

Checking job creation

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In the previous section, we have implemented our first task (the **t1.ecf** file).

The **t1.ecf** script needs to be preprocessed to generate the *job file*.

This *pre-processing* is done automatically by *ecflow_server* when the task is about to run.

However, it is possible to check the *job creation* before the *suite definition* is loaded into the *ecflow_server*.

Text

Automated job creation checking is only available with Python.

If the *ecflow_server* can't locate the *ecf script*, please see *ecf file location algorithm*

Python

The process of *job creation* can be checked before the *suite definition* is loaded into the *ecflow_server*. The following checks are done:

- Locating *ecf script* files, corresponding to the *task* in the *suite definition*.
- Performing *pre-processing*

When the *suite definition* is large and has many *ecf script* this checking can save a lot of time.

The following points should be noted about *job creation* checking:

- It is **independent** of the *ecflow_server*.
Hence ECF_PORT and ECF_HOST in the *job file* will have default values.
- Job files have a **.job0** extension, whereas the server will always generate jobs with an extension **.job<1-n>**, i.e. t1.job1, t1.job2.
The numbers correspond to *ECF_TRYNO* which is never zero.
- By default, the *job file* is created in the same directory as the *ecf script*. See *ECF_JOB*

Checking is done using `ecflow.Defs.check_job_creation`

Update **test.py** with:

\$HOME/course/test.py

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

print("Creating suite definition")
home = os.path.join(os.getenv("HOME"), "course")
defs = Defs(
    Suite('test',
        Edit(ECF_HOME=home),
        Task('t1'))
)
print(defs)

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

# We can assert, so that we only progress once job creation works
# assert len(defs.check_job_creation()) == 0, "Job generation failed"
```



It is highly advisable that *job creation* checking is enabled for all subsequent examples.

What to do

1. Add *job creation* checking to \$HOME/course/test.py
2. `python3 test.py | ./test.py`

3. Examine the job file `$HOME/course/test/t1.job0`

In particular note the substitutions made by the ecflow server such as `ECF_PORT`, `ECF_HOST`, etc

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