

Xroot for D2d copies and Tapes

Sébastien Ponce
sebastien.ponce@cern.ch

CERN

June 12th 2014

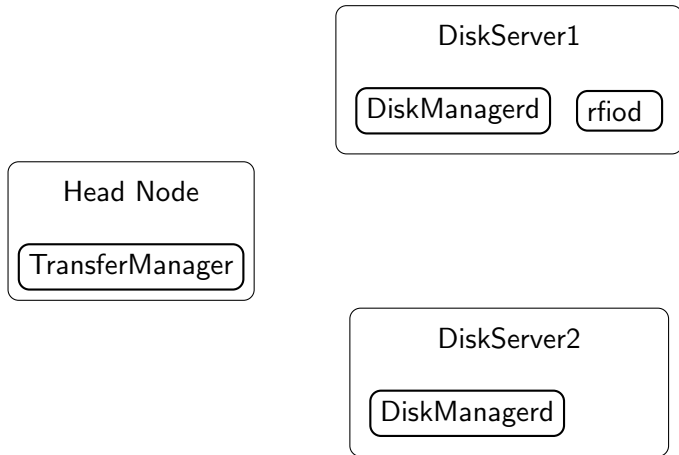


Outline

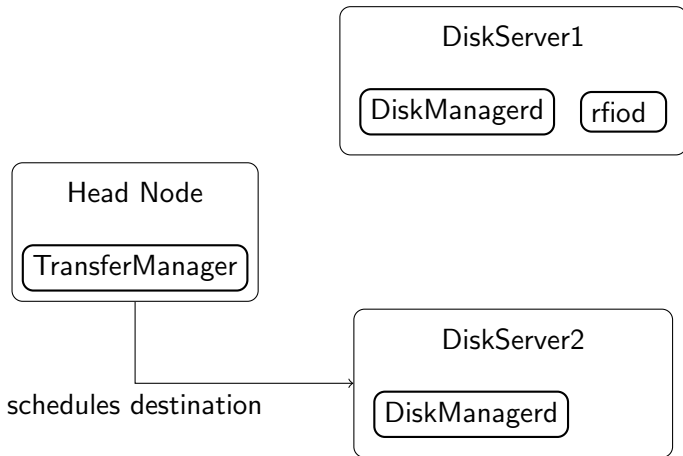
- 1 Moving disk to disk copies to Xroot
- 2 Moving tape transfers to Xroot

