

NAME

sysctlmib — Kernel Sysctl MIB Information

DESCRIPTION

The FreeBSD `sysctl` database allows one to manipulate and monitor various subsystems in the kernel. Nodes can be added and removed dynamically without any type of recompilation needed, unless the actual ABI changes.

From a programming perspective, it is better to get values from the `sysctl(3)` database than to use the infamous KVM interface.

This manual page contains a comprehensively described list of the sysctls available at hand on FreeBSD.

SYSCTL LIST**kern.ostype**

Operating system type.

kern.osrelease

Operating system release.

kern.osrevision

Operating system revision.

kern.version

Kernel version.

kern.maxvnodes

Maximum number of vnodes.

kern.maxproc

Maximum number of processes.

kern.maxfiles

Maximum number of files.

kern.argmax

Maximum bytes of argument to `execve(2)`.

kern.securelevel

Current secure level.

kern.hostname

Hostname.

kern.hostid

Host ID.

kern.clockrate

Rate and period of various kernel clocks.

kern.proc.all

Return entire process table.

kern.proc.pid

Process table.

kern.proc.pgrp

Process table.

kern.proc.tty

Process table.

kern.proc.uid

Process table.

kern.proc.ruid

Process table.

kern.proc.args

Process argument list.

kern.proc.proc

Return process table, no threads.

kern.proc.sv_name

Process syscall vector name (ABI type).

kern.file

Entire file table.

kern.posix1version

Version of POSIX attempting to comply to.

kern.ngroups

Maximum number of groups a user can belong to.

kern.job_control

Whether job control is available.

kern.saved_ids

Whether saved set-group/user ID is available.

kern.boottime

System boottime.

kern.domainname

Name of the current YP/NIS domain.

kern.osreldate

Kernel release date.

kern.bootfile

Name of kernel file booted.

kern.maxfilesperproc

Maximum files allowed open per process.

kern.maxprocperuid

Maximum processes allowed per userid.

kern.ipc.maxsockbuf

Maximum socket buffer size.

kern.ipc.sockbuf_waste_factor

No explanation provided, as of yet.

kern.ipc.somaxconn

Maximum pending socket connection queue size.

kern.ipc.max_linkhdr

No explanation provided, as of yet.

kern.ipc.max_protohdr

No explanation provided, as of yet.

kern.ipc.max_hdr

No explanation provided, as of yet.

kern.ipc.max_datalen

No explanation provided, as of yet.

kern.ipc.nmbclusters

Maximum number of mbuf clusters available.

kern.ipc.nmbufs

Maximum number of mbufs available.

kern.ipc.nmbcnt

Number used to scale kmem_map to ensure sufficient space for counters.

kern.ipc.nsfbufs

Maximum number of sendfile(2) sf_bufs available.

kern.ipc.mbuf_wait

Sleep time of mbuf subsystem wait allocations during exhaustion.

kern.ipc.mbuf_hiwm

Upper limit of number of mbufs allowed in each cache.

kern.ipc.mbuf_lowm

Lower limit of number of mbufs allowed in each cache.

kern.ipc.clust_hiwm

Upper limit of number of mbuf clusters allowed in each cache.

kern.ipc.clust_lowm

Lower limit of number of mbuf clusters allowed in each cache.

kern.ipc.mbstat

Mbuf general information and statistics.

kern.ipc.mb_statpcpu

Mbuf allocator per CPU statistics.

kern.ipc.maxpipekva

Pipe KVA limit.

kern.ipc.maxpipekvawired

Pipe KVA wired limit.

kern.ipc.pipes

Current # of pipes.

kern.ipc.bigpipes

Current # of big pipes.

kern.ipc.pipekva

Pipe KVA usage.

kern.ipc.pipewired

Pipe wired KVA usage.

kern.ipc.msgmax

No explanation provided, as of yet.

kern.ipc.msgmni

No explanation provided, as of yet.

kern.ipc.msgmnb

No explanation provided, as of yet.

kern.ipc.msgtql

No explanation provided, as of yet.

kern.ipc.msgssz

No explanation provided, as of yet.

kern.ipc.msgseg

No explanation provided, as of yet.

kern.ipc.msquids

Message queue IDs.

kern.ipc.semmap

No explanation provided, as of yet.

kern.ipc.semmni

No explanation provided, as of yet.

kern.ipc.semmns

No explanation provided, as of yet.

kern.ipc.semmnu

No explanation provided, as of yet.

kern.ipc.semmsl

No explanation provided, as of yet.

kern.ipc.semopm

No explanation provided, as of yet.

kern.ipc.semume

No explanation provided, as of yet.

kern.ipc.semusz

No explanation provided, as of yet.

kern.ipc.semvmx

No explanation provided, as of yet.

kern.ipc.semaem

No explanation provided, as of yet.

kern.ipc.sema

No explanation provided, as of yet.

kern.ipc.shmmax

No explanation provided, as of yet.

kern.ipc.shmmin

No explanation provided, as of yet.

kern.ipc.shmmni

No explanation provided, as of yet.

kern.ipc.shmseg

No explanation provided, as of yet.

kern.ipc.shmall

No explanation provided, as of yet.

kern.ipc.shm_use_phys

No explanation provided, as of yet.

kern.ipc.shmsegs

No explanation provided, as of yet.

kern.ipc.numopensockets

Number of open sockets.

kern.ipc.maxsockets

Maximum number of sockets available.

kern.dummy

No explanation provided, as of yet.

kern.ps_strings

No explanation provided, as of yet.

kern.usrstack

No explanation provided, as of yet.

kern.logsigexit

Log processes quitting on abnormal signals to syslog(3).

kern.iov_max

Maximum number of elements in an I/O vector; sysconf(_SC_IOV_MAX).

kern.random.sys.seeded

Seeded State.

kern.random.sys.burst

Harvest Burst Size.

kern.random.sys.harvest.ethernet

Harvest NIC entropy.

kern.random.sys.harvest.point_to_point

Harvest serial net entropy.

kern.random.sys.harvest.interrupt

Harvest IRQ entropy.

