burningtest-2  3g.burningtest-2  4g.burningtest-2
1g.burningtest-3  2g.burningtest-3  3g.burningtest-3  4g.burningtest-3
1g.burningtest-4  2g.burningtest-4  3g.burningtest-4  4g.burningtest-4
1g.burningtest-5  2g.burningtest-5  3g.burningtest-5  4g.burningtest-5
1g.burningtest-6  2g.burningtest-6  3g.burningtest-6  4g.burningtest-6
1g.burningtest-7  2g.burningtest-7  3g.burningtest-7
```

#29 - 06/08/2015 01:32 PM - Natalia Ratnikova

Check files distribution over the pools

```
[root@cmspnfs1 chimera-list]# for p in `grep burning  chimera_2015-06-08_1315 | awk '{print $NF}' | tr ',' "\n" | sort -u `; do echo $p; grep burning
chimera_2015-06-08_1315| grep -c $p  ; done
/mnt/dcache/uscms_test/burning
1
w-cmsstor155-disk_itb-disk1
58
w-cmsstor155-disk_itb-disk2
54
w-cmsstor155-disk_itb-disk3
60
w-cmsstor409-disk_itb-disk1
186
w-cmsstor409-disk_itb-disk2
199
w-cmsstor410-disk_itb-disk1
199
w-cmsstor410-disk_itb-disk2
226
```

#30 - 06/09/2015 01:27 PM - Natalia Ratnikova

- Status changed from Accepted to Closed

#31 - 06/09/2015 01:28 PM - Natalia Ratnikova

- Status changed from Closed to Accepted

#32 - 06/09/2015 01:56 PM - Natalia Ratnikova

Before decommissioning the 409/410 pools from the test instance, data need to be migrated back onto a permanent pool(s).

```
[root@cmspnfs1 chimera-list]# grep burning  chimera_2015-06-08_1315   | awk '{print $1}' | sort -u  | wc -l
406
[root@cmspnfs1 chimera-list]# for f in `grep burning  chimera_2015-06-08_1315   | awk '{print $1}' | sort -u |head `; do grep $f
chimera_2015-06-08_1315 | grep 155 ; done
1g.burningtest    000056542939ECAC4AE4B65837E95EEC7E79    c02d0001    1073741824    1433196695
w-cmsstor155-disk_itb-disk2,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk1
1g.burningtest-1    00008B0D2E76D6F54DCEA2996BE3D1A2AF8F    c02d0001    1073741824    1433202894
w-cmsstor155-disk_itb-disk1,w-cmsstor410-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
1g.burningtest-10    00007CAA659D4377495DA63CDB4643BBA761    c02d0001    1073741824    1433542156
w-cmsstor155-disk_itb-disk1,w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk1
1g.burningtest-100    0000C42BC90C8B50485593CDABF0396B2E35    c02d0001    1073741824    1433557155
w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk1
1g.burningtest-15    0000DB3D5FCA185E4C3CAEB789B493F73DA1    c02d0001    1073741824    1433542978
w-cmsstor155-disk_itb-disk3,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk2
1g.burningtest-17    0000853020BE01E8489AA5C255AD9C34FAA8    c02d0001    1073741824    1433543311
w-cmsstor155-disk_itb-disk2,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk1
1g.burningtest-18    0000BB18308A451D47EC96DED12958E28929    c02d0001    1073741824    1433543480
w-cmsstor155-disk_itb-disk1,w-cmsstor409-disk_itb-disk2,w-cmsstor409-disk_itb-disk3
1g.burningtest-2    0000B29829D3503748F2B7E4EE98BABC0851    c02d0001    1073741824    1433372235
w-cmsstor155-disk_itb-disk3,w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk1
1g.burningtest-20    000014D3FC06C44C42049ADFA80C2AFCC27D    c02d0001    1073741824    1433543806
w-cmsstor155-disk_itb-disk2,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk2
1g.burningtest-22    000082D9A48B008041AA82CABED3574A971A    c02d0001    1073741824    1433544133
w-cmsstor155-disk_itb-disk3,w-cmsstor410-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
1g.burningtest-24    0000CA11CD50F0BA44878FFE863C6EF8F3D4    c02d0001    1073741824    1433544456
w-cmsstor155-disk_itb-disk1,w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk1
1g.burningtest-25    0000B66FDCD8ABD34EA88F9B145185F4DEFE    c02d0001    1073741824    1433544617
w-cmsstor155-disk_itb-disk2,w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
1g.burningtest-26    0000796A216741694AE5A1C0550B996BDF58    c02d0001    1073741824    1433544776
w-cmsstor155-disk_itb-disk2,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk2
```