Moving disk to disk copies to Xroot

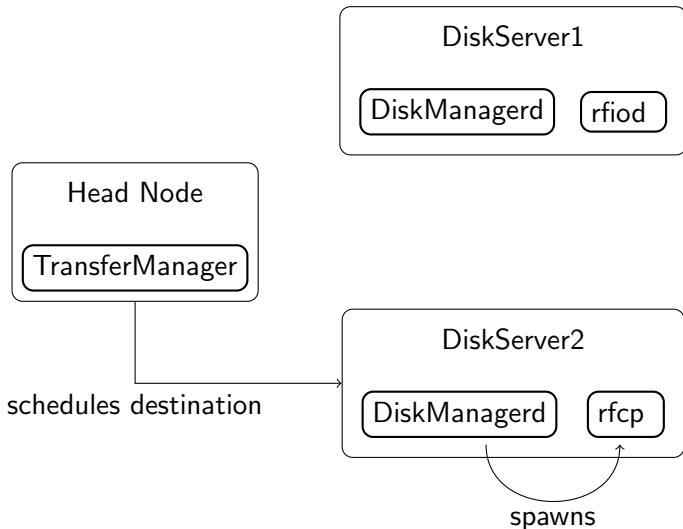
Sketch of a disk to disk transfer



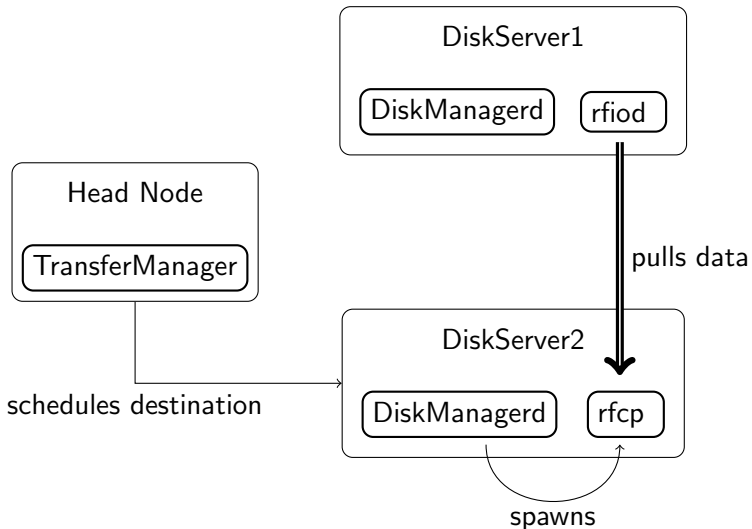
Sketch of a disk to disk transfer



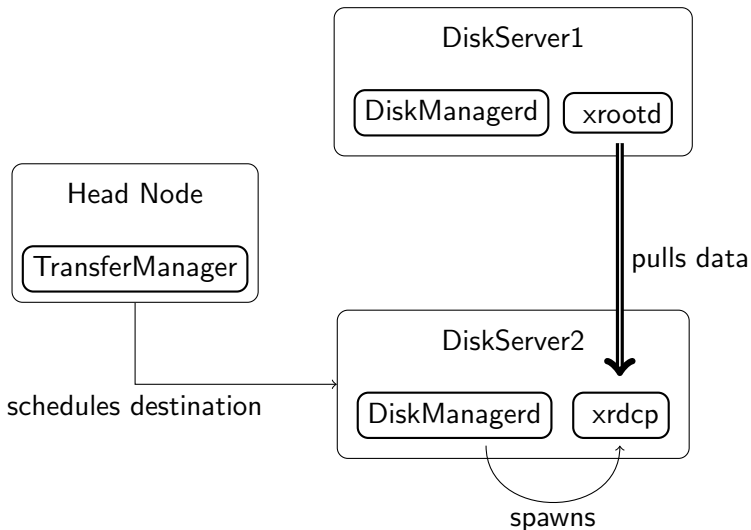
Sketch of a disk to disk transfer



Sketch of a disk to disk transfer



Moving to xroot for d2d transfers



code change

```
diff --git a/castor/scheduler/diskmanager/activitycontrol.py
index aa8146b..0bed2b7 100644
@@ -30,6 +30,9 @@ import connectionpool, dlf
+def buildXrootURL(diskserver, path):
+ return 'root://' + diskserver + ':1095//dummy?castor2fs.pfn'
+
@@ -68,7 +71,8 @@ class ActivityControlThread(threading.Thread):
- cmdLine = ['rfcp', srcDcPath, destDcPath]
+ srcDS, srcPath = srcDcPath.split(':', 1)
+ cmdLine = ['xrdcp',
+            buildXrootURL(srcDS, srcPath),
+            buildXrootURL('localhost', destDcPath)]
```



code change

```
diff --git a/castor/scheduler/diskmanager/activitycontrol.py
index aa8146b..0bed2b7 100644
@@ -30,6 +30,9 @@ import connectionpool, dlf
+def buildXrootURL(diskserver, path):
+ return 'root://' + diskserver + ':1095//dummy?castor2fs.pfn'
+
@@ -68,7 +71,8 @@ class ActivityControlThread(threading.Thread):
- cmdLine = ['rfcp', srcDcPath, destDcPath]
+ srcDS, srcPath = srcDcPath.split(':', 1)
+ cmdLine = ['xrdcp',
+            buildXrootURL(srcDS, srcPath),
+            buildXrootURL('localhost', destDcPath)]
```