kern.random.sys.harvest.swi

Harvest SWI entropy.

kern.random.yarrow.gengateinterval

Generator Gate Interval.

kern.random.yarrow.bins

Execution time tuner.

kern.random.yarrow.fastthresh

Fast reseed threshold.

kern.random.yarrow.slowthresh

Slow reseed threshold.

kern.random.yarrow.slowoverthresh

Slow over-threshold reseed.

kern.disks

names of available disks.

kern.geom.confxml

Dump the GEOM config in XML.

kern.geom.confdot

Dump the GEOM config in dot.

kern.geom.conftxt

Dump the GEOM config in txt.

kern.geom.debugflags

No explanation provided, as of yet.

kern.geom.collectstats

No explanation provided, as of yet.

kern.elf32.fallback_brand

ELF32 brand of last resort.

kern.init_path

Path used to search the init process.

kern.acct_suspend

percentage of free disk space below which accounting stops.

kern.acct_resume

percentage of free disk space above which accounting resumes.

kern.acct_chkfreq

frequency for checking the free space.

kern.cp_time

CPU time statistics.

kern.devname

devname(3) handler.

kern.openfiles

System-wide number of open files.

kern.kq_calloutmax

Maximum number of callouts allocated for kqueue.

kern.stackprot

No explanation provided, as of yet.

kern.ps_arg_cache_limit

No explanation provided, as of yet.

kern.ps_argsopen

No explanation provided, as of yet.

kern.lastpid

Last used PID.

kern.randompid

Random PID modulus.

kern.ktrace.genio_size

Maximum size of genio event payload.

kern.ktrace.request_pool

No explanation provided, as of yet.

kern.module_path

module load search path.

kern.function_list

kernel function list.

kern.malloc

Malloc Stats.

kern.ident

Kernel identifier.

kern.maxusers

Hint for kernel tuning.

kern.fallback_elf_brand

compatibility for kern.fallback_elf_brand.

kern.ntp_pll_gettime

No explanation provided, as of yet.

kern.kstack_pages

No explanation provided, as of yet.

kern.uarea_pages

No explanation provided, as of yet.

kern.sync_on_panic

Do a sync before rebooting from a panic.

kern.shutdown.poweroff_delay

No explanation provided, as of yet.

kern.shutdown.kproc_shutdown_wait

No explanation provided, as of yet.

kern.sugid_coredump

Enable coredumping set user/group ID processes.

kern.coredump

Enable/Disable coredumps.

kern.corefile

process corefile name format string.

kern.fscale

No explanation provided, as of yet.

kern.timecounter.nbinuptime

No explanation provided, as of yet.

kern.timecounter.nnanouptime

No explanation provided, as of yet.

kern.timecounter.nmicrouptime

No explanation provided, as of yet.

kern.timecounter.nbintime

No explanation provided, as of yet.

kern.timecounter.nnanotime

No explanation provided, as of yet.

kern.timecounter.nmicrotime

No explanation provided, as of yet.

kern.timecounter.ngetbinuptime

No explanation provided, as of yet.

kern.timecounter.ngetnanouptime

No explanation provided, as of yet.

kern.timecounter.ngetmicrouptime

No explanation provided, as of yet.

kern.timecounter.ngetbintime

No explanation provided, as of yet.

kern.timecounter.ngetnanotime

No explanation provided, as of yet.

kern.timecounter.ngetmicrotime

No explanation provided, as of yet.

kern.timecounter.nsetclock

No explanation provided, as of yet.

kern.timecounter.hardware

No explanation provided, as of yet.

kern.timecounter.choice

No explanation provided, as of yet.

kern.timecounter.tick

No explanation provided, as of yet.

kern.threads.debug

thread debug.

kern.threads.max_threads_per_proc

Limit on threads per proc.

kern.threads.max_groups_per_proc

Limit on thread groups per proc.

kern.threads.max_threads_hits

No explanation provided, as of yet.

kern.threads.virtual_cpu

debug virtual cpus.

kern.quantum

Roundrobin scheduling quantum in microseconds.

kern.ccpu

No explanation provided, as of yet.

kern.devstat.all

All devices in the devstat list.

kern.devstat.numdevs

Number of devices in the devstat list.

kern.devstat.generation

Devstat list generation.

kern.devstat.version

Devstat list version number.

kern.kobj_methodcount

No explanation provided, as of yet.

kern.log_wakeups_per_second

No explanation provided, as of yet.

kern.log_console_output

No explanation provided, as of yet.

kern.msgbuf

Contents of kernel message buffer.

kern.msgbuf_clear

Clear kernel message buffer.

kern.nselcoll

No explanation provided, as of yet.

kern.drainwait

Output drain timeout in seconds.

kern.ttys

All ttys.

kern.tty_nin

Total TTY in characters.

kern.tty_nout

Total TTY out characters.

kern.console

Console device control.

kern.consmute

No explanation provided, as of yet.

kern.consmgbuf_size

No explanation provided, as of yet.

kern.constty_wakeups_per_second

No explanation provided, as of yet.

kern.rootdev

Root file system device.

kern.filedelay

No explanation provided, as of yet.

kern.dirdelay

No explanation provided, as of yet.

kern.metadelay

No explanation provided, as of yet.

kern.minvnodes

Minimum number of vnodes.

kern.chroot_allow_open_directories

No explanation provided, as of yet.

vm.vmtotal

System virtual memory statistics.

vm.loadavg

Machine loadaverage history.

vm.v_free_min

No explanation provided, as of yet.

vm.v_free_target

No explanation provided, as of yet.

vm.v_free_reserved

No explanation provided, as of yet.

vm.v_inactive_target

No explanation provided, as of yet.

vm.v_cache_min

No explanation provided, as of yet.

vm.v_cache_max

No explanation provided, as of yet.

vm.v_pageout_free_min

No explanation provided, as of yet.

vm.pageout_algorithm

LRU page mgmt.

vm.swap_enabled

Enable entire process swapout.

vm.swap_async_max

Maximum running async swap ops.

