Linux Command: Put Laptop / Netbook In Hibernate / Suspend Mode

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How do I suspend or hibernate from bash shell command line under Linux operating systems? How do I suspend or hibernate my Ubuntu Dell laptop using command line, without using additional software?

You can use the following commands under Linux to suspend or Hibernate Linux system:

1. `systemctl suspend` **Command** – Use systemd to suspend/hibernate from command line on Linux.
2. `pm-suspend` **Command** – During suspend most devices are shutdown, and system state is saved in RAM. The system still requires power in this state. Most modern systems require 3 to 5 seconds to enter and leave suspend, and most laptops can stay in suspend mode for 1 to 3 days before exhausting their battery.
3. `pm-hibernate` **Command** – During hibernate the system is fully powered off, and system state is saved to disk. The system does not require power, and can stay in hibernate mode indefinitely. Most modern systems require 15 to 45 seconds to enter and leave hibernate, and entering and leaving hibernate takes longer when you have more memory.
4. `pm-suspend-hybrid` **Command** – Hybrid-suspend is the process where the system does everything it needs to hibernate, but suspends instead of shutting down. This means that your computer can wake up quicker than for normal hibernation if you do not run out of power, and you can resume even if you run out of power.

The above commands are part of the package called pm-utils. It is a package of power management software under RHEL, Fedora, CentOS, Red Hat Enterprise Linux, Debian, Ubuntu and other Linux distros.

Let us see all commands step-by-step to put Linux laptop in hibernate or suspend mode.

Systemd based method to suspend or hibernate your Linux laptop using command line

Type the following command:
`$ systemctl suspend`
Sample outputs:

```
vivek@dellm6700:~$ lsb_release -a
No LSB modules are available.
Distributor ID: Ubuntu
Description:    Ubuntu 16.04.1 LTS
Release:        16.04
Codename:       xenial
vivek@dellm6700:~$
vivek@dellm6700:~$ uname -mrs
Linux 4.4.0-28-generic x86_64
vivek@dellm6700:~$
vivek@dellm6700:~$ systemctl suspend
==== AUTHENTICATING FOR org.freedesktop.login1.set-wall-message ===
Authentication is required to set a wall message
Authenticating as: vivek,,, (vivek)
Password:
==== AUTHENTICATION COMPLETE ===
==== AUTHENTICATING FOR org.freedesktop.login1.suspend ===
Authentication is required for suspending the system.
Authenticating as: vivek,,, (vivek)
Password:
==== AUTHENTICATION COMPLETE ===
vivek@dellm6700:~$ █
```

Fig.01: systemctl suspend to suspend Ubuntu Linux Laptop

Type the following to hibernate Linux based laptop:
$ systemctl hibernate

Linux Command To Suspend System

To suspend system, enter:
pm-suspend
OR
$ sudo pm-suspend

Linux Command To Hibernate System

To hibernate system, enter:
pm-hibernate
OR
$ sudo pm-hibernate
OR
$ systemctl hibernate

How Do I Put My Computer To Sleep After a Certain Amount Of Time?

You can use the at command as follows to put laptop to sleep after 30 minutes of time:

```
echo 'pm-suspend' | at now + 30
minutes
```

OR

```
echo 'systemctl suspend' | at now + 30
minutes
```

How Do I Add Hooks (or so called scripts) When My System Is Suspended?

You can place your scripts in following directory. They are executed at suspend and resume:

- **/etc/pm/sleep.d** – Almost all distro including Debian looks here first to run script.
- **/usr/lib/pm-utils/sleep.d** – Default Debian location.

In short, if you need to run custom commands when suspending/resuming, you should place your custom scripts to /etc/pm/sleep.d/ directory only.

Sample Shell Script

```sh
#!/bin/sh
# If we are running NetworkManager, tell it we are going to sleep.
# TODO: Make NetworkManager smarter about how to handle
sleep/resume
#       If we are asleep for less time than it takes for TCP to reset a
#       connection, and we are assigned the same IP on resume, we
should
#       not break established connections.  Apple can do this, and it is
#       rather nifty.

. "${PM_FUNCTIONS}"

suspend_nm()
{
 # Tell NetworkManager to shut down networking
 dbus_send --print-reply --system                    \
  --dest=org.freedesktop.NetworkManager  \
  /org/freedesktop/NetworkManager        \
  org.freedesktop.NetworkManager.sleep 2>&1 > /dev/null
}

resume_nm()
{
 # Wake up NetworkManager and make it do a new connection
 dbus_send --print-reply --system                    \
  --dest=org.freedesktop.NetworkManager \
  /org/freedesktop/NetworkManager       \
  org.freedesktop.NetworkManager.wake 2>&1 > /dev/null
}

case "$1" in
 hibernate|suspend)
  suspend_nm
  ;;
 thaw|resume)
  resume_nm
  ;;
 *) exit $NA
  ;;
 esac
```

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