

# MC

## Data transfer & Book-keeping

...description and how-to...

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CERN

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# Goal...

- Move MC produced data from local site to CERN transparently
- Keep track of what/how has been transferred

Thus....

- Encapsulate file transfer
- Implement book-keeping

# Hypothesis...

- We assume that system should be used by any MC site with minor requirements.
  - ⇒ No local DB.
  - ⇒ Perl modules encapsulated in private dir.
- DB and daemon are running at CERN
- Locally only daemon and watchdog running.

# What it does...

- 1) Finds files to be transferred
- 2) "auto-magicaly" transfers files. If fails, go to 1)
- 3) Updates log locally.
- 4) Updates DB at CERN.
- 5) Goes back to 1)

Local user should only worry that:

- Daemon is running

# Data flow...

## Remote Site:

- `Main_bbftp_forker.pl` stays in infinite loop
- Finds files. Forks `bbftp_forker.pl`
- Performs minimal local validation (`CloseDST != Failure`).
- Then moves files to `pend`. Generates `bbftp ctrl` file. Bbft's files to `CERN:/$Site_dir/pend/` to avoid interference with production parser
- In case of `CloseDST == Failure`, journal only is sent to CERN
- Connect to server running at CERN and start DB update

# Data flow...

## CERN:

- `Server_DT_bbftp.pl` stays in infinite loop
- Receives request by remote site.
- Checks integrity (VC's crc)
- Moves file to `$Site_Dir/nt` or `/jou`
- *You should not worry about what happens at CERN....*

# Installation

## *Requirements:*

- Linux 2.4.x kernel, perl  $\geq$  5.50, ssl  $\geq$  0.96a

## *Pre-Installation*

- create user mcmover and add it to group of whoever is producing MC data (eg: ams) & create dedicated src dir in mcmover's home dir
- check that there's a CERN: \$SITE\_DIR/pend dir

## *Installation*

```
cd src
```

```
tar -zxvf mcmover.tar.gz
```

# Post-Installation

## *Post-Installation*

- Edit `servers/lib/Mc_Mover.pm` to suit your needs. Variables are described in the file itself
- be sure that files that need to be transferred are readable by `mcmover...`
- Start, as user `mcmover`,  
`Main_DT_devel_bbftp_forking.pl`
- Add `db/consistency/move_report.pl` to your crontab every 20 min.

You should be set by now.

# Post-Installation

```
Mc_Mover.pm
```

```
$My_Site= 'MILA'; # Your site defined in ams.cern.ch  
$dir_to_check = '/QUBA1/data/'; # must be slash-term.  
$dir_to_save = '/QUBA1/data/'; # must be slash-term.  
$Work_dir = '/home/mcmover/src/servers';  
$Filter      = "*. *"; # this gets ALL files, i.e.  
    .journal and .root or .hbk  
$file_type   = 'testbbftp';  
$User        = "mcmover";  
$Book_keeping = 'file';  
$default_rtt = 1024;  
$My_bbftp    = '/home/mcmover/src/servers/bbftp';
```

# Post-Installation

```
# Fill these in ONLY if you are NOT using a DB
$Fake_DB_File = '/home/mcmover/src/db/FAKE_DB.txt';

# These should be fixed

$Remote_Host   = "pcamsf2.cern.ch";

$Remote_DB_Host = "pcamsf0.cern.ch";

$Remote_Dir_jou = "/f2users/scratch/MC/milano/pend/";

$Remote_Dir_nt  = "/f2users/scratch/MC/milano/pend/";

$Remote_Dir_CONSISTENCY
  = "/afs/cern.ch/user/b/boschini/mcmover/src/db/consistency/";
```

# Download & "support"...

- Tarball can be downloaded from

<http://pcamsf0.cern.ch/cgi-bin/mon>

[/load.cgi?AMS02MCUploads/ams02bookkeeping.tar.gz](http://pcamsf0.cern.ch/cgi-bin/mon/load.cgi?AMS02MCUploads/ams02bookkeeping.tar.gz)

- Help can be obtained sending e-mail to [mcmover@mib.infn.it](mailto:mcmover@mib.infn.it).

# Milano use test...

- Milano used it for the MC production starting Jun 25
- Total ROOTtrees auto"magicaly" transferred > 1000

## ...conclusions...

- System proved EASY to use
- System proved robust
- ...it actually made MC production easier....