vm.dmmax

Maximum size of a swap block.

vm.nswapdev

Number of swap devices.

vm.swap_info

Swap statistics by device.

vm.swap_idle_threshold1

Guaranteed swapped in time for a process.

vm.swap_idle_threshold2

Time before a process will be swapped out.

vm.v_free_severe

No explanation provided, as of yet.

vm.stats.sys.v_swch

Context switches.

vm.stats.sys.v_trap

Traps.

vm.stats.sys.v_syscall

Syscalls.

vm.stats.sys.v_intr

Hardware interrupts.

vm.stats.sys.v_soft

Software interrupts.

vm.stats.vm.v_vm_faults

VM faults.

vm.stats.vm.v_cow_faults

COW faults.

vm.stats.vm.v_cow_optim

Optimized COW faults.

vm.stats.vm.v_zfod

Zero fill.

vm.stats.vm.v_ozfod

Optimized zero fill.

vm.stats.vm.v_swapin

Swapin operations.

vm.stats.vm.v_swapout

Swapout operations.

vm.stats.vm.v_swappgsin

Swapin pages.

vm.stats.vm.v_swappgsout

Swapout pages.

vm.stats.vm.v_vnodein

Vnodein operations.

vm.stats.vm.v_vnodeout

Vnodeout operations.

vm.stats.vm.v_vnodepgsin

Vnodein pages.

vm.stats.vm.v_vnodepgsout

Vnodeout pages.

vm.stats.vm.v_intrans

In transit page blocking.

vm.stats.vm.v_reactivated

Reactivated pages.

vm.stats.vm.v_pdwakeups

Pagedaemon wakeups.

vm.stats.vm.v_pdpages

Pagedaemon page scans.

vm.stats.vm.v_dfree

No explanation provided, as of yet.

vm.stats.vm.v_pfree

No explanation provided, as of yet.

vm.stats.vm.v_tfree

No explanation provided, as of yet.

vm.stats.vm.v_page_size

No explanation provided, as of yet.

vm.stats.vm.v_page_count

No explanation provided, as of yet.

vm.stats.vm.v_free_reserved

No explanation provided, as of yet.

vm.stats.vm.v_free_target

No explanation provided, as of yet.

vm.stats.vm.v_free_min

No explanation provided, as of yet.

vm.stats.vm.v_free_count

No explanation provided, as of yet.

vm.stats.vm.v_wire_count

No explanation provided, as of yet.

vm.stats.vm.v_active_count

No explanation provided, as of yet.

vm.stats.vm.v_inactive_target

No explanation provided, as of yet.

vm.stats.vm.v_inactive_count

No explanation provided, as of yet.

vm.stats.vm.v_cache_count

No explanation provided, as of yet.

vm.stats.vm.v_cache_min

No explanation provided, as of yet.

vm.stats.vm.v_cache_max

No explanation provided, as of yet.

vm.stats.vm.v_pageout_free_min

No explanation provided, as of yet.

vm.stats.vm.v_interrupt_free_min

No explanation provided, as of yet.

vm.stats.vm.v_forks

Number of fork() calls.

vm.stats.vm.v_vforks

Number of vfork() calls.

vm.stats.vm.v_rforks

Number of rfork() calls.

vm.stats.vm.v_kthreads

Number of fork() calls by kernel.

vm.stats.vm.v_forkpages

VM pages affected by fork().

vm.stats.vm.v_vforkpages

VM pages affected by vfork().

vm.stats.vm.v_rforkpages

VM pages affected by rfork().

vm.stats.vm.v_kthreadpages

VM pages affected by fork() by kernel.

vm.stats.misc.zero_page_count

No explanation provided, as of yet.

vm.stats.misc.cnt_prezero

No explanation provided, as of yet.

vm.max_proc_mmap

No explanation provided, as of yet.

vm.msync_flush_flags

No explanation provided, as of yet.

vm.idlezero_enable

No explanation provided, as of yet.

vm.idlezero_maxrun

No explanation provided, as of yet.

vm.max_laundry

Limit dirty flushes in pageout.

vm.pageout_stats_max

Max pageout stats scan length.

vm.pageout_full_stats_interval

Interval for full stats scan.

vm.pageout_stats_interval

Interval for partial stats scan.

vm.pageout_stats_free_max

Not implemented.

vm.swap_idle_enabled

Allow swapout on idle criteria.

vm.defer_swapspace_pageouts

Give preference to dirty pages in mem.

vm.disable_swapspace_pageouts

Disallow swapout of dirty pages.

vm.pageout_lock_miss

vget() lock misses during pageout.

vm.zone

Zone Info.

vm.kvm_size

Size of KVM.

vm.kvm_free

Amount of KVM free.

vfs.nfs.nfsstats

S,nfsstats.

vfs.nfs.realign_test

No explanation provided, as of yet.

vfs.nfs.realign_count

No explanation provided, as of yet.

vfs.nfs.bufpackets

No explanation provided, as of yet.

vfs.nfs.iodmaxidle

No explanation provided, as of yet.

vfs.nfs.iodmin

No explanation provided, as of yet.

vfs.nfs.iodmax

No explanation provided, as of yet.

vfs.nfs.defect

No explanation provided, as of yet.

vfs.nfs.nfs_ip_paranoia

No explanation provided, as of yet.

vfs.nfs.diskless_valid

No explanation provided, as of yet.

vfs.nfs.diskless_rootpath

No explanation provided, as of yet.

vfs.nfs.diskless_rootaddr

No explanation provided, as of yet.

vfs.nfs.access_cache_timeout

NFS ACCESS cache timeout.

vfs.nfs.nfsv3_commit_on_close

write+commit on close, else only write.

vfs.devfs.noverfbw

Size of DEVFS overflow table.

vfs.devfs.generation

DEVFS generation number.

vfs.devfs.inodes

DEVFS inodes.

vfs.devfs.topinode

DEVFS highest inode#.

vfs.pfs.vncache.entries

number of entries in the vnode cache.

vfs.pfs.vncache.maxentries

highest number of entries in the vnode cache.

