

Families

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Tasks can be logically grouped into *family*'s.

You can picture a suite as a hierarchical structure very similar to a UNIX file system, where the families are the directories, and the tasks are the files.

The suite is a family with some extra attributes (See [Dates and Clocks](#)).

Like directories, families can themselves contain other families.

And like directories, there can be many tasks with the same name, as long as they are in different families.

Unless you tell ecFlow where to find specific files, the default behaviour is to expect the file structure to reflect the structure of the suite.

Ecf Script

In the suite definition below we will create a family **f1** with two tasks **t1** and **t2**.

In this case, you will have to create a directory `$HOME/course/test/f1`,

and move **t1.ecf** and **t2.ecf** into it.

Conversely, the ecFlow jobs and the outputs will be created in this directory.

Because we have moved the scripts to another directory, ecFlow will not find the two included files [head.h](#) and [tail.h](#) one directory up from the scripts.

We could modify the scripts to search the include file two directories up, but this would be very cumbersome.

The solution is to define a special ecFlow *variable* called **ECF_INCLUDE**

that points to the directory containing the include files. See [pre-processing](#)

Whenever angled brackets are used, ecFlow first looks to see if **ECF_INCLUDE**

variable is specified. If the variable exists, it checks to see if the file

`%ECF_INCLUDE%/head.h` exists, otherwise it looks for `%ECF_HOME%/head.h`

This has the added advantage that specific includes files can be placed under

ECF_INCLUDE, and includes file common to **many** tasks can be placed in

ECF_HOME. For more details see [directives](#).

We need to do the following changes to the *ecf script*'s.

from:

```
%include "../head.h"
echo "I am part of a suite that lives in %ECF_HOME%"
%include "../tail.h"
```

to:

```
%include <head.h>
echo "I am part of a suite that lives in %ECF_HOME%"
%include <tail.h>
```

suite's, *family*'s and *task*'s are called *node*'s.

Text

```
# Definition of the suite test.
suite test
  edit ECF_INCLUDE "$HOME/course" # replace '$HOME' with the path to your home directory
  edit ECF_HOME      "$HOME/course"
  family f1
    task t1
    task t2
  endfamily
endsuite
```

Python

If you are using the [Suite Definition API](#): Update `$HOME/course/test.py`

\$HOME/course/test.py

```
import os
from ecflow import Defs, Suite, Family, Task, Edit

def create_family_f1():
    return Family("f1",
                  Task("t1"),
                  Task("t2"))

print("Creating suite definition")
home = os.path.join(os.getenv("HOME"), "course")
defs = Defs(
    Suite("test",
          Edit(ECF_INCLUDE=home, ECF_HOME=home),
          create_family_f1()))
print(defs)

print("Checking job creation: .ecf -> .job0")
print(defs.check_job_creation())

print("Saving definition to file 'test.def'")
defs.save_as_defs("test.def")
```

The hierarchy is shown as a tree in [ecflow_ui](#)

What to do

1. Update the [suite definition](#)
2. Create the directories needed, move the *ecf script's*
3. Edit the script to include [head.h](#) and [tail.h](#) from the ECF_INCLUDE directory.
4. Replace the [suite](#)
python: python3 test.py
python3 client.py
text: ecflow_client --suspend=/test ; ecflow_client --replace=/test test.def
5. View the suite in [ecflow_ui](#), notice the tree structure. You may have to unfold **test** and **f1** to see the tasks.

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