

Linux Kernel Parameter 3

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```

#                                     (max 65535)
# 128M -> 8192
# 256M -> 13684
# 512M -> 32768
# 1G -> 65536
# 2G -> 131072
fs.file-max = 65535

#          가          received host          backlog

net.core.netdev_max_backlog=2500

#
#          Serving
net.core.rmem_default = 65536
net.core.rmem_max = 8388608

#
#          Serving

#
net.core.wmem_default = 65536
net.core.wmem_max = 8388608

# TCP layer
#
net.ipv4.tcp_rmem = 4096 87380 8388608

# TCP layer
net.ipv4.tcp_wmem = 4096 65536 8388608

# The tcp_mem variable defines how the TCP stack should behave when it comes
to memory usage.
# TCP
#          min pressure max          tcp_wmem tcp_rmem

# IA32 4KB가
#          가
# {min} {pressure} {max}
net.ipv4.tcp_mem = 4096 4096 4096

#
#          7          "TCP: too many of orphaned
sockets"
# "Out of socket memory"          가

```

```

net.ipv4.tcp_orphan_retries = 7

#          RST      TIME_WAIT   가
#
# net.ipv4.tcp_max_tw_buckets

net.ipv4.tcp_rfc1337 = 1

# SPECWeb99          selective
acknowledgements off
# SPECWeb99          1-2hop   가
#          on

#          on
net.ipv4.tcp_sack = 1

# SPECWeb99          timestamps   off
# SPECWeb99          1-2hop   가
#          on          tcp_window_scaling
#          on
net.ipv4.tcp_timestamps = 1

# tcp_sack tcp_timestamps
# , rmem, wmem tcp_rmem, tcp_wmem
# tcp_timestamps on
net.ipv4.tcp_window_scaling = 1

# KEEPALIVE          stale
net.ipv4.tcp_keepalive_time = 1300

#          listen backlog
net.ipv4.tcp_max_syn_backlog = 8192

# FIN_TIMEOUT
net.ipv4.tcp_fin_timeout = 30

#          가
net.ipv4.ip_local_port_range = 16384 65536

# DOS          SYN flooding          On
#
#          tcp_
net.ipv4.tcp_syncookies = 1

# off          IP
net.ipv4.ip_forward = 0

#          high load

```

```

# TIME_WAIT   가           60           가

net.ipv4.tcp_max_tw_buckets = 2000000

# Linux 2.4
#           ssthread

#   10

net.ipv4.route.flush = 1

# 가
# 가
vm.bdflush = 100 1200 128 512 15 5000 500 1884 2

#           ,           ICMP ECHO           . smurf
#
net.ipv4.icmp_echo_ignore_broadcasts = 1

# SRR           . IP source routing
#           . TRUE (router) FALSE (host)
#
net.ipv4.conf.all.accept_source_route = 0

#net.ipv4.conf.all.send_redirects=0
#net.ipv4.conf.all.accept_redirects=0
# DOS           IP Spoofing   Source Route
#           가
#           on
# RFC182           IP spoof           (   2.2           )
#
net.ipv4.conf.eth0.rp_filter = 1
net.ipv4.conf.lo.rp_filter = 1
net.ipv4.conf.default.rp_filter = 1
net.ipv4.conf.all.rp_filter = 1

# Log Spoofed Packets, source Routed Packets, Redirect packetes
# ip
#
net.ipv4.conf.all.log_martians = 1

#
kernel.shmmax=3800000000

#
#   : {           SEM   } {   SEM           } { SEMOP           OP   } {           }
#   : {   SEM           } = {           } x {           SEM   } (DB2
)
kernel.sem=1000 32000 32 512

#
kernel.msgmni = 1024

```

- (,)

```
# vi /etc/sysctl.conf

net.ipv4.tcp_sack = 0
net.ipv4.tcp_rmem = 4096 87380 16194304
net.ipv4.tcp_wmem = 4096 87380 16194304

net.core.rmem_max = 16194304
net.core.wmem_max = 16194304
net.core.rmem_default = 87380
net.core.wmem_default = 87380

net.core.optmem_max = 87380
net.core.netdev_max_backlog = 300000
net.ipv4.tcp_adv_win_scale = 1
```

- offload (,)

```
# ethtool -K eth0 gso off
# ethtool -K eth2 gso off
# ethtool -K eth0 lro off
# ethtool -K eth2 lro off
```

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