vfs.pfs.vncache.hits

number of cache hits since initialization.

vfs.pfs.vncache.misses

number of cache misses since initialization.

vfs.vmioidirenable

Use the VM system for directory writes.

vfs.runningbufspace

Amount of presently outstanding async buffer io.

vfs.bufspace

KVA memory used for bufs.

vfs.maxbufspace

Maximum allowed value of bufspace (including buf_daemon).

vfs.bufmalloospace

Amount of malloced memory for buffers.

vfs.maxmallocbufspace

Maximum amount of malloced memory for buffers.

vfs.lobufspace

Minimum amount of buffers we want to have.

vfs.hibufspace

Maximum allowed value of bufspace (excluding buf_daemon).

vfs.bufreusecnt

Number of times we have reused a buffer.

vfs.buffreekvacnt

Number of times we have freed the KVA space from some buffer.

vfs.bufdefragcnt

Number of times we have had to repeat buffer allocation to defragment.

vfs.lorunningspace

Minimum preferred space used for in-progress I/O.

vfs.hirunningspace

Maximum amount of space to use for in-progress I/O.

vfs.dirtybufferflushes

Number of bwrite to bawrite conversions to limit dirty buffers.

vfs.altbufferflushes

Number of fsync flushes to limit dirty buffers.

vfs.recursiveflushes

Number of flushes skipped due to being recursive.

vfs.numdirtybuffers

Number of buffers that are dirty (has unwritten changes) at the moment.

vfs.lodirtybuffers

How many buffers we want to have free before bufdaemon can sleep.

vfs.hidirtybuffers

When the number of dirty buffers is considered severe.

vfs.dirtybufthresh

Number of bwrite to bawrite conversions to clear dirty buffers.

vfs.numfreebuffers

Number of free buffers.

vfs.lofreebuffers

XXX Unused.

vfs.hifreebuffers

XXX Complicatedly unused.

vfs.getnewbufcalls

Number of calls to getnewbuf.

vfs.getnewbufrestarts

Number of times getnewbuf has had to restart a buffer aquisition.

vfs.flushwithdeps

Number of buffers flushed with dependencies that require rollbacks.

vfs.cache.numneg

No explanation provided, as of yet.

vfs.cache.numcache

No explanation provided, as of yet.

vfs.cache.numcalls

No explanation provided, as of yet.

vfs.cache.dothits

No explanation provided, as of yet.

vfs.cache.dotdothits

No explanation provided, as of yet.

vfs.cache.numchecks

No explanation provided, as of yet.

vfs.cache.nummiss

No explanation provided, as of yet.

vfs.cache.nummisszap

No explanation provided, as of yet.

vfs.cache.numposzaps

No explanation provided, as of yet.

vfs.cache.numposhits

No explanation provided, as of yet.

vfs.cache.numnegzaps

No explanation provided, as of yet.

vfs.cache.numneghits

No explanation provided, as of yet.

vfs.cache.nchstats

VFS cache effectiveness statistics.

vfs.cache.numcwardcalls

No explanation provided, as of yet.

vfs.cache.numcwardfail1

No explanation provided, as of yet.

vfs.cache.numcwardfail2

No explanation provided, as of yet.

vfs.cache.numcwardfail3

No explanation provided, as of yet.

vfs.cache.numcwardfail4

No explanation provided, as of yet.

vfs.cache.numcwardfound

No explanation provided, as of yet.

vfs.cache.numfullpathcalls

No explanation provided, as of yet.

vfs.cache.numfullpathfail1

No explanation provided, as of yet.

vfs.cache.numfullpathfail2

No explanation provided, as of yet.

vfs.cache.numfullpathfail3

No explanation provided, as of yet.

vfs.cache.numfullpathfail4

No explanation provided, as of yet.

vfs.cache.numfullpathfound

No explanation provided, as of yet.

vfs.write_behind

Cluster write-behind; 0.

vfs.read_max

Cluster read-ahead max block count.

vfs.opv_numops

Maximum number of operations in vop_t vector.

vfs.usermount

No explanation provided, as of yet.

vfs.numvnodes

No explanation provided, as of yet.

vfs.wantfreenvodes

No explanation provided, as of yet.

vfs.freenvodes

No explanation provided, as of yet.

vfs.reassignbufcalls

No explanation provided, as of yet.

vfs.nameileafonly

No explanation provided, as of yet.

vfs.timestamp_precision

No explanation provided, as of yet.

vfs.confst

List of all configured filesystems.

vfs.nfsrv.nfsrvstats

S,nfsrvstats.

vfs.nfsrv.nfs_privport

No explanation provided, as of yet.

vfs.nfsrv.async

No explanation provided, as of yet.

vfs.nfsrv.commit_blks

No explanation provided, as of yet.

vfs.nfsrv.commit_miss

No explanation provided, as of yet.

vfs.nfsrv.realign_test

No explanation provided, as of yet.

vfs.nfsrv.realign_count

No explanation provided, as of yet.

vfs.nfsrv.gatherdelay

No explanation provided, as of yet.

vfs.nfsrv.gatherdelay_v3

No explanation provided, as of yet.

vfs.ffs.adjrefcnt

Adjust Inode Reference Count.

vfs.ffs.adjblkcnt

Adjust Inode Used Blocks Count.

vfs.ffs.freeblks

Free Range of Blocks.

vfs.ffs.freedirs

Free Range of Directory Inodes.

vfs.ffs.freefiles

Free Range of File Inodes.

vfs.ffs.setflags

Change Filesystem Flags.

vfs.ffs.doasyncfree

No explanation provided, as of yet.

vfs.ffs.doreallocblks

No explanation provided, as of yet.

net.local.stream.sendspace

No explanation provided, as of yet.

net.local.stream.recvspace

No explanation provided, as of yet.

net.local.stream.pcblist

List of active local stream sockets.

net.local.dgram.maxdgram

No explanation provided, as of yet.

net.local.dgram.recvspace

No explanation provided, as of yet.

net.local.dgram.pcblist

List of active local datagram sockets.

