RMFT
Managed File Transfer

RepliWeb

FASTCopy Installation Guide for UNIX

Software Version 2.6 and Above

May 21, 2009

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FASTCopy Installation for UNIX

Install FASTCopy for UNIX if you want to use FASTCopy protocol to pull files from a UNIX Machine to RMFT Server or to push files from RMFT Server to a UNIX Machine. For more information on automating transfers between computers, refer to the *RMFT Administrator's Guide*. You can also use the FASTCopy CLI to manually transfer files to any other machine (Windows or UNIX) on which the FASTCopy Daemon component is running.

Because the UNIX version of the FASTCopy software package includes components that are not available on other platforms, such the batch daemon *flogicd*, the monitoring utility *fmonitor* and the *flogicd*-dependant central monitoring programs, the UNIX FASTCopy kit is referred to as a FASTLogic kit. All the FASTCopy-related programs and files are considered components of the FASTLogic Distributed Applications Environment, and they are all installed under a common directory, which is called the root of the FASTLogic directory tree. Because of this, the installation is referred to as a FASTLogic installation.

Installing the software on your computer is a straightforward and easy process, consisting of two stages:

- Stage 1: Files archived in the installation kit are extracted into a temporary directory.
- Stage 2: You activate an installation script, which creates a directory tree for FASTLogic and copies all the appropriate files into that tree. The script renames any existing files which might be overwritten before doing this.

Once installation is complete, you may erase the temporary directory's contents. This process requires minimal user interaction beyond approving which directories FASTLogic files should be copied to. FASTLogic installation does not modify system parameters or system software in any way.

The following section explains FASTLogic installation step-by-step, along with a complete example.

The Installation Procedure

The FASTLogic distribution kit is a compressed tarred file, which is usually named `flogic_kit.platform.Z`, where platform is a variable tag indicating which platform the kit is meant to be installed on, for example: `"irix"` (Silicon Graphics IRIX), `"aix3"` (IBM RS/6000 AIX3), and so on. To begin installation, this file should be downloaded from the media supplied by your local distributor and transferred to some directory on your computer. In the example below, the kit resides in the directory `/flkit_dir`, on a machine running Linux, and it is called `flogic_kit.linux.Z`.

1. Uncompress (UNIX) or gunzip (Linux) the FASTLogic distribution kit file:

   ```
   /flkit_dir> uncompress flogic_kit.linux.Z
   ```

2. Create a temporary directory, such as `/flogic_tmp`, as follows:

   ```
   > mkdir /flogic_tmp
   ```

3. Extract the FASTLogic files archived in the distribution kit into the temporary directory. To do this, change your current working directory to the temporary directory (here, /flogic_tmp) and use the following *tar* command to extract files to that directory. You must be a super-user to issue this command:

   ```
   > cd /flogic_tmp/flogic_tmp> tar xvpf /flkit_dir/flogic_kit.linux
   ```

4. Activate the FASTLogic installation program, install, by typing the following (note you must use "./ " to ensure that the correct script is activated):

   ```
   /flogic_tmp>_./install
   ```

   You will be prompted for your activation key.

5. Paste your activation key and then press [Enter].

   When the installation begins, an introductory message is displayed:

   ```
   ============================
   FASTCopy version is 2.6.3 update 1 (truncate patch). Internal build
   version : 0.14
   FASTCopy compression methods supported: 27
   FASTCopy creation date : May 12 2009 17:27:17
   FLOGIC-I-VERSION, FASTLogic V2.6.3
           Revision: 1.146.1.1
           Compilation Date: May 12 2009
   Would you like to install the product system-wide or user-specific
   [system] ?
   ```

FASTCopy/FASTLogic can be installed either in a system-wide mode (the program is available to all users, but the installation must be run by the user root) or in a user-specific mode (the program can be installed by any user). In both cases, the installation process is very similar.