```
1g.burningtest-27    0000CB0C0A7DE5D74009BDF3432CFE8882A7    c02d0001    1073741824    1433544940
w-cmsstor155-disk_itb-disk1,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk1
1g.burningtest-28    00003888162C53BC4B0FA3AF8EE7A1206064    c02d0001    1073741824    1433545101
w-cmsstor155-disk_itb-disk3,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk2
1g.burningtest-31    00006EE6AECDF6E245E4A3797255F1892406    c02d0001    1073741824    1433545589
w-cmsstor155-disk_itb-disk3,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk2
1g.burningtest-32    000092350305DD934A4C8D21E6CFBAD7425C    c02d0001    1073741824    1433545757
w-cmsstor155-disk_itb-disk1,w-cmsstor409-disk_itb-disk1,w-cmsstor409-disk_itb-disk2
1g.burningtest-33    0000503F924D5BF74A70AD01363285528B25    c02d0001    1073741824    1433545934
w-cmsstor155-disk_itb-disk1,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk2
1g.burningtest-37    0000C066FA03E89747DBA26B0339C9A64A06    c02d0001    1073741824    1433546592
w-cmsstor155-disk_itb-disk3,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk1
1g.burningtest-43    0000EF4746F5F9CE4F74B64CC720C64717D2    c02d0001    1073741824    1433547571
w-cmsstor155-disk_itb-disk1,w-cmsstor410-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
1g.burningtest-45    000048054DFF1C6F4E3ABAF3134362D86B6E    c02d0001    1073741824    1433547906
w-cmsstor155-disk_itb-disk1,w-cmsstor409-disk_itb-disk1,w-cmsstor409-disk_itb-disk2
1g.burningtest-49    0000509DACD391D74F0EAFF0593B64F8F47F    c02d0001    1073741824    1433548574
w-cmsstor155-disk_itb-disk1,w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
1g.burningtest-50    00008D524093BB154374AB86A14950246FF0    c02d0001    1073741824    1433548748
w-cmsstor155-disk_itb-disk2,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk1
1g.burningtest-51    0000457592C665FA40938346183DF8292F6A    c02d0001    1073741824    1433548921
w-cmsstor155-disk_itb-disk2,w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
1g.burningtest-55    00001336CAC43CC0459DB041B80201D20307    c02d0001    1073741824    1433549585
w-cmsstor155-disk_itb-disk1,w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
1g.burningtest-6    00002912D8EA53BC4316AF0B1869144E4149    c02d0001    1073741824    1433541426
w-cmsstor155-disk_itb-disk1,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk1
1g.burningtest-60    00000C482A5B3B86491586D6591547A6A135    c02d0001    1073741824    1433550429
w-cmsstor155-disk_itb-disk3,w-cmsstor410-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
1g.burningtest-61    000000ECC7B7974746C5815A48FFD7CCF027    c02d0001    1073741824    1433550599
w-cmsstor155-disk_itb-disk3,w-cmsstor409-disk_itb-disk1,w-cmsstor409-disk_itb-disk2
1g.burningtest-66    00005BB63F2317E0447991B414785C10FD77    c02d0001    1073741824    1433551427
w-cmsstor155-disk_itb-disk1,w-cmsstor410-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
1g.burningtest-67    0000DA78FCCD15F7490E92A8EC240191E35A    c02d0001    1073741824    1433551598
w-cmsstor155-disk_itb-disk1,w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk1
1g.burningtest-68    00008041AFC262B24065BCAF715837D30D93    c02d0001    1073741824    1433551772
w-cmsstor155-disk_itb-disk1,w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
1g.burningtest-69    00003114C483796941F297CD9FEB2C8B9756    c02d0001    1073741824    1433551942
w-cmsstor155-disk_itb-disk1,w-cmsstor409-disk_itb-disk1,w-cmsstor409-disk_itb-disk2
1g.burningtest-7    00005B1405FA550C489590DF7E599CD79B41    c02d0001    1073741824    1433541665
w-cmsstor155-disk_itb-disk3,w-cmsstor410-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
1g.burningtest-70    000089BD26C14287434486BF49156E07D19B    c02d0001    1073741824    1433552110
w-cmsstor155-disk_itb-disk3,w-cmsstor410-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
1g.burningtest-74    000071A5C06C539F46A08F317F77D1158BC2    c02d0001    1073741824    1433552783
w-cmsstor155-disk_itb-disk2,w-cmsstor410-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
1g.burningtest-75    0000795E696DDAC94EE5B25327AA04E76AAD    c02d0001    1073741824    1433552958
w-cmsstor155-disk_itb-disk2,w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk1
1g.burningtest-76    0000D4B2716AC5C04232ACFB128C96288651    c02d0001    1073741824    1433553130
w-cmsstor155-disk_itb-disk3,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk2
1g.burningtest-78    00006F549893A27241029B38391C119AF6A1    c02d0001    1073741824    1433553458
w-cmsstor155-disk_itb-disk3,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk2
1g.burningtest-79    00002A5B7D72D2154955A2157647D8130D57    c02d0001    1073741824    1433553622
w-cmsstor155-disk_itb-disk3,w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
1g.burningtest-8    000081CFDF7E7CB44FCE9AF62CACD2DA59CF    c02d0001    1073741824    1433541831
w-cmsstor155-disk_itb-disk1,w-cmsstor409-disk_itb-disk1,w-cmsstor409-disk_itb-disk2
1g.burningtest-81    0000ADA151076A384A2DA284E98E5C311CB3    c02d0001    1073741824    1433553960
w-cmsstor155-disk_itb-disk2,w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
1g.burningtest-83    000097A9F155D3DC453FB06BF7F25BD2541F    c02d0001    1073741824    1433554290
w-cmsstor410-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
1g.burningtest-84    0000B523F2E6B00D4295808486B0D6EA4E1B    c02d0001    1073741824    1433554458
w-cmsstor155-disk_itb-disk3,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk2
1g.burningtest-86    00003B301EF207A546088272F60BC5907B07    c02d0001    1073741824    1433554793
w-cmsstor155-disk_itb-disk3,w-cmsstor409-disk_itb-disk1,w-cmsstor409-disk_itb-disk2
1g.burningtest-88    0000EDA21B3B989A4C02AF8858000A13805A    c02d0001    1073741824    1433555122
w-cmsstor155-disk_itb-disk2,w-cmsstor409-disk_itb-disk1,w-cmsstor409-disk_itb-disk2
1g.burningtest-92    0000715A29104515413B9BF36A6700312A16    c02d0001    1073741824    1433555782
w-cmsstor155-disk_itb-disk2,w-cmsstor410-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
1g.burningtest-95    00003A36948BCFDC448F9CB282CE88BB6F43    c02d0001    1073741824    1433556288
w-cmsstor155-disk_itb-disk2,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk2
1g.burningtest-98    0000F75563B746B8465BB0FA718868459D74    c02d0001    1073741824    1433556803
w-cmsstor155-disk_itb-disk3,w-cmsstor409-disk_itb-disk1,w-cmsstor409-disk_itb-disk2
1g.burningtest-99    0000CDD69018859B4816B6D8A50223400CA1    c02d0001    1073741824    1433556974
w-cmsstor155-disk_itb-disk1,w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
1g.burningtest-1    00008B0D2E76D6F54DCEA2996BE3D1A2AF8F    c02d0001    1073741824    1433202894
w-cmsstor155-disk_itb-disk1,w-cmsstor410-disk_itb-disk1,w-cmsstor410-disk_itb-disk2
1g.burningtest-10    00007CAA659D4377495DA63CDB4643BBA761    c02d0001    1073741824    1433542156
```