net.local.inflight

No explanation provided, as of yet.

net.inet.ip.portrange.lowfirst

No explanation provided, as of yet.

net.inet.ip.portrange.lowlast

No explanation provided, as of yet.

net.inet.ip.portrange.first

No explanation provided, as of yet.

net.inet.ip.portrange.last

No explanation provided, as of yet.

net.inet.ip.portrange.hifirst

No explanation provided, as of yet.

net.inet.ip.portrange.hilast

No explanation provided, as of yet.

net.inet.ip.portrange.reservedhigh

No explanation provided, as of yet.

net.inet.ip.portrange.reservedlow

No explanation provided, as of yet.

net.inet.ip.forwarding

Enable IP forwarding between interfaces.

net.inet.ip.redirect

Enable sending IP redirects.

net.inet.ip.ttl

Maximum TTL on IP packets.

net.inet.ip.rtexpire

Default expiration time on dynamically learned routes.

net.inet.ip.rtminexpire

Minimum time to attempt to hold onto dynamically learned routes.

net.inet.ip.rtmmaxcache

Upper limit on dynamically learned routes.

net.inet.ip.sourceroute

Enable forwarding source routed IP packets.

net.inet.ip.intr_queue_maxlen

Maximum size of the IP input queue.

net.inet.ip.intr_queue_drops

Number of packets dropped from the IP input queue.

net.inet.ip.stats

IP statistics (struct ipstat, netinet/ip_var.h).

net.inet.ip.accept_sourceroute

Enable accepting source routed IP packets.

net.inet.ip.fastforwarding

Enable fbw-based IP forwarding.

net.inet.ip.keepfaith

Enable packet capture for FAITH IPv4->IPv6 translator daemon.

net.inet.ip.gifttl

No explanation provided, as of yet.

net.inet.ip.subnets_are_local

No explanation provided, as of yet.

net.inet.ip.maxfragpackets

Maximum number of IPv4 fragment reassembly queue entries.

net.inet.ip.maxfragsperpacket

Maximum number of IPv4 fragments allowed per packet.

net.inet.ip.sendsourcequench

Enable the transmission of source quench packets.

net.inet.ip.check_interface

Verify packet arrives on correct interface.

net.inet.icmp.maskrepl

Reply to ICMP Address Mask Request packets..

net.inet.icmp.stats

No explanation provided, as of yet.

net.inet.icmp.icmplim

No explanation provided, as of yet.

net.inet.icmp.maskfake

Fake reply to ICMP Address Mask Request packets..

net.inet.icmp.drop_redirect

No explanation provided, as of yet.

net.inet.icmp.log_redirect

No explanation provided, as of yet.

net.inet.icmp.icmplim_output

No explanation provided, as of yet.

net.inet.icmp.bmcastecho

No explanation provided, as of yet.

net.inet.igmp.stats

No explanation provided, as of yet.

net.inet.tcp.rfc1323

Enable rfc1323 (high performance TCP) extensions.

net.inet.tcp.rfc1644

Enable rfc1644 (TTCP) extensions.

net.inet.tcp.mssdft

Default TCP Maximum Segment Size.

net.inet.tcp.stats

TCP statistics (struct tcpstat, netinet/tcp_var.h).

net.inet.tcp.keepidle

No explanation provided, as of yet.

net.inet.tcp.keepintvl

No explanation provided, as of yet.

net.inet.tcp.sendspace

Maximum outgoing TCP datagram size.

net.inet.tcp.recvspace

Maximum incoming TCP datagram size.

net.inet.tcp.keepinit

No explanation provided, as of yet.

net.inet.tcp.pcblist

List of active TCP connections.

net.inet.tcp.delacktime

Time before a delayed ACK is sent.

net.inet.tcp.v6mssdf

Default TCP Maximum Segment Size for IPv6.

net.inet.tcp.log_in_vain

Log all incoming TCP connections.

net.inet.tcp.blackhole

Do not send RST when dropping refused connections.

net.inet.tcp.delayed_ack

Delay ACK to try and piggyback it onto a data packet.

net.inet.tcp.rfc3042

Enable RFC 3042 (Limited Transmit).

net.inet.tcp.rfc3390

Enable RFC 3390 (Increasing TCP's Initial Congestion Window).

net.inet.tcp.path_mtu_discovery

Enable Path MTU Discovery.

net.inet.tcp.slowstart_flightsize

Slow start flight size.

net.inet.tcp.local_slowstart_flightsize

Slow start flight size for local networks.

net.inet.tcp.newreno

Enable NewReno Algorithms.

net.inet.tcp.tcbhashsize

Size of TCP control-block hashtable.

net.inet.tcp.do_tcpdrain

Enable tcp_drain routine for extra help when low on mbufs.

net.inet.tcp.pcbcount

Number of active PCBs.

net.inet.tcp.icmp_may_rst

Certain ICMP unreachable messages may abort connections in SYN_SENT.

net.inet.tcp.isn_reseed_interval

Seconds between reseeding of ISN secret.

net.inet.tcp.inflight_enable

Enable automatic TCP inflight data limiting.

net.inet.tcp.inflight_debug

Debug TCP inflight calculations.

net.inet.tcp.inflight_min

Lower-bound for TCP inflight window.

net.inet.tcp.inflight_max

Upper-bound for TCP inflight window.

net.inet.tcp.inflight_stab

Inflight Algorithm Stabilization $20 = 2$ packets.

net.inet.tcp.getcred

Get the xucred of a TCP connection.

net.inet.tcp.synccookies

Use TCP SYN cookies if the syncache overflows.

net.inet.tcp.syncache.bucketlimit

Per-bucket hash limit for syncache.

net.inet.tcp.syncache.cachelimit

Overall entry limit for syncache.

net.inet.tcp.syncache.count

Current number of entries in syncache.

net.inet.tcp.syncache.hashsize

Size of TCP syncache hashtable.

net.inet.tcp.syncache.rexmtlimit

Limit on SYN/ACK retransmissions.

