

# sar

- [How to use SAR to Monitor System Performance in Red Hat Enterprise Linux - Red Hat Customer Portal](#)

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**sar**?????????- Sar - RedHat/CentOS

?? CPU ??????????????

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- ??? CentOS/RedHat 5+??????????
- ?????????????????????????????????????

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- CPU / IO / System / Nice / Idle percentages
- Network Traffic / Network Errors
- Load Average and Run queue
- Interrupts
- Memory Free / Cached / Buffered / Swapped
- Device usage per Major/Minor number
- And many others

## Sar ????

- SAR writes to log files in /var/log/sa. This directory holds two types of files - sa\#\# files (binary) and sar\#\# files (text).
- The number at the end of the file corresponds to the day of the month that file was recording.
- For example, an sa03 file refers to the 03 day of the month.
- When the sysstat package is installed it places a file into /etc/cron.d/sysstat.
- This sets up two cron jobs.
  1. job to record statistics every 10 minutes.
  2. job to write the binary sa\#\# file to a text sar\#\# file once a day (typically right before midnight).
- Additionally, it places a configuration file in /etc/sysconfig/sysstat.
- ?????????????????????????? /etc/sysconfig/sysstat?  
Note that RHEL 4/5 sysstat does not support keeping more than 1 month of data; however, in RHEL6 if a HISTORY value greater than 28 is declared, SAR log files are

automatically split up into separate directories.

## Sar Cron Jobs?

/etc/cron.d/sysstat

```
# run system activity accounting tool every 10 minutes
*/10 * * * * root /usr/lib/sa/sa1 1 1

# generate a daily summary of process accounting at 23:53
53 23 * * * root /usr/lib/sa/sa2 -A
```

If it is desired for SAR to collect data more frequently, simply change `"*/10"` to a new interval.

For example, if to make SAR to track every 5 minutes, simply change to `"*/5"`.

### “ NOTE:

SAR does not add significant load to a server. It safely can be tuned down to 2 minute intervals without seeing a significant problem. SAR also does not grab individual block data.

RHEL 8/9 ??? crontab ?????? interval???????

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RedHat 5/6/7/8/9

```
yum install sysstat
```

For RHEL 8/9 only

```
systemctl start sysstat-collect.timer
```

## ?? Interval (for RHEL 8/9)

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```
systemctl cat sysstat-collect.timer
export SYSTEMD_EDITOR=/usr/bin/vi
systemctl edit sysstat-collect.timer
```

?????????: /etc/systemd/system/sysstat-collect.timer.d/override.conf ????????

“ NOTE: ??? OnCalendar=<??>????????????????

[Unit]

Description=Run system activity accounting tool every 1 minute

[Timer]

OnCalendar=

OnCalendar=\*:00/1

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systemctl daemon-reload

systemctl restart sysstat-collect.timer

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systemctl cat sysstat-collect.timer

systemctl status sysstat-collect.timer

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???? CPU ??

# □□□□

sar -P ALL

# □□ CPU

sar -u

?????? 13 ??????

sar -n ALL -f /var/log/sa/sa13

???????? 7 ? ?? 10:00 - 14:00 ??????????????????

sar -r -s 10:00:00 -e 14:00:00 -f /var/log/sa/sa07 -o /tmp/mem.txt

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# CPU on the Fly 10 times every 2 seconds

sar -u 2

sar -u 2 10

# Output to the file and read the file

sar -u 2 10 -o cpu.sa >/dev/null 2>&1

sar -f cpu.sa

# Memory

# kbcommit & %commit is the overall memory used including RAM & Swap

sar -r 1

sar -r 1 10

# Swap

sar -S 1

sar -S 1 10

# I/O

sar -b 1

sar -b 1 10

sar -p -d 1

sar -p -d 1 10

# Paging

# - majflts/s shows the major faults per second means number of pages loaded into the memory from disk (swap),

# if its value is higher then we can say that system is running out of RAM.

# - %vmeff indicates the number of pages scanned per second, if it's value is 100 % its is consider OK and

# when it is below 30 % then there is some issue with virtual memory. Zero value indicates that there is no page scanned during that time.

sar -B 1

# Network

sar -n ALL

“ Tips:

- Memory Swaping ???papgin/papgout/majflt ??????????

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RedHat ????????????????

I/O ????: <https://access.redhat.com/labs/rhiou/>

“ ???????? lsblk ?????????????? lsblk.out???????????????? sarXX  
???????????????????? I/O ???????

Memory ????: <https://access.redhat.com/labs/rhma/>

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- [Monitoring Linux system resources using SAR \(System Activity Report\)](#)
- [Sar command usage with examples in Linux](#)
- [The Sysadmin's Toolbox: sar](#)

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