

Testing Details for Section 4.8

NetApp Solutions

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This section contains the testing details for the section Achieving High Cluster Utilization with Over-Quota GPU Allocation.

Submit jobs in the following order:

Project	Image	# GPUs	Total	Comment
team-a	Jupyter	1	1/4	_
team-a	NetApp	1	2/4	_
team-a	Run:Al	2	4/4	Using all their quota
team-b	Run:Al	0.6	0.6/2	Fractional GPU
team-b	Run:Al	0.4	1/2	Fractional GPU
team-b	NetApp	1	2/2	_
team-b	NetApp	2	4/2	Two over quota
team-c	Run:Al	0.5	0.5/2	Fractional GPU
team-c	Run:Al	0.3	0.8/2	Fractional GPU
team-c	Run:Al	0.2	1/2	Fractional GPU
team-c	NetApp	2	3/2	One over quota
team-c	NetApp	1	4/2	Two over quota
team-d	NetApp	4	4/8	Using half of their quota

Command structure:

```
$ runai submit <job-name> -p project-name> -g <#GPUs> -i <image-name>
```

Actual command sequence used in testing:

```
$ runai submit a-1-1-jupyter -i jupyter/base-notebook -g 1 \
 --interactive --service-type=ingress --port 8888 \
  --args="--NotebookApp.base url=team-a-test-ingress" --command=start
-notebook.sh -p team-a
$ runai submit a-1-g -i gcr.io/run-ai-demo/quickstart -g 1 -p team-a
$ runai submit a-2-gg -i gcr.io/run-ai-demo/quickstart -g 2 -p team-a
$ runai submit b-1-g06 -i gcr.io/run-ai-demo/quickstart -g 0.6
--interactive -p team-b
$ runai submit b-2-g04 -i gcr.io/run-ai-demo/quickstart -g 0.4
--interactive -p team-b
$ runai submit b-3-g -i gcr.io/run-ai-demo/quickstart -g 1 -p team-b
$ runai submit b-4-gg -i gcr.io/run-ai-demo/quickstart -g 2 -p team-b
$ runai submit c-1-q05 -i qcr.io/run-ai-demo/quickstart -q 0.5
--interactive -p team-c
$ runai submit c-2-g03 -i gcr.io/run-ai-demo/quickstart -g 0.3
--interactive -p team-c
$ runai submit c-3-q02 -i gcr.io/run-ai-demo/quickstart -q 0.2
--interactive -p team-c
$ runai submit c-4-gg -i gcr.io/run-ai-demo/quickstart -g 2 -p team-c
$ runai submit c-5-g -i gcr.io/run-ai-demo/quickstart -g 1 -p team-c
$ runai submit d-1-qqqq -i qcr.io/run-ai-demo/quickstart -q 4 -p team-d
```

At this point, you should have the following states:

Project	GPUs Allocated	Workloads Queued
team-a	4/4 (soft quota/actual allocation)	None
team-b	4/2	None
team-c	4/2	None
team-d	4/8	None

See the section Achieving High Cluster Utilization with Over-uota GPU Allocation for discussions on the proceeding testing scenario.

Next: Testing Details for Section 4.9

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