

I.2-UNIX-SETUP-OFS SETTING UP THE OPERATIONAL FORECAST SYSTEM ON A UNIX SYSTEM

This Chapter describes how to set up the Operational Forecast System on a UNIX system.

1. **Choose a <user_id> name** (eg. oper).
2. **Create a file directory structure for input files and system files.**

a) cd to `$(ofs_dir)/scripts`

b) Run script 'create_input_group <user_id>'

This will create the input directories needed when running OFS programs using the script ofs:

```
eg. $(ofs_input)/filesize
     $(ofs_input)/filecrat
     .
     .
     .
     $(ofs_input)/shefutil
```

c) Run script 'create_files_group <user_id>'

This will create directories used for the OFS data files:

```
eg. $(ofs_fs5files)/fs5files
     $(ofs_fs5files)/mods
     $(ofs_fs5files)/shefdata
```

3. **Make sure that the necessary apps_defaults are set to <user_id>.**

At a minimum the apps_default ofs_level should be <user_id>.

4. **Run the OFS programs using the script ofs.**

The ofs script ofs command line looks like:

```
ofs -p program_name -i input_file -o output_file_prefix
```

See Section I.2-UNIX-OFS information on how to execute Operational Forecast System programs on UNIX systems.

- a) Calculate sizes required for OFS data files.

See Section I.5.3-FILESIZE for description of input.

Run 'ofs -p filesize -i filesize.orig -o filesize'.

This will create a filesize_pun.yymmdd.hhmmss file in your output directory. Copy this file to your filecrat input directory as file filecrat.

b) Create ofs data files based on output from program filesize.

See Section I.5.3-FILECRAT for description of input.

Run 'ofs -p filecrat -i filecrat -o filecrat'.

After the program FILECRAT is run, the permissions for the group may be read only for files in the fs5files directory. You might need to run the UNIX command 'chmod 660 *' in the directory \$(ofs_fs5files)/fs5files to allow other users in your group to write to the files.

Copy file filecrat.hcl.global from directory \$(rfs_sys_dir) into the filecrat input directory.

Run the program FILECRAT program to create the Global HCL files.

Run 'ofs -p filecrat -i filecrat.hcl.global -o filecrat.hcl'.

c) Define valid time series data types for processed database

See Section VI.6.4-PRDUTIL-DEFTYPE for description of input.

Run 'ofs -p prdutil -i deftype -o deftype'.

d) Create SASM and GOES data files

Copy files sasmdb.init and goesdb.init from directory \$(rfs_sys_dir) into the sasmdb and goesdb input directories.

Run 'ofs -p sasmdb -i sasmdb.init -o sasmdb'.

Run 'ofs -p goesdb -i goesdb.init -o goesdb'.

e) Define HCL Global Techniques and Functions

Copy files def.global.tech and def.global.func from directory \$(rfs_sys_dir) into the fcst input directory.

Define the Techniques before the Functions.

Run 'ofs -p fcst -i def.global.tech -o def.tech'.

Run 'ofs -p fcst -i def.global.func -o def.func'.

f) Set Local defaults to override Global ones for certain Techniques (eg. NOUTZ and NOUTDS).

Run 'ofs -p fcst -i set.local.defaults -o set.local'.

g) Run status to check progress of programs ppinit and fcinit (this is an optional step)

Run 'ofs -p ppinit -i status -o ppstatus'.

Run 'ofs -p fcinit -i status -o fcstatus'.

h) Define user information.

See Section VI.3.3B-DEFINE-USER for description of input.

Run 'ofs -p ppinit -i def.user -o def.user'.

i) Define stations in the data network.

See Section VI.3.3B-DEFINE-STATION for description of input.

Run 'ofs -p ppinit -i def.station -o def.station'

j) Do network computations so stations can be used in MAP or MAT areas.

See Section VI.3.3B-NETWORK for description of input.

Run 'ofs -p ppinit -i network -o network'

This command needs to be run when you add new station definitions.

k) Define basins.

See Section VI.3.3B-DEFINE-BASIN for description of input.

Run 'ofs -p ppinit -i def.basin -o def.basin'

l) Define areas.

See Section VI.3.3B-DEFINE-AREA for description of input

Run 'ofs -p ppinit -i def.area -o def.area'

m) Run status to check progress of ppinit runs.

Run 'ofs -p ppinit -i status -o ppstatus'

n) Define Rating Curves.

See Section VI.3.4-DEF-RC and V 4.2 for description of input.

Run 'ofs -p fcinit -i def.rc -o def.rc'

o) Define Segments.

See Sections VI.3.4B-SEGDEF, V.2.3 and V.3.1 for description of input.

Run 'ofs -p fcinit -i def.segs -o def.segs'

p) Define Forecast Groups.

See Section VI.3.4B-FGDEF for description of input.

Run 'ofs -p fcinit -i def.fgroup -o def.fgroup'

q) Define Carryover Groups.

See Section VI.3.4B-CGDEF for description of input.

Run 'ofs -p fcinit -i def.cgroup -o def.cgroup'

r) Determine computational order.

See Section VI.3.3B-ORDER for description of input.

Run 'ofs -p ppinit -i order -o order'

s) Run status to check progress of ppinit and fcinit.

Run 'ofs -p ppinit -i status -o ppstatus'

Run 'ofs -p fcinit -i status -o fcstatus'.