

How to Make a Tool Like Molly-Guard Using a Bash Script?

written by sysadmin | 5 April 2025

[The previous article](#) explained how the Molly-Guard tool can protect Linux servers from accidental reboot or shutdown commands. Unfortunately, this tool is only available on Debian/Ubuntu distros and their derivatives, while sysadmins generally have many Linux servers from various distros.

Problem

How to make a tool like Molly-Guard using a bash script?

Solution

To create a tool like Molly-Guard, you can use a bash script, and this script has been tested on Ubuntu Server 24.04, RockyLinux9, and OpenSUSE 15 distros. And this script should be applied throughout the Linux distro to replace the Molly Guard tool. Here are the steps:

1. Check the paths

First, check where the **reboot**, **shutdown**, **poweroff**, and **halt** commands are located on the Linux server by running the command below:

```
whereis -b reboot
whereis -b shutdown
whereis -b poweroff
whereis -b halt
```

```
[root@RockyLinux9 ~]# whereis -b reboot
reboot: /usr/sbin/reboot
[root@RockyLinux9 ~]#
[root@RockyLinux9 ~]# whereis -b shutdown
shutdown: /usr/sbin/shutdown
[root@RockyLinux9 ~]#
[root@RockyLinux9 ~]# whereis -b poweroff
poweroff: /usr/sbin/poweroff
[root@RockyLinux9 ~]#
[root@RockyLinux9 ~]# whereis -b halt
halt: /usr/sbin/halt
[root@RockyLinux9 ~]#
```

Check the paths in RockyLinux

As far as I know, Linux distributions such as RockyLinux and Ubuntu only provide one binary file for each command for the reboot, shutdown, poweroff, or halt command, usually in the folder **/usr/sbin**. However, on certain distros, for example, the OpenSUSE distro, when you run the command above, the result will be as shown in the image below:

```
OpenSUSE15:~ # whereis -b reboot
reboot: /usr/sbin/reboot /sbin/reboot
OpenSUSE15:~ #
OpenSUSE15:~ # whereis -b shutdown
shutdown: /usr/sbin/shutdown /sbin/shutdown
OpenSUSE15:~ #
OpenSUSE15:~ # whereis -b poweroff
poweroff: /usr/sbin/poweroff /sbin/poweroff
OpenSUSE15:~ #
OpenSUSE15:~ # whereis -b halt
halt: /usr/sbin/halt /sbin/halt
OpenSUSE15:~ #
```

Check the paths in OpenSUSE

From the image above, you can see that 2 files represent each of these commands. Because this article uses the commands in the **/usr/sbin** folder, you can rename the commands in the **/sbin** folder using the commands below:

```
mv /sbin/reboot /sbin/reboot_backup
```

```
mv /sbin/shutdown /sbin/shutdown_backup
mv /sbin/poweroff /sbin/poweroff_backup
mv /sbin/halt /sbin/halt_backup
```

```
OpenSUSE15:~ # mv /sbin/reboot /sbin/reboot_backup
OpenSUSE15:~ # mv /sbin/shutdown /sbin/shutdown_backup
OpenSUSE15:~ # mv /sbin/poweroff /sbin/poweroff_backup
OpenSUSE15:~ # mv /sbin/halt /sbin/halt_backup
```



