

# Workbench

## Workbench Batch Mode

It is possible to run Workbench scripts in batch mode. You need to configure solvers of individual components to run in parallel mode. Open your project in Workbench. Then, for example, in Mechanical, go to Tools - Solve Process Settings ..., click Advanced button as shown on the screenshot.

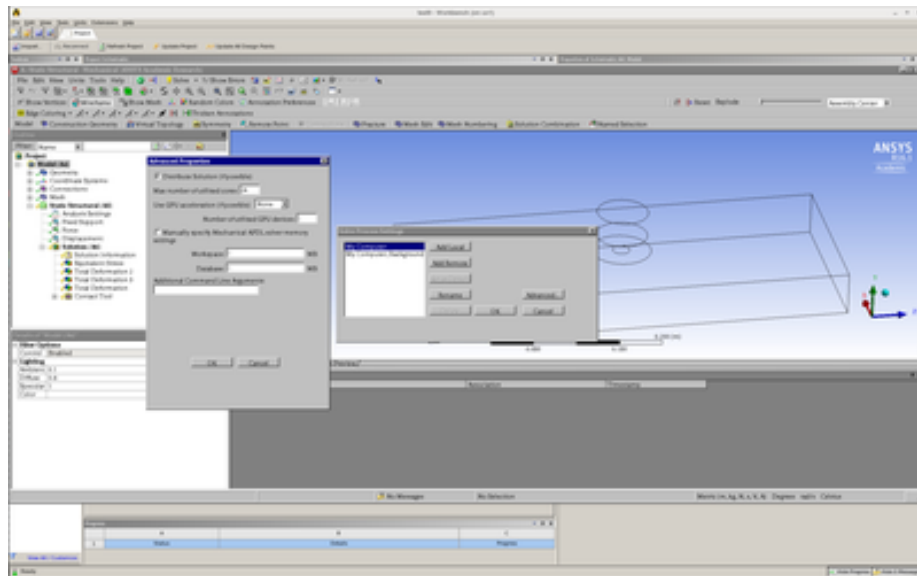


Figure 1:

Enable Distribute Solution checkbox and enter number of cores (eg. 48 to run on two Salomon nodes). If you want the job to run on more than 1 node, you must also provide a so called MPI appfile. In the Additional Command Line Arguments input field, enter :

```
-mpifile /path/to/my/job/mpifile.txt
```

Where /path/to/my/job is the directory where your project is saved. We will create the file mpifile.txt programatically later in the batch script. For more information, refer to *ANSYS Mechanical APDL Parallel Processing Guide*.

Now, save the project and close Workbench. We will use this script to launch the job:

```
#!/bin/bash
#PBS -l select=2:ncpus=24
#PBS -q qprod
```

```

#PBS -N test9_mpi_2
#PBS -A OPEN-0-0

# Mail to user when job terminate or abort
#PBS -m a

# change the working directory
WORK_DIR="$PBS_O_WORKDIR"
cd $WORK_DIR

echo Running on host `hostname`
echo Time is `date`
echo Directory is `pwd`
echo This jobs runs on the following nodes:
echo `cat $PBS_NODEFILE`

module load ANSYS

#### Set number of processors per host listing
procs_per_host=24
#### Create MPI appfile
echo -n "" > mpifile.txt
for host in `cat $PBS_NODEFILE`
do
    echo "-h $host -np $procs_per_host $ANSYS160_DIR/bin/ansysdis161 -dis" > mpifile.txt
done

#-i input.dat includes the input of analysis in APDL format
#-o file.out is output file from ansys where all text outputs will be redirected
#-p the name of license feature (aa_r=ANSYS Academic Research, ane3fl=Multiphysics(commercial))

# prevent using scsif0 interface on accelerated nodes
export MPI_IC_ORDER="UDAPL"
# spawn remote process using SSH (default is RSH)
export MPI_REMSH="/usr/bin/ssh"

runwb2 -R jou6.wbjn -B -F test9.wbpj

```

The solver settings are saved in file solvehandlers.xml, which is not located in the project directory. Verify your solved settings when uploading a project from your local computer.