net.inet.tcp.msl

Maximum segment lifetime.

net.inet.tcp.rexmit_min

Minimum Retransmission Timeout.

net.inet.tcp.rexmit_slop

Retransmission Timer Slop.

net.inet.tcp.always_keepalive

Assume SO_KEEPALIVE on all TCP connections.

net.inet.udp.checksum

No explanation provided, as of yet.

net.inet.udp.stats

UDP statistics (struct udpstat, netinet/udp_var.h).

net.inet.udp.maxdgram

Maximum outgoing UDP datagram size.

net.inet.udp.recvspace

Maximum incoming UDP datagram size.

net.inet.udp.pcblist

List of active UDP sockets.

net.inet.udp.log_in_vain

Log all incoming UDP packets.

net.inet.udp.blackhole

Do not send port unreachables for refused connects.

net.inet.udp.getcred

Get the xucred of a UDP connection.

net.inet.raw.maxdgram

Maximum outgoing raw IP datagram size.

net.inet.raw.recvspace

Maximum incoming raw IP datagram size.

net.inet.raw.pcblist

List of active raw IP sockets.

net.inet.accf.unloadable

Allow unload of accept filters (not recommended).

net.routetable

No explanation provided, as of yet.

net.link.generic.system.ifcount

Number of configured interfaces.

net.link.generic.ifdata

Interface table.

net.link.ether.inet.prune_intvl

No explanation provided, as of yet.

net.link.ether.inet.max_age

No explanation provided, as of yet.

net.link.ether.inet.host_down_time

No explanation provided, as of yet.

net.link.ether.inet.maxtries

No explanation provided, as of yet.

net.link.ether.inet.useloopback

No explanation provided, as of yet.

net.link.ether.inet.proxyall

No explanation provided, as of yet.

net.link.ether.inet.log_arp_wrong_iface

log arp packets arriving on the wrong interface.

net.link.ether.inet.log_arp_movements

log arp replies from MACs different than the one in the cache.

net.link.ether.ipfw

Pass ether pkts through fi rewall.

net.link.gif.max_nesting

Max nested tunnels.

net.link.gif.parallel_tunnels

Allow parallel tunnels?.

net.inet6.tcp6.getcred

Get the xucred of a TCP6 connection.

net.inet6.udp6.getcred

Get the xucred of a UDP6 connection.

net.inet6.ip6.forwarding

No explanation provided, as of yet.

net.inet6.ip6.redirect

No explanation provided, as of yet.

net.inet6.ip6.hlim

No explanation provided, as of yet.

net.inet6.ip6.stats

No explanation provided, as of yet.

net.inet6.ip6.maxfragpackets

No explanation provided, as of yet.

net.inet6.ip6.accept_rtadv

No explanation provided, as of yet.

net.inet6.ip6.keepfaith

No explanation provided, as of yet.

net.inet6.ip6.log_interval

No explanation provided, as of yet.

net.inet6.ip6.hdrnestlimit

No explanation provided, as of yet.

net.inet6.ip6.dad_count

No explanation provided, as of yet.

net.inet6.ip6.auto_fblabel

No explanation provided, as of yet.

net.inet6.ip6.defmcasthlim

No explanation provided, as of yet.

net.inet6.ip6.gifhlim

No explanation provided, as of yet.

net.inet6.ip6.kame_version

No explanation provided, as of yet.

net.inet6.ip6.use_deprecated

No explanation provided, as of yet.

net.inet6.ip6.rr_prune

No explanation provided, as of yet.

net.inet6.ip6.v6only

No explanation provided, as of yet.

net.inet6.ip6.rtxpire

No explanation provided, as of yet.

net.inet6.ip6.rtminexpire

No explanation provided, as of yet.

net.inet6.ip6.rtmaxcache

No explanation provided, as of yet.

net.inet6.ip6.use_tempaddr

No explanation provided, as of yet.

net.inet6.ip6.temppltime

No explanation provided, as of yet.

net.inet6.ip6.tempvtime

No explanation provided, as of yet.

net.inet6.ip6.auto_linklocal

No explanation provided, as of yet.

net.inet6.ip6.rip6stats

No explanation provided, as of yet.

net.inet6.ip6.addrtcpolicy

No explanation provided, as of yet.

net.inet6.ip6.maxfrags

No explanation provided, as of yet.

net.inet6.icmp6.stats

No explanation provided, as of yet.

net.inet6.icmp6.rediraccept

No explanation provided, as of yet.

net.inet6.icmp6.redirtimeout

No explanation provided, as of yet.

net.inet6.icmp6.nd6_prune

No explanation provided, as of yet.

net.inet6.icmp6.nd6_delay

No explanation provided, as of yet.

net.inet6.icmp6.nd6_umaxtries

No explanation provided, as of yet.

net.inet6.icmp6.nd6_mmaxtries

No explanation provided, as of yet.

net.inet6.icmp6.nd6_useloopback

No explanation provided, as of yet.

net.inet6.icmp6.nodeinfo

No explanation provided, as of yet.

net.inet6.icmp6.errppslimit

No explanation provided, as of yet.

net.inet6.icmp6.nd6_maxnudhint

No explanation provided, as of yet.

net.inet6.icmp6.nd6_debug

No explanation provided, as of yet.

net.inet6.icmp6.nd6_drlist

No explanation provided, as of yet.

net.inet6.icmp6.nd6_prlist

No explanation provided, as of yet.

net.isr.enable

enable direct dispatch.

net.isr.count

No explanation provided, as of yet.

net.isr.directed

No explanation provided, as of yet.

net.isr.deferred

No explanation provided, as of yet.

net.isr.queued

No explanation provided, as of yet.

net.isr.swi_count

No explanation provided, as of yet.

debug.enter_debugger

Set to 'ddb' or 'gdb' to enter the kernel debugger.

debug.acpi.acpi_ca_version

Version of Intel ACPI-CA.

debug.acpi.semaphore_debug

Enable ACPI semaphore debug messages.

debug.doslowdown

No explanation provided, as of yet.

debug.elf32_trace

No explanation provided, as of yet.

