

Revolving wing job array submission steps

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1 File package

The revolving CFD job package file tree is as follow:

```
rev_job_array
├── r04_ar2_aoa00
├── r04_ar2_aoa10
├── r04_ar2_aoa...
├── all_current_jobs.sh
└── revolving-jobs-submission.pdf
```

Where the main folder *rev_job_array* contains all the CFD case folders named according to the case parameters (wing shape parameters and angle of attack, e.g. *r04_ar2_aoa10*).

The case control file *all_current_jobs.sh* is also in the main folder and contains the scripts used to instruct the **csf3** system to run all the cases within the main folder.

2 Submission steps

Before submission, open the file *all_current_jobs.sh* find line #7:

```
#$ -M hao.lee0019@gmail.com
```

replace the rear part with your own email.

2.1 Transferring file package to csf3

Linux system:

1. Go to the parent folder which contains the main package directory (*rev_job_array*)
2. Open terminal
3. Type (**username** should be replaced by your csf3 username):

```
rsync -rlvz rev_job_array username@csf3.itservices.manchester.ac.
```

uk:~

and type in your csf3 password when prompted.

Windows system:

Refer to the tutorial page:

<http://ri.itservices.manchester.ac.uk/tutorials/general-usage/file-transfer/>

2.2 Job submission

1. Login to **csf3** system:

For **Linux system** type in terminal:

```
ssh username@csf3.itservices.manchester.ac.uk
```

and type in your csf3 password when prompted.

For **Windows system** refer to the tutorial page:

<http://ri.itservices.manchester.ac.uk/tutorials/general-usage/rvds/>

2. When logged in, copy file package *rev_job_array* to *scratch* directory by typing:

```
cp -r ~/rev_job_array ~/scratch
```

3. Go to the job directory by typing:

```
cd ~/scratch/rev_job_array
```

4. Submit the job array by typing:

```
qsub all_current_jobs.sh
```

2.3 Downloading force coefficients results

After each case run, the force coefficients result is copied into the folder *SIM_RESULTS* which is created within the main job folder *rev_job_array* when the job starts.

The result file of each case is saved as text file and has the same name as the case folder, e.g. *r04_ar2_aoa10*.

To download the whole *SIM_RESULTS* folder, in **Linux system**:

1. Go to the dir in your local machine where you want to put the results
2. Open terminal
3. Type (**username** should be replaced by your csf3 username):
`rsync -avz username@csf3.itservices.manchester.ac.uk:~/scratch/rev_
job_array/SIM_RESULTS ./`
and type in your csf3 password when prompted.

For **Windows system** refer to the tutorial page:

<http://ri.itservices.manchester.ac.uk/tutorials/general-usage/rvds/>