SLURM JOB SCRIPT CHEAT SHEET
GENERIC/ADVANCED

```
#!/bin/bash

#SBATCH –-job-name=myjobname                    #Your Job Name
#SBATCH --nodes=1                              #Number of Nodes desired e.g 1 node
#SBATCH --time=00:10:00                        #Walltime: Duration for the Job to run HH:MM:SS
#SBATCH --mail-user=useremail@kaust.edu.sa     #Your Email address assigned for your job
#SBATCH --mail-type=ALL                        #Receive an email for ALL Job Statuses
#SBATCH --error=JobName.%J.err                 #The .error file name
#SBATCH --output=JobName.%J.out                #The .output file name

#Go to your working directory
cd /my_working_dir/

#Module load the desired application if necessary
module load module_name                        #Always check the module needed on the login node “module avail”

#Edit below with the launching command:
your_commands_goes_here
```

Additional Options that can be added to your job script:

```
#SBATCH --constraint={constraint}              #Run on a specific type of nodes
#SBATCH --ntasks-per-node=4                    #Number of tasks to run per node
#SBATCH --cpus-per-task=4                      #Number of cores assigned per task
#SBATCH --partition=batch                      #Partition name default for Ibex
#SBATCH --mem=2GB                              #Memory requested for e.g 2GB
#SBATCH --reservation=RESNAME                  #Specify your reservation node if any
#SBATCH --gres=gpu:1                           #Run on 1 GPU of any type
#SBATCH --gres=gpu:<GPU_type>:<number>         #Check for advanced tips on GPU constraints
#SBATCH --array=1-10                           #For Job Arrays
#SBATCH --cpus-per-gpu=2                       #Number of CPUs per allocated GPU
#SBATCH --gpus=2                               #Total job GPU count
#SBATCH --gpus-per-node=1                      #Number of GPUs per node
#SBATCH --gpus-per-socket=1                    #Number of GPUs per socket
#SBATCH --gpus-per-task=1                      #Number of GPUs per task
#SBATCH --mem-per-gpu=100GB                    #Amount of allocated memory per GPU
```

To submit a Job: *sbatch myjobscript*

To cancel a job: *scancel jobid*

To check the status of your jobs: *squeue –u username*

TIPS:

- Best practice is to use the Ibex Job generator : https://www.hpc.kaust.edu.sa/ibex/job
- Check with the system’s team if you need to extend your job wall time.
- For more info on SLURM check their website: https://slurm.schedmd.com/

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Here are some advanced tips for Ibex Users

Specific Constraints for different node types:			
CPU Family	#Nodes	#Cores per node	Constraint
Intel Cascadelake	106	40	#SBATCH --constraint=cascadelake
Intel Skylake	106	40	#SBATCH --constraint=skylake
AMD Rome	108	128	#SBATCH --constraint=rome
			#SBATCH --constraint=amd

Large memory info for different node sizes : Just add the memory desired and automatic allocation will occur #SBATCH –mem=##			
CPU Family	Cores per node	Available number of nodes	Recommended max memory per node
Intel Skylake	32	4	2.93 TB
Intel CascadeLake	48	18	2.93 TB

GPU Specific Constraints for different node types:			
Description	Available GPU cards per node	Available number of nodes	Constraint
Pascal:gtx1080ti	4	8	#SBATCH --gres=gpu:gtx1080ti:1
	8	4	
Pascal:p100	4	5	#SBATCH --gres=gpu:p100:1
Pascal:p6000	2	3	#SBATCH --gres=gpu:p6000:1
Turing:rtx2080ti	8	3	#SBATCH --gres=gpu:rtx2080ti:1
Volta:v100	4	6	#SBATCH --gres=gpu:v100:1
	2	1	
	8	30	
Ampere:a100	4	46	#SBATCH --gres=gpu:a100:1
	8	8	

Computing Resources:

- For more details on the computing resources visit: https://www.hpc.kaust.edu.sa/ibex/computing