```
w-cmsstor155-disk_itb-disk1,w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk1
1g.burningtest-100   0000C42BC90C8B50485593CDABF0396B2E35   c02d0001   1073741824   1433557155
w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk1
1g.burningtest-15   0000DB3D5FCA185E4C3CAEB789B493F73DA1   c02d0001   1073741824   1433542978
w-cmsstor155-disk_itb-disk3,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk2
1g.burningtest-17   0000853020BE01E8489AA5C255AD9C34FAA8   c02d0001   1073741824   1433543311
w-cmsstor155-disk_itb-disk2,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk1
1g.burningtest-18   0000BB18308A451D47EC96DED12958E28929   c02d0001   1073741824   1433543480
w-cmsstor155-disk_itb-disk1,w-cmsstor409-disk_itb-disk1,w-cmsstor409-disk_itb-disk2
1g.burningtest-10   00007CAA659D4377495DA63CDB4643BBA761   c02d0001   1073741824   1433542156
w-cmsstor155-disk_itb-disk1,w-cmsstor409-disk_itb-disk1,w-cmsstor410-disk_itb-disk1
1g.burningtest-100   0000C42BC90C8B50485593CDABF0396B2E35   c02d0001   1073741824   1433557155
w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk1
1g.burningtest-100   0000C42BC90C8B50485593CDABF0396B2E35   c02d0001   1073741824   1433557155
w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk1
1g.burningtest-15   0000DB3D5FCA185E4C3CAEB789B493F73DA1   c02d0001   1073741824   1433542978
w-cmsstor155-disk_itb-disk3,w-cmsstor409-disk_itb-disk2,w-cmsstor410-disk_itb-disk2
[root@cmspnfs1 chimera-list]# for f in `grep burning  chimera_2015-06-08_1315   | awk '{print $1}' | sort -u |head `; do grep $f
chimera_2015-06-08_1315 | grep 155 ; done | wc -l
59
```

#33 - 06/10/2015 05:07 PM - Gerard Bernabeu Altayo

- Due date changed from 06/02/2015 to 06/11/2015

#34 - 06/10/2015 05:51 PM - Natalia Ratnikova

Prevent writing or reading data to/from the burning pools via client

Removed burning-link from modules/dcache/files/etc/dcache/poolmanager-disk_itb.conf
in natalia_burning_dcache_pools branch

Push the change to puppet central repo.

Check links via admin interface:

```
[cmsstor152.fnal.gov] (PoolManager) admin >  psu ls link
flush-link
readonly-link
[cmsstor152.fnal.gov] (PoolManager) admin >
```

There are only two links already.

that's because puppet was running, here is the update record in the puppet log:

2015-06-10T17:39:12.963283-05:00 cmsstor152 puppet-agent[23615]:
(/Stage[main]/Dcache::Dcachedomain/File[/etc/dcache/poolmanager.conf]/content) content changed '{md5}2f4670f5c5ce1b17b4a57eefcbaa4b90' to
'{md5}84516872dc662e68840a46b10957ffd5'
2015-06-10T17:45:10.850496-05:00 cmsstor152 puppet-agent[29326]: Applying configuration version '1433976282'

Restarted dcache on the head node for it to take an effect if updated poolmanager.conf triggers any change.
Run puppet agent -t
- no change , clear run.

Check links again:

```
[cmsstor152.fnal.gov] (local) admin > cd PoolManager
[cmsstor152.fnal.gov] (PoolManager) admin > psu ls link
flush-link
readonly-link
[cmsstor152.fnal.gov] (PoolManager) admin >
```

#35 - 06/11/2015 12:12 PM - Natalia Ratnikova

The files created with /dev/zero and "seek" options do not actually contain any data.

To created data with real random data, use /dev/urandom :

cd /uscmst1b_scratch/lpc1/3DayLifetime/natasha/pool_test_data

time dd if=/dev/urandom of=2g.burningtest-source bs=1G count=1
time dd if=/dev/urandom of=2g.burningtest-source bs=1G count=2
cat 1g.burningtest-source 2g.burningtest-source > 3g.burningtest-source
cat 3g.burningtest-source 1g.burningtest-source > 4g.burningtest-source

Now copy them into the system:

```
bash-4.1$ time for f in *.burningtest-source; do srmcp file:///`pwd`/$f
srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/$f; done

real    2m59.811s
user    1m52.489s
sys     0m36.141s
```

#36 - 06/11/2015 02:19 PM - Natalia Ratnikova

To replicate the source files to 5TB of data:

in screen on cmslpc23:

```
bash
cd /uscmst1b_scratch/lpc1/3DayLifetime/natasha/pool_test_data
for i in {1..500}; do for c in *.burningtest-source; do f=`echo $c | sed 's?test-source??'`; srmcp ~~debug file:///`pwd`/$c~~
~~srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/$f~~$i; done; done
```

#37 - 06/11/2015 05:11 PM - Natalia Ratnikova

Created new page for enhanced procedure:
https://cmsweb.fnal.gov/bin/view/Storage/PoolAdd

Replaced old procedure with a link to the new one
Described the workflow in the introduction section
reworked previous documentation based on the input from various discussions
Added description of procedure for pools burning tests

#38 - 06/15/2015 04:40 PM - Natalia Ratnikova

Write and test scripts for starting and checking csm status and errors.

Corresponding dCache functionality is described in:
https://www.dcache.org/manuals/Book-2.2/cookbook/cb-pool-checksumming-fhs.shtml

The commands can be executed in batch via connectChimera-disk_itb.sh script :

We do not have it intalled from rpm yet, but it can be created by patching disk intance script which is installed on the disk_itb instance servers:

```
cat /usr/libexec/dcache/connectChimera-disk.sh | sed "s/cmsdcacheadmindisk/cmsstor152/"  > connectChimera-disk_itb.sh
```

```
cat admin.query | /usr/libexec/dcache/connectChimera-disk_itb.sh | tee admin.query.`date +%s`.log
```

Example for veryifying checksums for all data on cmsstor409 and 410 pools:

1) get pool names from /etc/dcache/poolmanager.conf and create admin query for csm status:

```
touch  csm_status.query; for p in  `for n in cmsstor409 cmsstor410; do grep ^psu  /etc/dcache/poolmanager.conf | grep $n | tr " " "\n" | grep $n| sort -u ;done` ; do echo "cd $p" >> csm_status.query ; echo "csm status" >> csm_status.query ; echo ".." >> csm_status.query ; done; echo "logoff" >> csm_status.query;
```

2) And this is a query for initializing checksumming:

```
touch  csm_check.query; for p in  `for n in cmsstor409 cmsstor410; do grep ^psu  /etc/dcache/poolmanager.conf | grep $n | tr " " "\n" | grep $n| sort -u ;done` ; do echo "cd $p" >> csm_check.query ; echo "csm check *" >> csm_check.query ; echo ".." >> csm_check.query ; done; echo "logoff" >> csm_check.query;
```

Now execute the check and then status query:

```
cat csm_check.query | ./connectChimera-disk_itb.sh  | tee csm_check.query`date+%s`.log
```

```
cat csm_status.query | ./connectChimera-disk_itb.sh  | tee csm_status.query`date+%s`.log
```

The output is :

```
dCache Admin (VII) (user=admin)

[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor409-disk_itb-disk1
[cmsstor152.fnal.gov] (w-cmsstor409-disk_itb-disk1) admin > csm check *
java.lang.IllegalStateException: Still active
[cmsstor152.fnal.gov] (w-cmsstor409-disk_itb-disk1) admin > ..
[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor409-disk_itb-disk2
[cmsstor152.fnal.gov] (w-cmsstor409-disk_itb-disk2) admin > csm check *
```

Started ...; check 'csm status' for status
[cmsstor152.fnal.gov] (w-cmsstor409-disk_itb-disk2) admin > ..
[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor410-disk_itb-disk1
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk1) admin > csm check *
Started ...; check 'csm status' for status
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk1) admin > ..
[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor410-disk_itb-disk2
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk2) admin > csm check *
Started ...; check 'csm status' for status
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk2) admin > ..
[cmsstor152.fnal.gov] (local) admin > logoff
dmg.util.CommandExitException: (0) Done