If you choose a user-specific installation (by typing "u" or "user"), you will be prompted for the user name:

```
Please enter owner's user name [root] :
```

The Installation program will attempt to install the product under that user's home directory. Otherwise, if you choose a system-wide installation, (by typing "s" or "system"), it will attempt to install the product so that it is generally available.

The installation begins with the creation of the FASTLogic directory tree. It first checks if there is an existing FASTLogic installation, by looking for a file called `flogic.root` in either the `/etc` directory (if the installation is system-wide) or the user's home directory. If it finds a previous installation, it will look for an installation profile file, called either `flogic_profile` or `flogic_profile.username` (if installing in user mode), in the existing FASTLogic directory. This file will list the names of the directories used in the last installation.

If you have an existing FASTLogic installation on the system, you will see the following message (in this example, a system-wide installation was chosen:)

```
Reading profile file /usr/flogic/flogic_profile...
```

6. You are prompted for the names of the directories into which FASTLogic files will be copied. As defaults, you are offered the names of the directories found in the `flogic_profile` file.

First, you choose the directory under which the installation procedure will build subdirectories for all the FASTLogic kit files:

```
Please enter root directory for flogic software [/usr/flogic] :
```

Symbolic links to the executable files will be created in the following directory.This should be a directory that is in the default search path.

```
Please enter a directory for the symbolic links to the executables
(should be in your PATH) [/usr/bin] :
```

The libraries for the callable API will be copied to the next directory specified. When linking a program using FASTLogic API, make sure to include this directory in the directories search list for link:

```
Please enter a directory for the libraries [/usr/lib] :
```

Select a directory for the FASTCopy examples. These are sample C programs using the callable API:

```
Please enter a directory for the examples [/usr/flogic/examples] :
```

The API include file will be copied to the directory specified next. When compiling a program using the API, make sure to include this directory in the directories search list for compile:

```
Please enter a directory for include files [/usr/flogic/include] :
```

Finally, specify a directory for the fcopy command man pages. To view the FASTCopy man pages after the installation, just issue - man fcopy.

```
Please enter a directory for the man pages [/usr/man/man1] :
```

If there is an existing FASTLogic installation, the program will offer to backup existing files:

```
Would you like to backup existing files [no] ?
```

Incoming FASTCopy connections are handled by the FASTCopy daemon, *fcopyd*. The daemon can be started manually, or set up so that it is started automatically by *inetd* in response to incoming connections, like other TCP/IP services:

```
Would you like FASTCopy daemon to be started by 'inetd' [yes] ?
```

The default answer is "yes" in a system-wide installation, "no" in a user installation. In either case, starting the FASTCopy daemon through *inetd* requires updating the *inetd* configuration file. If you choose this option, you will be prompted for that file's location:

```
'inetd' configuration file location [/etc/inetd.conf] ?
```

FASTCopy communications normally use the registered FASTCopy port, 5745, for outgoing and incoming transmissions. If this port is reserved for other uses in your system, you should modify this. If installing FASTCopy for a specific user, the script will offer a different port number as default, so that user-specific and system-wide installations do not conflict:

```
Please enter port number for FASTCopy [5745] ?
```

In this example, the user accepted all the defaults.

7. You are prompted to confirm your choices. After confirmation, installation begins immediately.

```
system mode installation.
Flogic tree will be built under /usr/flogic.
Executables will be symbolic linked to /usr/bin.
Libraries will be copied to /usr/lib.
Examples will be copied to /usr/flogic/examples.
```

```
Include files will be copied to /usr/flogic/include.
Documents will be copied to /usr/flogic/doc.
FASTCopy service will be added to /etc/services
Man pages will be copied to /usr/man/man1
Will NOT save backup of all effected files
Will modify /etc/inetd.conf to start FASTCopy daemon using port 5745
'inetd' process id is 87

This installation will affect the following files (outside
/usr/flogic):
/usr/lib/libmaster.a /usr/lib/libflogic.a /usr/lib/libfcopy.a
/usr/man/man1/fcopy.1 /etc/flogic.root /etc/services /etc/inetd.conf
/etc/softlink.security /etc/softlink.login

Is the above information correct (YES / NO / QUIT) ?y

Beginning installation ...
```

