

NAME

tmpfs – variables that configure tmpfs filesystems mounted during boot

DESCRIPTION

The */etc/default/tmpfs* file contains variable settings in POSIX format:

```
VAR=VAL
```

Only one assignment is allowed per line. Comments (starting with '#') are also allowed.

This file is for the configuration of tmpfs filesystems mounted in early boot, before filesystems from */etc/fstab* are mounted. This currently includes the filesystems */run*, */run/lock*, */run/shm* and */tmp*. */run* is required to be a tmpfs on systems supporting tmpfs mounts. */run/lock* and */run/shm* may be separate tmpfs mounts, useful for enforcing separate size limits. */tmp* is not required to be a tmpfs, and is not mounted as a tmpfs by default.

/run Previously configured using **RAMRUN** in */etc/default/rcS*, */run* is now always mounted as a ram file system (tmpfs). The size of the tmpfs can be controlled using **TMPFS_SIZE** and **RUN_SIZE**. If desired, the defaults may also be overridden with an entry in */etc/fstab*, for example:

```
tmpfs /run tmpfs nodev,nosuid,size=10%,mode=755 0 0
```

The contents of */run* will always be lost on system reboot, and it is no longer explicitly cleaned at boot. Packages can not expect directories in */run* to exist after boot. Packages expecting this are buggy and need to be fixed. Note that */run* was previously */var/run*, and a compatibility symlink or bind mount will be created to allow the old path to continue to function.

/run/lock

Previously configured using **RAMLOCK** in */etc/default/rcS*. Configured using **RAMLOCK**, **TMPFS_SIZE** and **LOCK_SIZE**. If desired, the defaults may also be overridden with an entry in */etc/fstab*, for example:

```
tmpfs /run/lock tmpfs nodev,noexec,nosuid,size=52428800,mode=1777 0
```

Note that irrespective of these settings, */run/lock* will be located on a tmpfs, either one mounted on */run/lock* (if **RAMLOCK=yes**) or one mounted on */run* (if **RAMLOCK=no**), and as a result the contents of */var/lock* will always be lost on system reboot, and it is no longer explicitly cleaned at boot. Packages can not expect directories in */var/lock* to exist after boot. Packages expecting this are buggy and need to be fixed. Note that */run/lock* was previously */var/lock*, and a compatibility symlink or bind mount will be created to allow the old path to continue to function.

/run/shm

Previously configured using **RAMSHM** in */etc/default/rcS*. Note that the setting in */etc/default/rcS*, if present, will still be used, but the setting in */etc/default/tmpfs* will take precedence if enabled. Configured using **RAMSHM**, **TMPFS_SIZE** and **SHM_SIZE**. If desired, the defaults may also be overridden with an entry in */etc/fstab*, for example:

```
tmpfs /run/shm tmpfs nosuid,nodev,size=40%,mode=1777 0 0
```

Packages can not expect directories in */run/shm* to exist after boot. Note that */run/shm* was previously */dev/shm*, and a compatibility symlink or bind mount will be created to allow the old path to continue to function. If an *fstab* entry for */dev/shm* exists instead of */run/shm*, then */dev/shm* will continue to be used; note that this is only needed for users of newer versions of the Oracle database, which contain a buggy check for */dev/shm*.

/tmp Previously configured using **RAMTMP** in */etc/default/rcS*. Note that the setting in */etc/default/rcS*, if present, will still be used, but the setting in */etc/default/tmpfs* will take precedence if enabled. Configured using **RAMTMP**, **TMPFS_SIZE** and **TMP_SIZE**. If desired, the defaults may also be overridden with an entry in */etc/fstab*, for example:

```
tmpfs /tmp tmpfs nodev,nosuid,size=20%,mode=1777 0 0
```

Packages can not expect directories in /tmp to exist after boot.

NOTE: This file is ignored when systemd is used as init system.

OPTIONS

The following variables can be set.

Enabling or disabling tmpfs mounts

The following options enable specific mounts (with the exception of /run) to be enabled or disabled. Note that the addition of an entry to /etc/fstab for any of the following will enable the mount unconditionally, overriding the setting here.

RAMLOCK

Mount /run/lock as a tmpfs (separately from /run). Defaults to **yes**; set to **no** to disable (/run/lock will then be part of the /run tmpfs, if available).

RAMSHM

Mount /run/shm as a tmpfs (separately from /run). Defaults to **yes**; set to **no** to disable (/run/shm will then be part of the /run tmpfs, if available).

RAMTMP

Mount /tmp as a tmpfs. Defaults to **no**; set to **yes** to enable (/tmp will be part of the root filesystem if disabled). /tmp may also be configured to be a separate mount in /etc/fstab, which will override the RAMTMP setting.

Configuring size limits for tmpfs mounts

The following options configure size limits for tmpfs mounts. Note that the addition of an entry to /etc/fstab will override any of the limits specified here.

The following `_SIZE` variables are the maximum size (in bytes) that tmpfs filesystems can use. The size will be rounded down to a multiple of the page size, 4096 bytes. If no size is set, `TMPFS_SIZE` will be used as the default.

More complex mount options may be used by the creation of a suitable entry in /etc/fstab. For example:

```
tmpfs /run tmpfs size=10% 0 0
```

is equivalent to

```
RUN_SIZE=10%
```

and will override the `RUN_SIZE` setting. This will allow additional options such as `nr_blocks` and `nr_inodes` to be used, and also adjustment of the mode, `nodev`, `nosuid`, `noexec` options should any change from the defaults be necessary.

TMPFS_SIZE

Maximum size for all tmpfs filesystems if no specific size is provided. The default is **20%VM** (20% of virtual memory, including swap space). If no value is provided here, the kernel default (50% RAM) will be used. Note that the "%VM" suffix may be used in this and all the `_SIZE` settings below, but may not be used in /etc/fstab (the absolute size is calculated by the init scripts).

RUN_SIZE

Maximum size of /run (was previously /var/run). The default is 10% core memory; the size required varies widely depending upon the demands of the software being run; this heuristic scales /run usage on system size. Samba in particular has been seen to use at least 50MiB in a large heavily used server. Typical usage is hundreds of KiB, maximum is tens of MiB.

LOCK_SIZE

Maximum size of /run/lock (was previously /var/lock). Defaults to 5242880 (5 MiB). Typical usage: tens of KiB; maximum hundreds of KiB. The default of 5 MiB should ensure the limit is never reached.

SHM_SIZE

Maximum size of /run/shm (was previously /dev/shm). No default size; the size required varies widely depending upon the demands of the software being run.

TMP_SIZE

Maximum size of /tmp. No default size.

Emergency overflow /tmp

If the amount of free space on the root filesystem falls below a certain size, a tmpfs will be mounted on /tmp (irrespective of the RAMTMP setting, which this overrides). This is to permit logins when there would otherwise be too little free space for this to be possible.

TMP_OVERFLOW_LIMIT

Mount a tmpfs on /tmp if the amount of free space on the root filesystem is below the specified limit at boot time (default 1024 KiB).

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SEE ALSO

[mount\(8\)](#), [rcS\(5\)](#).