```
dCache Admin (VII) (user=admin)
```

[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor409-disk_itb-disk1
[cmsstor152.fnal.gov] (w-cmsstor409-disk_itb-disk1) admin > csm status
FullScan Active 99561 checked; 0 errors detected
SingeScan Idle   0000C742FF12CA914F5A8495A89FFF0C7874 OK 1:ee310cc8
Scrubber Idle 0 of 0 checked; 0 errors detected
[cmsstor152.fnal.gov] (w-cmsstor409-disk_itb-disk1) admin > ..
[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor409-disk_itb-disk2
[cmsstor152.fnal.gov] (w-cmsstor409-disk_itb-disk2) admin > csm status
FullScan Active 2157 checked; 0 errors detected
SingeScan Idle
Scrubber Idle 0 of 0 checked; 0 errors detected
[cmsstor152.fnal.gov] (w-cmsstor409-disk_itb-disk2) admin > ..
[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor410-disk_itb-disk1
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk1) admin > csm status
FullScan Active 1870 checked; 0 errors detected
SingeScan Idle
Scrubber Idle 0 of 0 checked; 0 errors detected
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk1) admin > ..
[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor410-disk_itb-disk2
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk2) admin > csm status
FullScan Active 1449 checked; 0 errors detected
SingeScan Idle
Scrubber Idle 0 of 0 checked; 0 errors detected
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk2) admin > ..
[cmsstor152.fnal.gov] (local) admin > logoff
dmg.util.CommandExitException: (0) Done

NO ERRORS!

#39 - 06/15/2015 04:51 PM - Natalia Ratnikova

dCachedisk_itb contains many relatively small test files from January. all same size nad owned by root.
This interferes with the burning tests, since may of these small files are actually migrating to the pools and created load on the namespace without
writing large volume of data, and thus slow down the burning tests.

Checked with Chih-Hao: he does not need these data - and it's OK to remove.

Started a somewhat "gentle" removal in the name space mounted on cmsstor155 for all TEST data.

This seems to confuse the csm process, and gives exceptions for pnfs manager time out, and also for the removed files:

cmsstor152.fnal.gov] (w-cmsstor409-disk_itb-disk1) admin > csm status
FullScan Idle CacheException(rc=10006;msg=Request to [>PnfsManager@local] timed out.) 99561 checked; 0 errors detected
SingeScan Idle   0000C742FF12CA914F5A8495A89FFF0C7874 OK 1:ee310cc8
Scrubber Idle 0 of 0 checked; 0 errors detected
[cmsstor152.fnal.gov] (w-cmsstor409-disk_itb-disk1) admin > ..
[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor409-disk_itb-disk2
[cmsstor152.fnal.gov] (w-cmsstor409-disk_itb-disk2) admin > csm status
FullScan Idle CacheException(rc=10001;msg=No such file or directory: 0000DFEAA26B888B41A286886C786DD1CA84) 5435 checked; 0 errors
detected
SingeScan Idle
Scrubber Idle 0 of 0 checked; 0 errors detected
[cmsstor152.fnal.gov] (w-cmsstor409-disk_itb-disk2) admin > ..
[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor410-disk_itb-disk1
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk1) admin > csm status
FullScan Idle CacheException(rc=10001;msg=No such file or directory: 000008BACD216CA14F84B19B3519AE64468A) 5728 checked; 0 errors
detected
SingeScan Idle
Scrubber Idle 0 of 0 checked; 0 errors detected
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk1) admin > ..

