

# FDS

**Purpose:** Fire Simulator

**Latest version:** 6.7.1

**Licence:**  Free of use  
Open Source

**Website:** [https://pages.nist.gov/fds-smv/\\_ext-link](https://pages.nist.gov/fds-smv/_ext-link)

FDS is a program for fire simulations.

FDS is a computational fluid dynamics (CFD) program which implements large eddy simulations (LES) for the analysis of fire evolution and fire-driven fluid flows, including smoke and heat transfer. Its companion program Smokeview allows for the visualisation and analysis of fire dynamics.

## SLURM Submit script example

More information about the submit script can be found using the *Job Script Generator*.

### fds\_example.slm

```
#!/bin/bash
#SBATCH -J fds_example
#SBATCH -e fds_example.err
#SBATCH -o fds_example.out
#SBATCH -p std
#SBATCH -n 1
#SBATCH -t 0-02:00

module load apps/fds/6.6.0

##
# Modify the input and output files!
INPUT_FILE=fds_example.inp
OUTPUT_FILE=gaussian_example.log

##
# You don't need to modify nothing more
cp -r ${SLURM_SUBMIT_DIR}/${INPUT_FILE}
${SCRATCH}
cd ${SCRATCH}

srun fds ${INPUT_FILE} ${OUTPUT_FILE}

cp ./${OUTPUT_FILE} ${SLURM_SUBMIT_DIR}
```

### Sbatch options:

The options shown in the example are detailed below. For more information and a more comprehensive list of available options, see the *sbatch command page*.

- **-J:** Name for the job's allocation.
- **-e:** Name of the stderr redirection filename.
- **-o:** Name of the stdout redirection filename.
- **-p:** Name of the partition (queue) where the job will be submitted.
- **-n:** Number of tasks.
- **-c:** Number of cores per task.

- **-t:** Set the job's time limit. If the job don't finish before the time runs out, it will be killed.
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