

overview of the resources offered

`sinfo` : overview of the resources offered by the cluster

By default, `sinfo` lists the available partitions name(s), availability, time limit, number of nodes, their **state** and the nodelist. A partition is a set of compute nodes.

The command `sinfo` by default

```
$ sinfo
PARTITION AVAIL  TIMELIMIT  NODES  STATE NODELISTall*          up   infinite    5  down*
wn[075,096,105,110,146]all*      up   infinite    6  drain wn[077,091,101,117,143,148]
all*          up   infinite    2  mix  wn[079,097]all*          up   infinite   33  alloc
wn[081-089,092-095,099-100,104,108,112,115,118,124,135-139,144-145,151,155-158]all*
up   infinite    40  idle wn[071-073,076,080,090,098,102-103,106-107,109,111,113-
114,116,120-123,125-128,130-134,140-142,147,149-150,152-154,159-160]all*          up
infinite    4  down wn[074,078,119,129]debug          up   infinite    8  idle wn[060-
063,065-067,069]
debug          up   infinite    3  down wn[064,068,070]
```

The command `sinfo --Node` provides the list of nodes and their actual state individually.

```
$ sinfo --Node
NODELIST  NODES  PARTITION  STATE
wn071      1    all*  alloc
wn072      1    all*  drain
wn073      1    all*  alloc
wn074      1    all*  down
wn075      1    all*  down*
wn076      1    all*  alloc
```

The command `sinfo --summarize` provides the node state in the form "available/idle/other/total"

```
$ sinfo --summarize
PARTITION AVAIL  TIMELIMIT  NODES(A/I/O/T)  NODELISTall*      up    infinite
36/7/47/90  wn[071-160]
debug      up    infinite      2/6/3/11  wn[060-070]
```

The command `sinfo --long` provides additional information than `sinfo`. Informations about the OverSubscribe (OVERSUBS), All the queues are defined as OVERSUBS=NO, none of the partitions(queues) allow requestes over the limit of the consumable resources.

```
$ sinfo --long
PARTITION AVAIL  TIMELIMIT  JOB_SIZE ROOT OVERSUBS  GROUPS  NODES  STATE NODELIST
all*      up    infinite 1-infinite  no      NO      all     5      down*
wn[075,096,105,110,146]all*      up    infinite 1-infinite  no      NO      all
38      drained wn[072-073,076-077,080,090-091,098,101-103,106-107,109,113-114,116-117,120-
123,125-128,130,133-134,136,140-141,143,147-148,150,152,159]all*      up    infinite 1-
infinite  no      NO      all     4      mixed wn[079,094,097,137]all*      up
infinite 1-infinite  no      NO      all     32     allocated wn[071,081-089,092-
093,095,099-100,104,108,112,115,118,124,131-132,135,138-139,144,151,155-158]all*      up
infinite 1-infinite  no      NO      all     7      idle  wn[111,142,145,149,153-
154,160]
```

With `sinfo` you can also filter the nodes/partitions for specific situation, in this example we requested to list the nodes either idle or down

```
$sinfo --states=idle,down
PARTITION AVAIL  TIMELIMIT  NODES  STATE NODELISTall*      up    infinite      5  down*
wn[075,096,105,110,146]all*      up    infinite      8  idle wn[113,116,121-122,126,140-
141,143]
all*      up    infinite      4  down wn[074,078,119,129]debug      up    infinite
7  idle wn[060-063,065-067]
debug      up    infinite      3  down wn[064,068,070]
```

“ For more detailed information, please see manual `man sinfo`

states:

- **mix** : consumable resources partially allocated
- **idle** : available to requests consumable resources
- **drain** : unavailable for use per system administrator request
- **drng** : currently executing a job, but will not be allocated to additional jobs. The node will be changed to state DRAINED when the last job on it completes
- **alloc** : consumable resources fully allocated
- **down** : unavailable for use. Slurm can automatically place nodes in this state if some failure occurs.

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