```
[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor410-disk_itb-disk2
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk2) admin > csm status
FullScan Idle CacheException(rc=10001;msg=No such file or directory: 000042CA2E8909234B2ABBEC27CD3E1F8103) 5090 checked; 0 errors
detected
SingeScan Idle
Scrubber Idle  0 of 0 checked; 0 errors detected
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk2) admin > ..
[cmsstor152.fnal.gov] (local) admin > logoff
dmg.util.CommandExitException: (0) Done

[root@cmsstor152 2015-06-15]# cat csm_status.query | ./connectChimera-disk_itb.sh  | tee csm_status.query`date +%s`.log
Pseudo-terminal will not be allocated because stdin is not a terminal.

dCache Admin (VII) (user=admin)

[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor409-disk_itb-disk1
[cmsstor152.fnal.gov] (w-cmsstor409-disk_itb-disk1) admin > csm status
FullScan Idle CacheException(rc=10006;msg=Request to [>PnfsManager@local] timed out.) 99561 checked; 0 errors detected
SingeScan Idle   0000C742FF12CA914F5A8495A89FFF0C7874 OK 1:ee310cc8
Scrubber Idle  0 of 0 checked; 0 errors detected
[cmsstor152.fnal.gov] (w-cmsstor409-disk_itb-disk1) admin > ..
[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor409-disk_itb-disk2
[cmsstor152.fnal.gov] (w-cmsstor409-disk_itb-disk2) admin > csm status
FullScan Idle CacheException(rc=10001;msg=No such file or directory: 0000DFEAA26B888B41A286886C786DD1CA84) 5435 checked; 0 errors
detected
SingeScan Idle
Scrubber Idle  0 of 0 checked; 0 errors detected
[cmsstor152.fnal.gov] (w-cmsstor409-disk_itb-disk2) admin > ..
[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor410-disk_itb-disk1
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk1) admin > csm status
FullScan Idle CacheException(rc=10001;msg=No such file or directory: 000008BACD216CA14F84B19B3519AE64468A) 5728 checked; 0 errors
detected
SingeScan Idle
Scrubber Idle  0 of 0 checked; 0 errors detected
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk1) admin > ..
[cmsstor152.fnal.gov] (local) admin > cd w-cmsstor410-disk_itb-disk2
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk2) admin > csm status
FullScan Idle CacheException(rc=10001;msg=No such file or directory: 000042CA2E8909234B2ABBEC27CD3E1F8103) 5090 checked; 0 errors
detected
SingeScan Idle
Scrubber Idle  0 of 0 checked; 0 errors detected
[cmsstor152.fnal.gov] (w-cmsstor410-disk_itb-disk2) admin > ..
[cmsstor152.fnal.gov] (local) admin > logoff
dmg.util.CommandExitException: (0) Done
```

#40 - 06/19/2015 10:54 AM - Natalia Ratnikova

- Status changed from Accepted to Feedback

Waiting for feedback from invloved parties.

#41 - 06/19/2015 03:39 PM - Natalia Ratnikova

Add some more data int odcache testbed instance, using third party transfers.

The previous process did not finish because of expired proxy. Files copying was rather slow, probably because it was copying files from the
3dayslifetime area on the node. Only files in range 1..191 have been copied, while command was 1..500.

Now try to copy the rest using 3rd party transfer, and long-living proxy (190 hours), from the screen "populate_dcache_itb" on cmslpc23:

```
$ bash  # my default shell is tcsh
bash-4.1$ for i in {192..500}; do for g in {1..4}; do srmcp
"srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/${g}g.burningtest-source"
"srm://cmsstor153.fnal.gov:8443/srm/managerv2?SFN=/dcache/uscms_test/burning/${g}g.burning-$i"; done; done
```


#42 - 07/20/2015 02:29 PM - Natalia Ratnikova

- Status changed from Feedback to Resolved

- % Done changed from 60 to 100

Feedback from Gerard received, documentation updated .
Procedure has been verified using cmsstor409/410 nodes, which are now put in production.

Resolving the issue.

Files

Gerards_nodes_testing_sketch.jpg	61 KB	05/26/2015	Natalia Ratnikova