

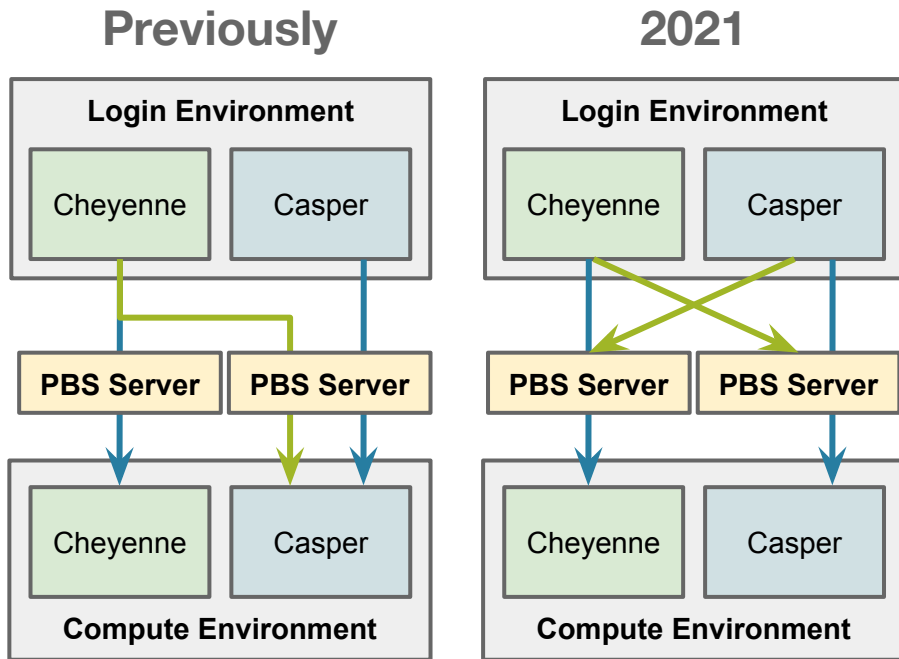
# Peer scheduling on Cheyenne and Casper

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- Clusters are now all updated to the same version of the scheduler software allowing for more seamless integration
- peer scheduling enabled( submitting a job directly to another cluster working from Casper to Cheyenne now as well)
- gpu development queue on Casper

# Peering environment architecture



Previously users would run *native* commands within each system and *wrappers* to use Casper PBS on Cheyenne

Soon users will be able to *natively* submit jobs directly to each cluster using *native* commands or *wrappers*.

## Show all jobs for a particular system:

```
qstat @cheyenne
```

```
qstat @chadmin1.ib0.cheyenne.ucar.edu
```

## Show jobs in a particular queue on a system:

```
qstat gpgpu@casper
```

```
qstat gpgpu@casper-pbs
```

## Show a particular job on a system:

```
qstat 112262.cheyenne
```

```
qstat 112262.chadmin1.ib0.cheyenne.ucar.edu
```

- Resources for job placement
  - ngpus
    - number of gpus to use in the job
  - cpu\_type
    - Type of cpu you would like (broadwell, cascadelake, skylake, and eventually milan)
  - gpu\_type
    - Type of gpu you would like to use ( gp100, v100, and eventually a100 )

Examples of submitting interactive jobs:

From Cheyenne to Casper:

```
execcasper -A SSSG0001 --nchunks 1 --mem 20gb --ngpus 1 --gpu v100
```

From Casper to Cheyenne:

```
qinteractive -A SSSG0001 --nchunks 1 --mem 10gb
```

# gpudev queue

We are currently testing and will release shortly a gpudev queue. The queue will have the following restrictions:

- Will only run jobs from 8am to 5:30 pm Mon-Fri
- Only one job for each user will be allowed at any time
- Max walltime is set to 30 minutes
- A user can request from 1 to 4 GPUs for development work.

We hope that you will find the gpudev queue a valuable resource to quickly test your GPU codes before submitting larger runs.

```
qsub -I -q gpudev -A SSSG0001 -l select=1:ncpus=36:ngpus=1 -l  
gpu_type=v100 -l walltime=00:20:00
```