8. The Installation program stores all your answers to its installation queries in a profile file. These will be offered as default choices should you wish to perform another FASTLogic installation on the same machine in the future. If installing under a specific user, the profile file is created in that user's home directory, with the user's name appended to the profile name. If this is a system-wide installation, the profile is created under ***/etc***.

```
Beginning installation ...

----------------- PRE-INSTALLATION STAGE ------------------
Setting up root directory /usr/flogic...
Creating profile file in /usr/flogic/flogic_profile...
Creating pointer file in /etc/flogic.root...
Creating temporary info file in /tmp/fl_install.info__...
```

It stops any FASTLogic or FASTCopy daemons which might be active on the system before proceeding.

```
Killing daemons...
FLOGIC-W-NODAEMON, no flogic daemon seem to be running
FLOGIC-I-BANNER, Licensed only to fastcopy internal use
FCOPY-E-KILLDAEMON, failed to kill FASTCopy daemon ( port 5745 )
-SYS-E-ERRMSG, max kill retries reached (5)
FCOPY-I-ATTMKILL, attempting to kill FASTCopy daemon ( port 5745 )
```

Next, the program checks which files will be effected by the installation and informs the user.

9. The FASTLogic directory tree is created:

```
----------------------- STAGE 1 -----------------------
Creating directory tree under /usr/flogic...
```

10. If you chose to do so, the program creates backups of all the files which might be effected by the installation:

```
----------------------- STAGE 2 -----------------------
Backing up all affected files...
Saving /usr/lib/libmaster.a in /usr/lib/libmaster.a.old...
Saving /usr/lib/libflogic.a in /usr/lib/libflogic.a.old...
```