Rename the file

2. Create a bash script

Copy the bash script below into the `/usr/local/bin/` folder and give it a **molly-guard-costume.sh** name:

```
#!/usr/bin/env bash
```

```
# molly-guard-costume.sh: Prevent accidental reboot or shutdown like molly-guard tool
```

```
#####
#####
```

```
# The functions
```

```
check_hostname_reboot() {
```

```
# Compare the user input with the actual hostname
```

```
if [ "$USER_INPUT" == "$ACTUAL_HOSTNAME" ]; then
```

```
    echo "Hostname confirmed."
```

```
    echo
```

```
    sleep 1
```

```
    echo "Proceeding with the command..."
```

```
    echo
```

```
    sleep 1
```

```
    echo "The system will reboot now!"
```

```
    echo
```

```
    sleep 1
```

```
    /usr/sbin/reboot_server
```

```
else
```

```
    echo "Hostname mismatch. Aborting the reboot operation."
```

```
    exit 1
```

```
fi
```

```
}
```

```
check_hostname_halt() {
```

```
# Compare the user input with the actual hostname
```

```
if [ "$USER_INPUT" == "$ACTUAL_HOSTNAME" ]; then
```

```
    echo "Hostname confirmed."
```

```
    echo
```

```

        sleep 1
        echo "Proceeding with the command..."
        echo
        sleep 1
        /usr/sbin/halt_server
else
    echo "Hostname mismatch. Aborting the halt operation."
    exit 1
fi
}

check_hostname_poweroff() {
# Compare the user input with the actual hostname
if [ "$USER_INPUT" == "$ACTUAL_HOSTNAME" ]; then
    echo "Hostname confirmed."
    echo
    sleep 1
    echo "Proceeding with the command..."
    echo
    sleep 1
    echo "The system will reboot now!"
    echo
    sleep 1
    /usr/sbin/poweroff_server
else
    echo "Hostname mismatch. Aborting the poweroff operation."
    exit 1
fi
}

check_hostname_shutdown() {
# Compare the user input with the actual hostname
if [ "$USER_INPUT" == "$ACTUAL_HOSTNAME" ]; then
    echo "Hostname confirmed."
    echo
    sleep 1
    echo "Proceeding with the command..."
    echo
    sleep 1
    echo "The system will reboot now!"
    echo
    sleep 1
    /usr/sbin/shutdown_server
else
    echo "Hostname mismatch. Aborting the shutdown operation."
    exit 1
fi
}

```

```

#####
#####

```

```

# Get the actual system hostname
ACTUAL_HOSTNAME=$(hostname)

# Ask the user to input the hostname
echo "Please confirm the hostname to proceed it."
read -p "Enter the hostname: " USER_INPUT

# Check the command
ps aux | grep reboot > /tmp/reboot.txt
ps aux | grep halt > /tmp/halt.txt
ps aux | grep poweroff > /tmp/poweroff.txt
ps aux | grep shutdown > /tmp/shutdown.txt

reboot_size=`ls -al /tmp/reboot.txt | awk '{print $5}'`
halt_size=`ls -al /tmp/halt.txt | awk '{print $5}'`
poweroff_size=`ls -al /tmp/poweroff.txt | awk '{print $5}'`
shutdown_size=`ls -al /tmp/shutdown.txt | awk '{print $5}'`

# Compare the command

if [ $reboot_size -gt 90 ];
then
    rm -f /tmp/reboot.txt /tmp/halt.txt /tmp/poweroff.txt
/tmp/shutdown.txt
    check_hostname_reboot
elif [ $shutdown_size -gt 90 ];
then
    rm -f /tmp/reboot.txt /tmp/halt.txt /tmp/poweroff.txt
/tmp/shutdown.txt
    check_hostname_shutdown
elif [ $poweroff_size -gt 90 ];
then
    rm -f /tmp/reboot.txt /tmp/halt.txt /tmp/poweroff.txt
/tmp/shutdown.txt
    check_hostname_poweroff
elif [ $halt_size -gt 90 ];
then
    rm -f /tmp/reboot.txt /tmp/halt.txt /tmp/poweroff.txt
/tmp/shutdown.txt
    check_hostname_halt
fi

```

Then run the command below so that it can be run:

```
chmod +x /usr/local/bin/molly-guard-costume.sh
```

3. Copy the commands

Use the commands below to copy the commands :

```
file_path=$(whereis -b "reboot" | cut -d ' ' -f 2);sudo cp $file_path  
${file_path}_server > /dev/null 2>&1  
file_path=$(whereis -b "shutdown" | cut -d ' ' -f 2);sudo cp $file_path  
${file_path}_server > /dev/null 2>&1  
file_path=$(whereis -b "poweroff" | cut -d ' ' -f 2);sudo cp $file_path  
${file_path}_server > /dev/null 2>&1  
file_path=$(whereis -b "halt" | cut -d ' ' -f 2);sudo cp $file_path  
${file_path}_server > /dev/null 2>&1
```

```
[root@RockyLinux9 ~]# file_path=$(whereis -b "reboot" | cut -d ' ' -f 2);cp $file_path ${file_path}_server > /dev/null 2>&1  
[root@RockyLinux9 ~]# file_path=$(whereis -b "shutdown" | cut -d ' ' -f 2);cp $file_path ${file_path}_server > /dev/null 2>&1  
[root@RockyLinux9 ~]# file_path=$(whereis -b "poweroff" | cut -d ' ' -f 2);cp $file_path ${file_path}_server > /dev/null 2>&1  
[root@RockyLinux9 ~]# file_path=$(whereis -b "halt" | cut -d ' ' -f 2);cp $file_path ${file_path}_server > /dev/null 2>&1
```

