

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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