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# **SETTE tools Documentation**

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# Shell scripts

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## 1.1 fcm\_job.sh

### 1.1.1 Simple job for NEMO tests

#### SYNOPSIS

```
$ ./fcm_job.sh INPUT_FILE_CONFIG_NAME NUMBER_PROC TEST_NAME
```

#### DESCRIPTION

Simple job for SET TESTS for NEMO (SETTE)

get input files (if needed) : tar file

(note this job needs to have an input\_CONFIG.cfg in which can be found input tar file name)

runs job in interactive or batch mode : all jobs using 1 process are run interactive, and all MPP jobs are

run in batch (MPI\_INTERACT="no") or interactive (MPI\_INTERACT="yes") see sette.sh and BATCH\_TEMPLATE directory

and call post\_test\_tidyup function (that moves in NEMO\_VALIDATION\_DIR solver.stat, tracer.stat (for LOBSTER & PISCES) & ocean.output)

#### EXAMPLES

```
$ ./fcm_job.sh INPUT_FILE_CONFIG_NAME NUMBER_PROC TEST_NAME
```

run a job of config GYRE with 1 processor SHORT test ( 5 days )

```
$ ./fcm_job.sh input_GYRE.cfg 1 SHORT
```

run a job of config ORCA2\_LIM\_PISCES with 8 processors test RESTARTABILITY

```
$ ./fcm_job.sh input_ORCA2_LIM_PISCES.cfg 8 LONG
```

## TODO

option debug

## EVOLUTIONS

\$Id: fcm\_job.sh 3012 2011-10-27 13:06:58Z flavoni \$

- creation

## 1.2 all\_functions.sh

### 1.2.1 Set of functions used by sette.sh (NEMO tests)

#### SYNOPSIS

```
$ ./set_namelist INPUT_NAMELIST VARIABLE VALUE
$ post_test_tidyup
```

#### DESCRIPTION

**function superegrep** input variable value

**function set\_namelist** input namelist\_name variable value output namelist

**function post\_test\_tidyup** creates nemo\_validation tree, and save output & debug files this function creates tree of validation in NEMO\_VALIDATION\_DIR as follows :

NEMO\_VALIDATION\_DIR/WCONFIG\_NAME/WCOMPILER\_NAME/REVISION\_NUMBER(or DATE)/TEST\_NAME

NEMO\_VALIDATION\_DIR : is choosen in param.cfg

WCONFIG\_NAME : set by makenemo at the moment of compilation

WCOMPILER\_NAME : set by makenemo at the moment of compilation

REVISION\_NUMBER(or DATE) : revision number by svn info, if problems with svn date is taken

TEST\_NAME : set in sette.sh for each configuration to be tested (directory TEST\_NAME is created under \${NEW\_CONF} directory )

#### EXAMPLES

```
$ ./set_namelist namelist nn_itend 75
$ ./set_namelist namelist_ice_lim2 cn_icerst_in \"00101231_restart_ice\"
$ post_test_tidyup
```

## TODO

option debug

## EVOLUTIONS

\$Id: all\_functions.sh 3012 2011-10-27 13:06:58Z flavoni \$

- creation

## 1.3 prepare\_exe\_dir.sh

### 1.3.1 Set of functions used by sette.sh (NEMO tests)

#### SYNOPSIS

```
$ ./prepare_exe_dir.sh
```

#### DESCRIPTION

prepare\_exe\_dir.sh creates execution directory takes name of TEST\_NAME defined in every test in sette.sh

it is necessary to define in sette.sh TEST\_NAME ( example : export TEST\_NAME="LONG") to create execution directory in where run test.

NOTE : each test has to run in its own directory ( of execution), if not existing files are re-written (for example namelist)

#### EXAMPLES

```
$ ./prepare_exe_dir.sh
```

#### TODO

option debug

## EVOLUTIONS

\$Id: \$

- creation

## 1.4 sette.sh

### 1.4.1 Set of tests for NEMO

#### SYNOPSIS

```
$ ./sette.sh
```

## DESCRIPTION

Variables to be checked by user:

COMPILER : name of compiler as defined in NEMOGCM/ARCH directory

BATCH\_COMMAND : name of the command for batch submission

MPI\_INTERACT :

for MPP tests, “no” for batch execution, “yes” for interactive execution

NOTE: for run with 1 process tests are run always in MPI\_INTERACT=“yes”

Principal script is sette.sh, that calls

makenemo

creates the executable in `${CONFIG_NAME}/BLD/bin/nemo.exe` (and its link opa in `${CONFIG_NAME}/EXP00`)

param.cfg : sets and loads following directories:

FORCING\_DIR : is the directory for forcing files (tarfile)

INPUT\_DIR : is the directory for input files storing

TMPDIR : is the temporary directory (if needed)

NEMO\_VALIDATION\_DIR : is the validation directory

(NOTE: this file is the same for all configurations to be tested with sette)

all\_functions.sh : loads functions used by sette (note: new functions can be added here)

set\_namelist : function declared in all\_functions that set namelist parameters for tests

post\_test\_tidyup : creates validation storage directory and copy needed output files (solver.stat and ocean.output) in it after execution of test.

Tree of VALIDATION is:

`NEMO_VALIDATION_DIR/WCONFIG_NAME/WCOMPILER_NAME/TEST_NAME/REVISION_NUMBER(or DATE)`

prepare\_exe\_dir.sh : defines and creates directory where the test is executed

execution directory takes name of TEST\_NAME defined in every test in sette.sh

( each test in executed in its own directory )

fcm\_job.sh

runs job in interactive or batch mode : all jobs using 1 process are run interactive, and all MPP jobs are

run in batch (MPI\_INTERACT=“no”) or interactive (MPI\_INTERACT=“yes”) see sette.sh and BATCH\_TEMPLATE directory

(note this job needs to have an input\_CONFIG.cfg in which can be found input tar file)

NOTE: if job is not launched for some problems you have executable ready in `${EXE_DIR}` directory

NOTE: the changed namelists are leaved in `${EXE_DIR}` directory whereas original namelist remains in `${NEW_CONF}/EXP00`

in `${SETTE_DIR}` is created output.sette with the echo of executed commands

if sette.sh is stopped in output.sette there is written the last command executed by sette.sh



if you run: `./sette.sh 2>&1 | tee out.sette`  
in `${SETTE_DIR}` `out.sette` is redirected standard error & standard output

## EXAMPLES

```
$ ./sette.sh
```

## TODO

option debug

## EVOLUTIONS

\$Id: sette.sh 3011 2011-10-27 13:03:40Z flavoni \$

- creation

## 1.5 sette\_beginner.sh

### 1.5.1 Set of tests for NEMO for beginners

#### SYNOPSIS

```
$ ./sette_beginner.sh
```

#### DESCRIPTION

First simple example of how to use SETTE: create `GYRE_SHORT` configuration, compile it with 1 proc, and test it for a `SHORT` test: 5days



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# Indices and tables

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