11. The installation program copies its files to their destination directories:

```
----------------------- STAGE 3 -----------------------
Files will now be moved to their target directories...
Files will now be moved to their target directories...
Copying fsubmit to /usr/flogic/bin/fsubmit...
Copying fmonitor to /usr/flogic/bin/fmonitor...
Copying flogicd to /usr/flogic/bin/flogicd...
Copying fsubmitshr to /usr/flogic/bin/fsubmitshr...
Copying wake_job to /usr/flogic/bin/wake_job...
Copying talk2master to /usr/flogic/bin/talk2master...
Copying check_master to /usr/flogic/bin/check_master...
Copying purge to /usr/flogic/bin/purge...
Copying lsr to /usr/flogic/bin/lsr...
Copying sl_passwd to /usr/flogic/bin/sl_passwd...
Copying check_sec to /usr/flogic/bin/check_sec...
Copying flicense to /usr/flogic/bin/flicense...
Copying libmaster.a to /usr/lib/libmaster.a...
Copying libflogic.a to /usr/lib/libflogic.a...
Copying .flogicrc to /usr/flogic/.flogicrc...
Copying fcopy to /usr/flogic/bin/fcopy...
Copying fcopyd to /usr/flogic/bin/fcopyd...
Copying fcopyshr to /usr/flogic/bin/fcopyshr...
Copying fcmon to /usr/flogic/bin/fcmon...
Copying fcmon_handler to /usr/flogic/bin/fcmon_handler...
Copying fest_scan to /usr/flogic/bin/fest_scan...
Copying fest_cleanup to /usr/flogic/bin/fest_cleanup...
Copying uninstall to /usr/flogic/bin/uninstall...
Copying libfcopy.a to /usr/lib/libfcopy.a...
Copying fcopy.1 to /usr/man/man1/fcopy.1...
Copying transfer.c to /usr/flogic/examples/transfer.c...
Copying transfer.dat to /usr/flogic/examples/transfer.dat...
Copying fcmon_hook.h to /usr/flogic/examples/fcmon_hook.h...
```

```
Copying fcopyapi_user.h to /usr/flogic/include/fcopyapi_user.h...
Copying .fest to /usr/flogic/examples/.fest...
Copying .fest_complete to /usr/flogic/examples/.fest_complete...
Copying fc_auditor.c to /usr/flogic/examples/fc_auditor.c...
Copying mon_hook.o to /usr/flogic/examples/mon_hook.o...
Copying atoe.tbl to /usr/flogic/tables/atoe.tbl...
Copying etoa.tbl to /usr/flogic/tables/etoa.tbl...
Copying cleanup__ to /usr/flogic/jobs/cleanup__...
Copying collect to /usr/flogic/jobs/collect...
Copying collect__ to /usr/flogic/jobs/collect__...
Copying control__ to /usr/flogic/jobs/control__...
Copying dup_dir_client to /usr/flogic/jobs/dup_dir_client...
Copying dup_dir_server to /usr/flogic/jobs/dup_dir_server...
Copying dupdir to /usr/flogic/jobs/dupdir...
Copying execute to /usr/flogic/jobs/execute...
Copying execute__ to /usr/flogic/jobs/execute__...
Copying fcbatch__ to /usr/flogic/jobs/fcbatch__...
Copying fclog__ to /usr/flogic/jobs/fclog__...
Copying fest to /usr/flogic/jobs/fest...
Copying fest__ to /usr/flogic/jobs/fest__...
Copying fl_fcbatch__ to /usr/flogic/jobs/fl_fcbatch__...
Copying flogic_defs to /usr/flogic/jobs/flogic_defs...
Copying handler__ to /usr/flogic/jobs/handler__...
Copying incoming__ to /usr/flogic/jobs/incoming__...
Copying monitor__ to /usr/flogic/jobs/monitor__...
Copying outgoing__ to /usr/flogic/jobs/outgoing__...
Copying print to /usr/flogic/jobs/print...
Copying print_install to /usr/flogic/jobs/print_install...
Copying print_pre_transfer to
/usr/flogic/jobs/print_pre_transfer...
Copying print_rollback to /usr/flogic/jobs/print_rollback...
Copying purge__ to /usr/flogic/jobs/purge__...
Copying transfer to /usr/flogic/jobs/transfer...
Copying transfer__ to /usr/flogic/jobs/transfer__...
```

The script sets the protection level on the main *Security and Administration File* and on the login security file (see the *RMFT FASTCopy Administrator's Guide* for details).

```
Setting protection 644 on file /etc/softlink.security...
Setting protection 600 on file /etc/softlink.login...
```

12. If no license is found, an evaluation license included in the kit is installed:

```
----------------------- STAGE 4 -----------------------
Installing licenses...
```

```
        Skipping license lic_fastcopy.sl (license already exist)
```

13. The suid flag is set for specific files used by FASTLogic:

```
----------------------- STAGE 5 -----------------------
Setting protection bits
    setting suid flag to /usr/flogic/bin/fmonitor...
    setting suid flag to /usr/flogic/bin/wake_job...
    setting suid flag to /usr/flogic/bin/check_master...
```

14. Symbolic links are created for the executable files, so that they can be activated by the user through the standard path.

```
----------------------- STAGE 6 -----------------------
Creating symbolic links for executables...
/usr/bin/fsubmit --> /usr/flogic/bin/fsubmit
/usr/bin/fmonitor --> /usr/flogic/bin/fmonitor
/usr/bin/flogicd --> /usr/flogic/bin/flogicd
/usr/bin/fsubmitshr --> /usr/flogic/bin/fsubmitshr
/usr/bin/talk2master --> /usr/flogic/bin/talk2master
/usr/bin/fcopyd --> /usr/flogic/bin/fcopyd
/usr/bin/fcopy --> /usr/flogic/bin/fcopy
/usr/bin/fcopyshr --> /usr/flogic/bin/fcopyshr
/usr/bin/fcmon --> /usr/flogic/bin/fcmon
/usr/bin/sl_passwd --> /usr/flogic/bin/sl_passwd
/usr/bin/check_sec --> /usr/flogic/bin/check_sec
/usr/bin/flicense --> /usr/flogic/bin/flicense
```