Copy the commands

To see the result, type the command below:

```
ls -al /usr/sbin/ | grep server
```

```
[root@RockyLinux9 ~]# ls -al /usr/sbin/ | grep server  
-rwxr-xr-x. 1 root root 305752 Mar 19 05:46 halt_server  
-rwxr-xr-x. 1 root root 305752 Mar 19 05:46 poweroff_server  
-rwxr-xr-x. 1 root root 305752 Mar 19 05:46 reboot_server  
-rwxr-xr-x. 1 root root 305752 Mar 19 05:46 shutdown_server  
[root@RockyLinux9 ~]#
```

Link the script to the command

4. Link the script to the commands

Then, link the bash script to the commands by running the command below:

```
ln -sf /usr/local/bin/molly-guard-costume.sh /usr/sbin/reboot  
ln -sf /usr/local/bin/molly-guard-costume.sh /usr/sbin/shutdown  
ln -sf /usr/local/bin/molly-guard-costume.sh /usr/sbin/poweroff  
ln -sf /usr/local/bin/molly-guard-costume.sh /usr/sbin/halt
```

```
[root@RockyLinux9 ~]# ln -sf /usr/local/bin/molly-guard-costume.sh /usr/sbin/reboot  
[root@RockyLinux9 ~]# ln -sf /usr/local/bin/molly-guard-costume.sh /usr/sbin/shutdown  
[root@RockyLinux9 ~]# ln -sf /usr/local/bin/molly-guard-costume.sh /usr/sbin/poweroff  
[root@RockyLinux9 ~]# ln -sf /usr/local/bin/molly-guard-costume.sh /usr/sbin/halt
```

The result of copying the command

To see the results, type the command below:

```
ls -al /usr/sbin/ | grep molly
```

```
[root@RockyLinux9 ~]# ls -al /usr/sbin/ | grep molly
lrwxrwxrwx. 1 root root 37 Mar 19 05:49 halt -> /usr/local/bin/molly-guard-costume.sh
lrwxrwxrwx. 1 root root 37 Mar 19 05:49 poweroff -> /usr/local/bin/molly-guard-costume.sh
lrwxrwxrwx. 1 root root 37 Mar 19 05:49 reboot -> /usr/local/bin/molly-guard-costume.sh
lrwxrwxrwx. 1 root root 37 Mar 19 05:49 shutdown -> /usr/local/bin/molly-guard-costume.sh
[root@RockyLinux9 ~]#
```

The result of linking the script to the commands

5. Test the result

Now, try to do the reboot command and write the wrong hostname, and your Linux server shouldn't reboot. However, try to write the correct hostname, then your Linux server should be rebooted, like in the image below:

```
[root@RockyLinux9 ~]# reboot
Please confirm the hostname to proceed it.
Enter the hostname: RockyLinux8 Type the wrong hostname
Hostname mismatch. Aborting the reboot operation.
[root@RockyLinux9 ~]#
[root@RockyLinux9 ~]# reboot
Please confirm the hostname to proceed it.
Enter the hostname: RockyLinux9 Type the right hostname
Hostname confirmed.

Proceeding with the command...

The system will reboot now!

[root@RockyLinux9 ~]#
```

Test the results

You should get the same results when running other commands such as poweroff, shutdown, and halt.

Note

Unlike the Molly-Guard tool, this script will continue to

work even though you run the reboot or shutdown command without an SSH connection or directly connect the keyboard to the Linux server.

References

unix.bris.ac.uk
stackoverflow.com
geeksforgeeks.org