

NAME

sysctl – configure kernel parameters at runtime

SYNOPSIS

sysctl [*options*] [*variable*[=*value*]] [...]

sysctl -p [*file* or *regexp*] [...]

DESCRIPTION

sysctl is used to modify kernel parameters at runtime. The parameters available are those listed under */proc/sys/*. Procs is required for **sysctl** support in Linux. You can use **sysctl** to both read and write sysctl data.

PARAMETERS

variable

The name of a key to read from. An example is kernel.ostype. The *'/'* separator is also accepted in place of a *'.'*.

variable=value

To set a key, use the form *variable=value* where *variable* is the key and *value* is the value to set it to. If the value contains quotes or characters which are parsed by the shell, you may need to enclose the value in double quotes.

-n, --values

Use this option to disable printing of the key name when printing values.

-e, --ignore

Use this option to ignore errors about unknown keys.

-N, --names

Use this option to only print the names. It may be useful with shells that have programmable completion.

-q, --quiet

Use this option to not display the values set to stdout.

-w, --write

Force all arguments to be write arguments and print an error if they cannot be parsed this way.

-p[*FILE*], --load[=*FILE*]

Load in **sysctl** settings from the file specified or */etc/sysctl.conf* if none given. Specifying *-* as filename means reading data from standard input. Using this option will mean arguments to **sysctl** are files, which are read in the order they are specified. The file argument may be specified as regular expression.

-a, --all

Display all values currently available except deprecated and verboten parameters.

--deprecated

Include deprecated parameters to **--all** values listing.

-b, --binary

Print value without new line.

--system

Load settings from all system configuration files. See the **System file precedence** sub-section below.

-r, --pattern *pattern*

Only apply settings that match *pattern*. The *pattern* uses extended regular expression syntax.

-A Alias of **-a**

-d Alias of **-h**

- f** Alias of **-p**
- X** Alias of **-a**
- o** Does nothing, exists for BSD compatibility.
- x** Does nothing, exists for BSD compatibility.
- h, --help**
Display help text and exit.
- V, --version**
Display version information and exit.

FILES

```

/proc/sys
/etc/sysctl.d/*.conf
/run/sysctl.d/*.conf
/usr/local/lib/sysctl.d/*.conf
/usr/lib/sysctl.d/*.conf
/lib/sysctl.d/*.conf
/etc/sysctl.conf

```

NOTES

System file precedence

When using the **--system** option, **sysctl** will read files from directories in the following list in given order from top to bottom. Once a file of a given filename is loaded, any file of the same name in subsequent directories is ignored.

```

/etc/sysctl.d/*.conf
/run/sysctl.d/*.conf
/usr/local/lib/sysctl.d/*.conf
/usr/lib/sysctl.d/*.conf
/lib/sysctl.d/*.conf
/etc/sysctl.conf

```

All configuration files are sorted in lexicographic order, regardless of the directory they reside in. Configuration files can either be completely replaced (by having a new configuration file with the same name in a directory of higher priority) or partially replaced (by having a configuration file that is ordered later).

Deprecated parameters

The **base_reachable_time** and **retrans_time** are deprecated. The **sysctl** command does not allow changing values of these parameters. Users who insist to use deprecated kernel interfaces should push values to **/proc** file system by other means. For example:

```
echo 256 > /proc/sys/net/ipv6/neigh/eth0/base_reachable_time
```

Verboten parameters

Certain kernel parameters should not be read due to side-effects and will be skipped by **sysctl** using the **--all** option.

stat_refresh

This parameter returns no value but flushes per-cpu vm statistics.

EXAMPLES

```

/sbin/sysctl -a
/sbin/sysctl -n kernel.hostname
/sbin/sysctl -w kernel.domainname="example.com"
/sbin/sysctl -p/etc/sysctl.conf

```

```
/sbin/sysctl -a --pattern forward  
/sbin/sysctl -a --pattern forward$  
/sbin/sysctl -a --pattern 'net.ipv4.conf.(eth|wlan)0.arp'  
/sbin/sysctl --pattern '^net.ipv6' --system
```

SEE ALSO

proc(5), **sysctl.conf(5)**, **regex(7)**

REPORTING BUGS

Please send bug reports to procps@freelists.org