

# 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	NODELIST
all*	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) NODELIST
all*      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 NODELIST
all*      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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