15. The installation program checks for the FASTCopy network service. If necessary, it then adds the FASTCopy network service to the /etc/services file:

```
----------------------- STAGE 7 -----------------------
Checking for service existence in /etc/services...
     Adding the following line to /etc/services:
     fcopy$server   5745/tcp #   FASTCopy server
```

16. Finally, a FASTCopy daemon record is added to the inetd configuration file (if no previous record is found, as in this example:)

```
----------------------- STAGE 8 -----------------------
Checking for FASTCopy daemon record in /etc/inetd.conf...
   Warning! will not change /etc/inetd.conf, since the following
record was found:
        # The following line (fcopy$server) was added by FASTLogic
installation
#fcopy$server stream tcp nowait root /usr/flogic/bin/fcopyd in.fcopyd
fcopy$server stream tcp nowait root /usr/flogic/bin/fcopyd in.fcopyd
```

17. Once installation is complete, the installation program attempts to verify that it was successfully by triggering an installation verification procedure: It attempts to use FASTCopy to copy a file to the "remote" node localhost. Failure of this stage doesn't necessarily indicate that the installation itself failed. Various configuration issues may prevent the operation even when the installation is successful.

```
----------------------- IVP STAGE -----------------------
Checking version information...

FASTCopy Version Information:
============================
FASTCopy version is 2.6.3 update 1 (truncate patch). Internal build
version : 0.14
FASTCopy compression methods supported: 27
FASTCopy creation date : Jul 9 2009 16:44:10

Trying fcopy...
FCOPY-I-BANNER , Licensed only to softlink internal use

Source File name : /flogic_tmp/install
Target File name : localhost:/tmp/fc_ivp1
Transfer started at : Sun Aug 23 17:14:12 2009

File size : 26580 bytes

FCOPY-S-FILE_COPIED, file '/flogic_tmp/install' FASTCopied to file
'localhost:/tmp/fc_ivp1' ( 26580 Bytes )

Transfer started at : Sun Aug 23 17:14:12 2009
Transfer ended at : Sun Aug 23 17:14:12 2009

FASTCopy termination statistics report:

FCOPY-I-FILESUMM - 1 file(s) FASTCopied
1 file has been transferred.
0 file(s) had identical modification dates.
0 file(s) failed.

FASTCopy originally started at : Sun Aug 23 17:14:09 2009
FASTCopy ended at : Sun Aug 23 17:14:12 2009

FCOPY-S-FINISHED, FASTCopy operation successfully finished
```

The Installation Verification Procedure includes two transfer operations, file push and file pull:

```
FCOPY-I-BANNER , Licensed only to softlink internal use

Source File name : localhost:/tmp/fc_ivp1
Target File name : /tmp/fc_ivp2
Transfer started at : Sun Aug 23 17:14:14 2009

File size : 26580 bytes

FCOPY-S-FILE_COPIED, file 'localhost:/tmp/fc_ivp1' FASTCopied to file
'/tmp/fc_ivp2' ( 26580 Bytes )

Transfer started at : Sun Aug 23 17:14:14 2009
Transfer ended at : Sun Aug 23 17:14:14 2009

FASTCopy termination statistics report:

FCOPY-I-FILESUMM - 1 file(s) FASTCopied
1 file has been transferred.
0 file(s) had identical modification dates.
0 file(s) failed.

FASTCopy originally started at : Sun Aug 23 17:14:12 2009
FASTCopy ended at : Sun Aug 23 17:14:14 2009

FCOPY-S-FINISHED, FASTCopy operation successfully finished

---------------------- INSTALLATION COMPLETED ----------------------

All files have been moved to their destination. You may now delete
the files from this directory.
```

With this, the installation is complete, and the files in the temporary directory (`/flogic_tmp`) may be deleted.