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How backups are preset at LBT

This page is currently (as of 26-Nov-2013) in development. We are working on the final set up right now.

Note: some additional info on AO servers configuration is also available at [AoServersLBTO](#).

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Log Files and AO data

There are two levels of data mirroring active at LBTO:

- Local data mirroring: from server internal disks to local shared SAN disks.
- Remote data mirroring: from SAN disks to NAS in Arcetri (not yet finished)

Each level provides for mirroring log files and AO data

Local data mirroring

Log Files

adsecdx	/local/aolog	➔	/ao-data/adsecdx/aolog
wfsdx	/local/aolog	➔	/ao-data/wfsdx/aolog
adsecsx	/local/aolog	➔	/ao-data/adsecsx/aolog
wfssx	/local/aolog	➔	/ao-data/wfssx/aolog

AO Data

adsecdx	/local/towerdata/adsec_data	➔	/ao-data/adsecdx/adsec_data
adsecsx	/local/aomeas/adsec_calib	➔	/ao-data/adsecdx/adsec_data

Remote data mirroring

The complete status of local SAN disks is replicated at Arcetri as follows:

| **/ao-data/*** | ➔ | obelix:/mirror

Detailed configuration

Each AO server has two mirroring procedures which are executed periodically by cron (as user **AOeng**). All connections to the repository in Arcetri use the UserID: **archiver**.

- **mirrorLog.sh**: compresses with `gzip` the log files and then copies updated ones to `obelix.arcetri.astro.it`. Operations are logged into daily files in `~AOeng/mirrorLog` directory.
- **mirrorMeas.sh**: uses `rsync` to copy measure files to `obelix.arcetri.astro.it`. Operations are logged into daily files in `~AOeng/mirrorMeas` directory.

Note: all AO workstations use UT, and cron start times are set up to perform mirroring during LBTO daytime.

adsecdx

adsecdx: crontab

```
0 14 * * * /home/aoacct/scripts/mirrorLog.sh
30 14 * * * /home/aoacct/scripts/mirrorMeas.sh
0 15 * * * /home/aoacct/scripts/make_digest > make_digest.log 2>&1
* * * * * /usr/local/itt/idl/bin/lmstat -f idl >>
/local/aolog/lmstat/idl_license.txt
0 8 * * * /home/aoacct/scripts/disk-alarm.py > disk-alarm.log 2>&1
```

Backup related commands are the first two lines.

adsecdx: scripts/mirrorLog.sh

```
#!/bin/bash

Data=$(date +%Y%m%d)
LogFile=/home/aoacct/mirrorLog/$Data.log
LockFile=/home/aoacct/mirrorLog/lockfile
Remote=archiver@193.206.155.70

# Mirror log files to Arcetri

exec 8>$LockFile    # This is to use a lock file
flock -n 8          # lock file protected code starts here
STATUS=$?

if [ $STATUS -eq 0 ]; then
    echo -n "Starting log save at " >> $LogFile
    date >> $LogFile
    cd /local/aolog
    find . -regex '.*[.][0-9]+[.]log' -exec gzip -q {} \;
    find . -regex '.*[.][0-9]+[.]tel' -exec gzip -q {} \;
    find . -regex '.*[.][0-9]+[.]net' -exec gzip -q {} \;
    rsync -av * --exclude=*.log --exclude=*.tel --exclude=*.net --
exclude=current* $Remote:/mirror3/FLAO_logs/adsecdx >> $LogFile 2>&1
    rm $LockFile
fi
```

adsecdx: scripts/mirrorMeas.sh

```
#!/bin/bash

Data=$(date +%Y%m%d)
LogFile=/home/aoacct/mirrorMeas/$Data.log
LockFile=/home/aoacct/mirrorMeas/lockfile
Remote=archiver@193.206.155.70

# Mirroring adsecdx measure data to Arcetri

exec 8>$LockFile      # This is to use a lock file
flock -n 8            # lock file protected code starts here
STATUS=$?

if [ $STATUS -eq 0 ]; then
    rsync -av --exclude="**/baktmp/" --exclude="**/meas/" /local/towerdata/*
$Remote:/mirror2/LBT_data_right/ >> $LogFile 2>&1
    rm $LockFile
fi
```

wfsdx

wfsdx: crontab

```
15 15 * * * /home/aoacct/scripts/mirrorLog.sh
* * * * * rsync -av --exclude='**/current'
/home/aoacct/A0/current/calib/wfs/W2/* /towerdata/wfs_calib_W2 > /dev/null
2>&1
0 8 * * * /home/aoacct/scripts/disk-alarm.py > disk-alarm.log 2>&1
```

