

Load Checks

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Load Checks

A definition of load is required.

Resource: [Linux Manual Page - getloadavg\(3\)](#)

The `getloadavg()` function returns the number of processes in the system run queue averaged over various periods of time. Up to `nelem` samples are retrieved and assigned to `loadavg`. It imposes a maximum of 3 samples, representing averages over the last 1, 5, and 15 minutes, respectively.

Resource: [Linux Manual Page - Uptime](#)

System load averages is the average number of processes that are either in a runnable or uninterruptable state. A process in a runnable state is either using the CPU or waiting state is waiting for some I/O access, eg waiting for disk. The averages are taken over the three time intervals. Load averages are not normalized for the number of CPUs in a system. A system with 4 CPUs is loaded all the time while on a 4 CPU system it means it was idle 75% of the time.

The term **Load** can often be mistaken as pure CPU Usage. The examples in this KB article are focused on load intervals. A separate KB article will cover CPU Usage checks that are r

Nagios Plugins

The `check_load` plugin is part of Nagios Plugins. The thresholds for the plugin are triggered if any of the load samples are greater than the supplied value.

A detailed discussion about this is available in [this GitHub issue](#).

The `-r` argument is used to divide the load averages by the number of CPUs.

Warning 1 Minute: 0.15

Warning 5 Minute: 0.1

Warning 15 Minute: 0.05

Critical 1 Minute: 0.30

Critical 5 Minute: 0.25

Critical 15 Minute: 0.2

Command:

```
./check_load -r -w 0.15,0.10,0.05 -c 0.30,0.25,0.20
```

Output:

```
OK - load average: 0.03, 0.01, 0.01 | load1=0.025;0.150;0.300;0; load5=0.015;0.100;0.250;0; load15=0.010;0.050;0.200;0;
```

NCPA

NCPA does not include a load module, it does however have a CPU module that provides usage checks.

NSClient++ via check_nt

NSClient++ includes a `cpu load` module. The thresholds for the load checks are triggered if the load interval is greater than the supplied value.

Format is `<minutes range>,<warning threshold>,<critical threshold>` and up to 10 requests can be done in one check.

Unit: %

Warning 1 Minute: 90

Warning 5 Minute: 80

Warning 15 Minute: 70

Critical 1 Minute: 95

Critical 5 Minute: 85

Critical 15 Minute: 75

Command:

```
./check_nt -H 10.25.14.10 -p 12489 -s 'StrongP@ssw0rd' -v CPULOAD -l 1,90,95,5,80,85,15,70,75
```

Output:

```
CPU Load 0% (1 min average) 0% (5 min average) 0% (15 min average) | '1 min avg Load'=0%;90;95;0;100 '5 min avg Load'=0%;80;85;0;1
```

NSClient++ via check_nrpe

NSClient++ includes a `cpu load` module. The load intervals are 5min, 1min, 5sec and the percentage thresholds are triggered if the load interval is greater than the supplied value.

Unit: %

Warning: 80

Critical: 90

Command:

```
/check_nrpe -H 10.25.14.10 -c check_cpu -a show-all -a 'warn=load>80' 'crit=load>90' show-all
```

Output:

```
OK: 5m: 0%, 1m: 0%, 5s: 0%|'total 5m'=0%;80;90 'total 1m'=0%;80;90 'total 5s'=0%;80;90
```

You can define the load intervals by using multiple `time=x` arguments:

Command:

```
./check_nrpe -H 10.25.14.10 -c check_cpu -a show-all -a time=1m time=5m time=15m 'warn=load>80' 'crit=load>90' show-all
```

Output:

```
OK: 1m: 0%, 5m: 0%, 15m: 0%|'total 1m'=0%;80;90 'total 5m'=0%;80;90 'total 15m'=0%;80;90
```

WMI

Check WMI Plus does not include a load module, it does however have a CPU module that provides usage checks.

SNMP

The `check_snmp_load_wizard.pl` plugin is provided as an example here. The thresholds for the plugin are triggered if any of the load samples are greater than the supplied value.

Warning 1 Minute: 0.15

Warning 5 Minute: 0.1

Warning 15 Minute: 0.05

Critical 1 Minute: 0.30

Critical 5 Minute: 0.25

Critical 15 Minute: 0.2

Command:

```
./check_snmp_load_wizard.pl -H 10.25.13.15 -C public --v2c -T nets1 -w 0.15,0.1,0.05 -c 0.3,0.25,0.2 -f
```

Output:

```
Load : 0.00 0.01 0.05 : OK | load_1_min=0.00;0.15;0.3 load_5_min=0.01;0.1;0.25 load_15_min=0.05;0.05;0.2
```

Final Thoughts

For any support related questions please visit the [Nagios Support Forums](http://support.nagios.com/forum/) at:

<http://support.nagios.com/forum/>

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Online URL: <https://support.nagios.com/kb/article/load-checks-771.html>