debug.elf32_legacy_coredump

No explanation provided, as of yet.

debug.boothowto

No explanation provided, as of yet.

debug.bootverbose

No explanation provided, as of yet.

debug.free_devt

No explanation provided, as of yet.

debug.fdexpand

No explanation provided, as of yet.

debug.sizeof.g_class

No explanation provided, as of yet.

debug.sizeof.g_geom

No explanation provided, as of yet.

debug.sizeof.g_provider

No explanation provided, as of yet.

debug.sizeof.g_consumer

No explanation provided, as of yet.

debug.sizeof.g_bioq

No explanation provided, as of yet.

debug.sizeof.vnode

sizeof(struct vnode).

debug.sizeof.proc

sizeof(struct proc).

debug.sizeof.cdev

sizeof(struct cdev).

debug.sizeof.bio

sizeof(struct bio).

debug.sizeof.buf

sizeof(struct buf).

debug.sizeof.kinfo_proc

sizeof(struct kinfo_proc).

debug.sizeof.devstat

sizeof(struct devstat).

debug.debugger_on_panic

Run debugger on kernel panic.

debug.trace_on_panic

Print stack trace on kernel panic.

debug.to_avg_depth

Average number of items examined per softclock call. Units = 1/1000.

debug.to_avg_gcalls

Average number of Giant callouts made per softclock call. Units = 1/1000.

debug.to_avg_mpcalls

Average number of MP callouts made per softclock call. Units = 1/1000.

debug.mpsafenet

Enable/disable MPSAFE network support.

debug.rman_debug

rman debug.

debug.ttydebug

No explanation provided, as of yet.

debug.dobkgrdwrite

Do background writes (honoring the BV_BKGRDWRITE flag)?.

debug.nchash

No explanation provided, as of yet.

debug.ncnegfactor

No explanation provided, as of yet.

debug.numneg

No explanation provided, as of yet.

debug.numcache

No explanation provided, as of yet.

debug.numcachehv

No explanation provided, as of yet.

debug.vfscache

No explanation provided, as of yet.

debug.vnsize

No explanation provided, as of yet.

debug.ncsize

No explanation provided, as of yet.

debug.hashstat.rawnchash

nchash chain lengths.

debug.hashstat.nchash

nchash chain lengths.

debug.hashstat.rawnfsnode

nfsnode chain lengths.

debug.hashstat.nfsnode

nfsnode chain lengths.

debug.disablecwd

Disable the getcwd syscall.

debug.disablefullpath

Disable the vn_fullpath function.

debug.rush_requests

No explanation provided, as of yet.

debug.vnlru_nowhere

Number of times the vnlru process ran without success.

debug.bpf_bufsize

No explanation provided, as of yet.

debug.bpf_maxbufsize

No explanation provided, as of yet.

debug.dopersistence

No explanation provided, as of yet.

debug.snapdebug

No explanation provided, as of yet.

debug.collectsnapstats

No explanation provided, as of yet.

debug.max_softdeps

No explanation provided, as of yet.

debug.tickdelay

No explanation provided, as of yet.

debug.maxindirdeps

No explanation provided, as of yet.

debug.worklist_push

No explanation provided, as of yet.

debug.blk_limit_push

No explanation provided, as of yet.

debug.ino_limit_push

No explanation provided, as of yet.

debug.blk_limit_hit

No explanation provided, as of yet.

debug.ino_limit_hit

No explanation provided, as of yet.

debug.sync_limit_hit

No explanation provided, as of yet.

debug.indir_blk_ptrs

No explanation provided, as of yet.

debug.inode_bitmap

No explanation provided, as of yet.

debug.direct_blk_ptrs

No explanation provided, as of yet.

debug.dir_entry

No explanation provided, as of yet.

debug.bigcgs

No explanation provided, as of yet.

debug.dircheck

No explanation provided, as of yet.

hw.machine

Machine class.

hw.model

Machine model.

hw.ncpu

Number of active CPUs.

hw.byteorder

System byte order.

hw.physmem

No explanation provided, as of yet.

hw.usermem

No explanation provided, as of yet.

hw.pagesize

System memory page size.

hw.fbatingpoint

Floatingpoint instructions executed in hardware.

hw.machine_arch

System architecture.

hw.ata.ata_dma

ATA disk DMA mode control.

hw.ata.wc

ATA disk write caching.

hw.ata.atapi_dma

ATAPI device DMA mode control.

hw.fxp_rnr

fxp rnr events.

hw.fxp_nofbw

fxp fbw control disabled.

hw.pci.enable_io_modes

Enable I/O and memory bits in the config register. Some BIOSes do not.

enable these bits correctly. We'd like to do this all the time, but there are some peripherals that this causes problems with.

hw.pci.allow_unsupported_io_range

Allows the PCI Bridge to pass through an unsupported memory range assigned by the BIOS..

hw.pci irq_override_mask

Mask of allowed irqs to try to route when it has no good clue about.

which irqs it should use.

hw.intrnames

Interrupt Names.

hw.intrent

Interrupt Counts.

hw.availpages

No explanation provided, as of yet.

hw.bus.devctl_disable

devctl disable.

hw.bus.info

bus-related data.

hw.bus.devices

system device tree.

hw.bus.rman

kernel resource manager.

hw.kbd.keymap_restrict_change

restrict ability to change keymap.

hw.syscons.saver.keyonly

screen saver interrupted by input only.

hw.syscons.bell

enable bell.

hw.syscons.sc_no_suspend_vtswitch

Disable VT switch before suspend..

hw.clockrate

CPU instruction clock rate.

hw.instruction_sse

SIMD/MMX2 instructions available in CPU.

hw.acpi.supported_sleep_state

No explanation provided, as of yet.

hw.acpi.power_button_state

No explanation provided, as of yet.

hw.acpi.sleep_button_state

No explanation provided, as of yet.

hw.acpi.lid_switch_state

No explanation provided, as of yet.

hw.acpi.standby_state

No explanation provided, as of yet.