Security

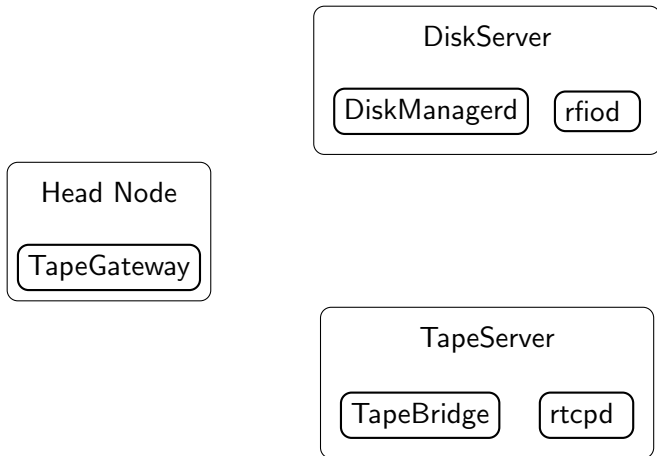
- url needs to be encrypted
- 3 more lines using python-crypto module



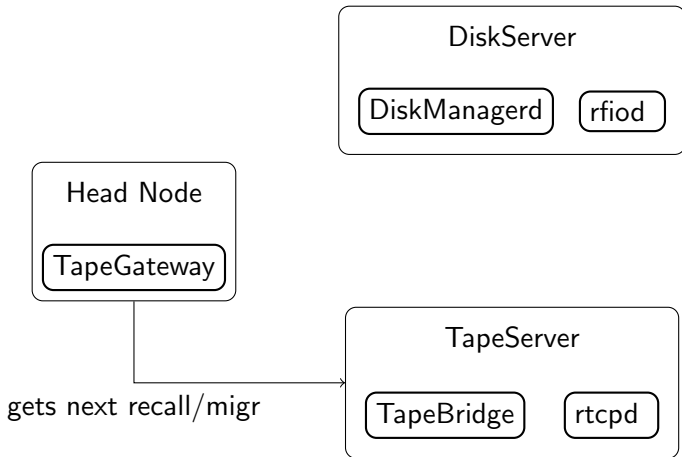
Moving tape transfers to Xroot



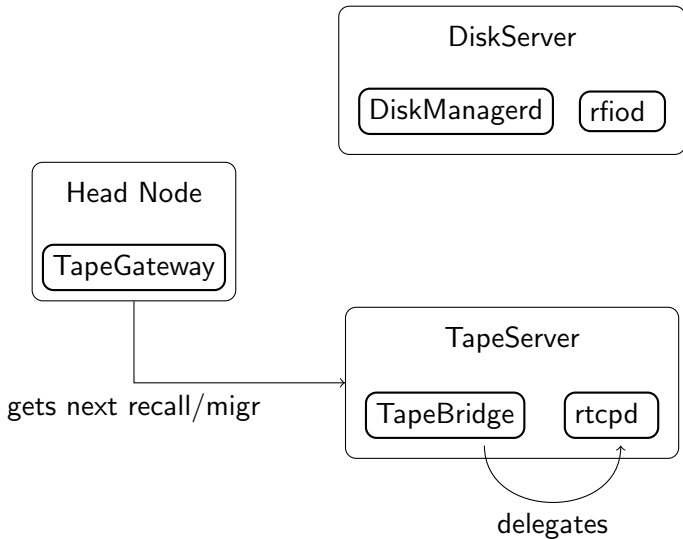
Sketch of a tape transfer



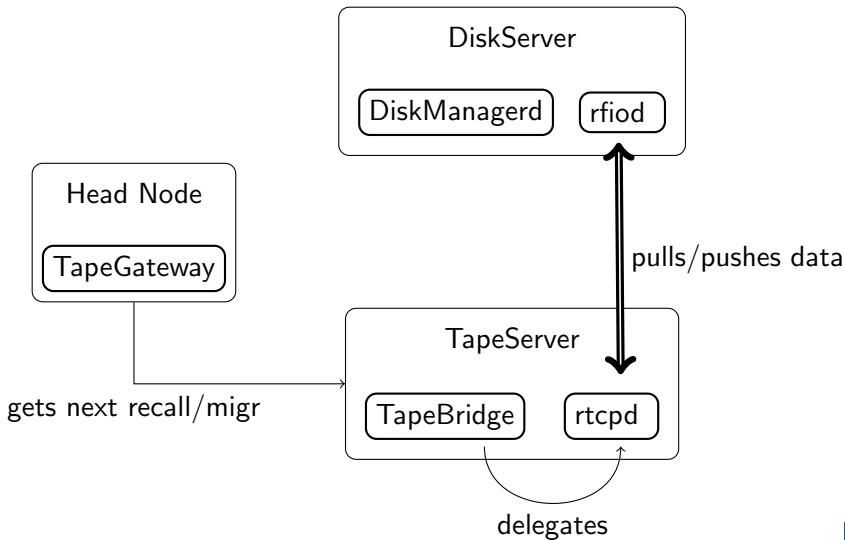
Sketch of a tape transfer



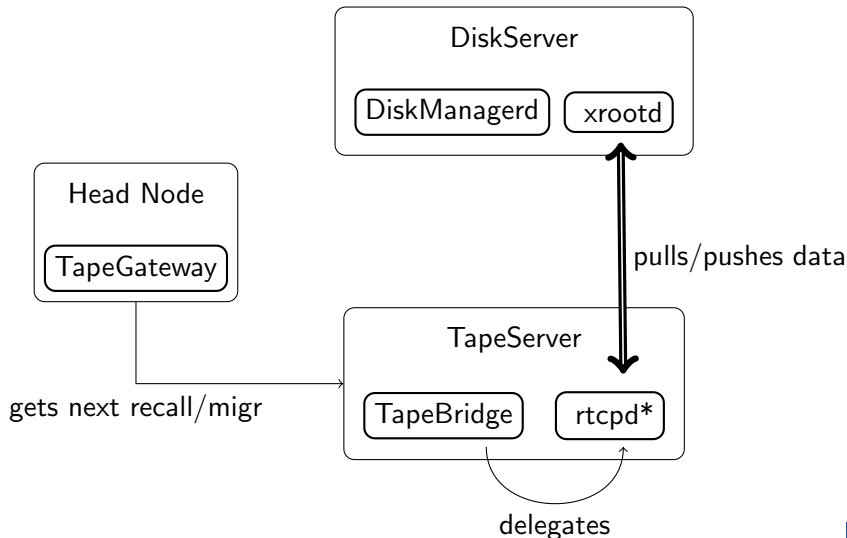
Sketch of a tape transfer



Sketch of a tape transfer



Moving to xroot for tape transfers



code change

```

>git diff --stat master xrootTape
cmake/Findxrootd.cmake | 7 +-
h/rtcp_xroot.h          | 22 +++++
rtcopy/CMakeLists.txt  | 8 +-
rtcopy/rtcp_CheckReq.c | 94 ++++++-----
rtcopy/rtcp_xroot.c     | 49 ++++++++
rtcopy/rtcpapi.c        | 2 -
rtcopy/rtcpd_Disk.c     | 278 ++++++-----
7 files changed, 275 insertions(+), 185 deletions(-)

```



code change

```

>git diff --stat master xrootTape
cmake/Findxrootd.cmake | 7 +-
h/rtcp_xroot.h          | 22 +++++
rtcopy/CMakeLists.txt  | 8 +-
rtcopy/rtcp_CheckReq.c | 94 ++++++-----
rtcopy/rtcp_xroot.c     | 49 ++++++++
rtcopy/rtcpapi.c        | 2 -
rtcopy/rtcpd_Disk.c     | 278 ++++++-----
7 files changed, 275 insertions(+), 185 deletions(-)

```

Security

- url needs to be encrypted
- mores lines using openssl module

Status

- ✓ D2d copies through xroot
 - × security being debugged
- ✓ Tape transfers through xroot
 - × security has to be added