wfsdx: scripts/mirrorLog.sh

```
#!/bin/bash

Data=$(date +%Y%m%d)
LogFile=/home/aoacct/mirrorLog/$Data.log
LockFile=/home/aoacct/mirrorLog/lockfile
Remote=archiver@193.206.155.70

# Mirror log files to arcetri

exec 8>$LockFile      # This is to use a lock file
flock -n 8            # lock file protected code starts here
STATUS=$?

if [ $STATUS -eq 0 ]; then
    cd /local/aolog
    find . -regex '.*[.][0-9]+[.]log' -exec gzip -q {} \;
    find . -regex '.*[.][0-9]+[.]tel' -exec gzip -q {} \;
    find . -regex '.*[.][0-9]+[.]net' -exec gzip -q {} \;
    rsync -av * --exclude=*.log --exclude=*.tel --exclude=*.net --
exclude=current* $Remote:/mirror3/FLAO_logs/wfsdx >> $LogFile 2>&1
    rm $LockFile
fi
```

adsecsx

adsecsx: crontab

```
0 14 * * * /home/aoacct/scripts/mirrorLog.sh
30 14 * * * /home/aoacct/scripts/mirrorMeas.sh
0 15 * * * /home/aoacct/scripts/make_digest > /tmp/make_digest.log 2>&1
0 15 3 * * /home/aoacct/scripts/makestat > /tmp/make_stat.log 2>&1
0 15 18 * * /home/aoacct/scripts/makestat > /tmp/make_stat.log 2>&1
3 8 * * * /home/aoacct/scripts/disk-alarm.py > disk-alarm.log 2>&1
* * * * * /usr/local/itt/idl/bin/lmstat -f idl >>
/local/aolog/lmstat/idl_license.txt
```

adsecsx: scripts/mirrorLog.sh

```
#!/bin/bash

Data=$(date +%Y%m%d)
LogFile=/home/aoacct/mirrorLog/$Data.log
LockFile=/home/aoacct/mirrorLog/lockfile
Remote=archiver@193.206.155.70

# Mirror log files to arcetri

exec 8>$LockFile      # This is to use a lock file
flock -n 8            # lock file protected code starts here
STATUS=$?

if [ $STATUS -eq 0 ]; then
    cd /local/aolog
    find . -regex '.*[.][0-9]+[.]log' -exec gzip -q {} \;
    find . -regex '.*[.][0-9]+[.]tel' -exec gzip -q {} \;
    find . -regex '.*[.][0-9]+[.]net' -exec gzip -q {} \;
    rsync -av * --exclude=*.log --exclude=*.tel --exclude=*.net --
exclude=current* $Remote:/mirror3/FLAO_logs/adsecsx/ >> $LogFile 2>&1
    rm $LockFile
fi
```

adsecsx: scripts/mirrorMeas.sh

```
#!/bin/bash

Data=$(date +%Y%m%d)
LogFile=/home/aoacct/mirrorMeas/$Data.log
LockFile=/home/aoacct/mirrorMeas/lockfile
Remote=archiver@193.206.155.70

# Mirror adsecsx measure data to arcetri

exec 8>$LockFile      # This is to use a lock file
flock -n 8            # lock file protected code starts here
STATUS=$?

if [ $STATUS -eq 0 ]; then
    rsync -av --exclude="**/baktmp/" --exclude="**/meas/" /local/towerdata/*
$Remote:/mirror2/LBT_data_left/ >> $LogFile 2>&1
    #rsync -av /local/aomeas/adsec_calib
$Remote:/mirror2/LBT_data_left/adsec_meas >> $LogFile 2>&1
    rm $LockFile
fi
```

wfssx

wfssx: crontab

```
00 15 * * * /home/aoacct/scripts/mirrorLog.sh
* * * * * rsync -av --exclude='**/current'
/home/aoacct/A0/current/calib/wfs/W1/* /towerdata/wfs_calib_W1 > /dev/null
2>&1
0 8 * * * /home/aoacct/scripts/disk-alarm.py > disk-alarm.log 2>&1
```

wfssx: scripts/mirrorLog.sh

```
#!/bin/bash

Data=$(date +%Y%m%d)
LogFile=/home/aoacct/mirrorLog/$Data.log
LockFile=/home/aoacct/mirrorLog/lockfile
Remote=archiver@193.206.155.7

# Mirror log files to Arcetri

exec 8>$LockFile      # This is to use a lock file
flock -n 8            # lock file protected code starts here
STATUS=$?

if [ $STATUS -eq 0 ]; then
  cd /local/aolog
  find . -regex '.*[.][0-9]+[.]log' -exec gzip -q {} \;
  find . -regex '.*[.][0-9]+[.]tel' -exec gzip -q {} \;
  find . -regex '.*[.][0-9]+[.]net' -exec gzip -q {} \;
  rsync -av * --exclude=*.log --exclude=*.tel --exclude=*.net --
exclude=current* $Remote:/mirror3/FLAO_logs/wfssx >> $LogFile 2>&1
  rm $LockFile
fi
```

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