hw.acpi.suspend_state

No explanation provided, as of yet.

hw.acpi.sleep_delay

sleep delay.

hw.acpi.s4bios

S4BIOS mode.

hw.acpi.verbose

verbose mode.

hw.acpi.disable_on_poweroff

ACPI subsystem disable on poweroff.

hw.acpi.reset_video

Call the VESA reset BIOS vector on the resume path.

hw.acpi.cpu.max_speed

maximum CPU speed.

hw.acpi.cpu.current_speed

current CPU speed.

hw.acpi.cpu.performance_speed

No explanation provided, as of yet.

hw.acpi.cpu.economy_speed

No explanation provided, as of yet.

hw.fxp0.int_delay

FXP driver receive interrupt microcode bundling delay.

hw.fxp0.bundle_max

FXP driver receive interrupt microcode bundle size limit.

hw.fxp1.int_delay

FXP driver receive interrupt microcode bundling delay.

hw.fxp1.bundle_max

FXP driver receive interrupt microcode bundle size limit.

machdep.consdev

No explanation provided, as of yet.

machdep.adjkerntz

No explanation provided, as of yet.

machdep.disable_rtc_set

No explanation provided, as of yet.

machdep.bootinfo

No explanation provided, as of yet.

machdep.wall_cmos_clock

No explanation provided, as of yet.

machdep.acpi_timer_freq

No explanation provided, as of yet.

machdep.conrclk

No explanation provided, as of yet.

machdep.gdbspeed

No explanation provided, as of yet.

machdep.conspeed

No explanation provided, as of yet.

machdep.sio

sio timestamps.

machdep.enable_panic_key

No explanation provided, as of yet.

machdep.acpi_root

The physical address of the RSDP.

machdep.disable_mtrrs

Disable i686 MTRRs..

machdep.cpu_idle_hlt

Idle loop HLT enable.

machdep.guessed_bootdev

Maybe the Boot device (not in dev_t format).

machdep.ddb_on_nmi

Go to DDB on NMI.

machdep.panic_on_nmi

Panic on NMI.

machdep.tsc_freq

No explanation provided, as of yet.

machdep.i8254_freq

No explanation provided, as of yet.

user.cs_path

PATH that finds all the standard utilities.

user.bc_base_max

Max ibase/obase values in bc(1).

user.bc_dim_max

Max array size in bc(1).

user.bc_scale_max

Max scale value in bc(1).

user.bc_string_max

Max string length in bc(1).

user.coll_weights_max

Maximum number of weights assigned to an LC_COLLATE locale entry.

user.expr_nest_max

No explanation provided, as of yet.

user.line_max

Max length (bytes) of a text-processing utility's input line.

user.re_dup_max

Maximum number of repeats of a regexp permitted.

user.posix2_version

The version of POSIX 1003.2 with which the system attempts to comply.

user.posix2_c_bind

Whether C development supports the C bindings option.

user.posix2_c_dev

Whether system supports the C development utilities option.

user.posix2_char_term

No explanation provided, as of yet.

user.posix2_fort_dev

Whether system supports FORTRAN development utilities.

user.posix2_fort_run

Whether system supports FORTRAN runtime utilities.

user.posix2_localedef

Whether system supports creation of locales.

user.posix2_sw_dev

Whether system supports software development utilities.

user.posix2_upe

Whether system supports the user portability utilities.

user.stream_max

Min Maximum number of streams a process may have open at one time.

user.tzname_max

Min Maximum number of types supported for timezone names.

p1003_1b.asynchronous_io

No explanation provided, as of yet.

p1003_1b.mapped_files

No explanation provided, as of yet.

p1003_1b.memlock

No explanation provided, as of yet.

p1003_1b.memlock_range

No explanation provided, as of yet.

p1003_1b.memory_protection

No explanation provided, as of yet.

p1003_1b.message_passing

No explanation provided, as of yet.

p1003_1b.prioritized_io

No explanation provided, as of yet.

p1003_1b.priority_scheduling

No explanation provided, as of yet.

p1003_1b.realtime_signals

No explanation provided, as of yet.

p1003_1b.semaphores

No explanation provided, as of yet.

p1003_1b.fsync

No explanation provided, as of yet.

p1003_1b.shared_memory_objects

No explanation provided, as of yet.

p1003_1b.synchronized_io

No explanation provided, as of yet.

p1003_1b.timers

No explanation provided, as of yet.

p1003_1b.aio_listio_max

No explanation provided, as of yet.

p1003_1b.aio_max

No explanation provided, as of yet.

p1003_1b.aio_prio_delta_max

No explanation provided, as of yet.

p1003_1b.delaytimer_max

No explanation provided, as of yet.

p1003_1b.mq_open_max

No explanation provided, as of yet.

p1003_1b.pagesize

No explanation provided, as of yet.

p1003_1b.rtsig_max

No explanation provided, as of yet.

p1003_1b.sem_nsems_max

No explanation provided, as of yet.

p1003_1b.sem_value_max

No explanation provided, as of yet.

p1003_1b.sigqueue_max

No explanation provided, as of yet.

p1003_1b.timer_max

No explanation provided, as of yet.

security.jail.set_hostname_allowed

Processes in jail can set their hostnames.

security.jail.socket_unixiproute_only

Processes in jail are limited to creating UNIX/IPv4/route sockets only.

security.jail.sysvipc_allowed

Processes in jail can use System V IPC primitives.

security.jail.list

List of active jails.

security.bsd.suser_enabled

processes with uid 0 have privilege.

security.bsd.see_other_uids

Unprivileged processes may see subjects/objects with different real uid.

security.bsd.conservative_signals

Unprivileged processes prevented from sending certain signals to processes whose credentials have changed.

security.bsd.unprivileged_proc_debug

Unprivileged processes may use process debugging facilities.

security.bsd.unprivileged_read_msgbuf

Unprivileged processes may read the kernel message buffer.

security.bsd.unprivileged_get_quota

Unprivileged processes may retrieve quotas for other uids and gids.

SEE ALSO

`sysctl(8)`

AUTHORS

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