

# Identify and Remove Zombie Processes on Ubuntu Server

## Scenario:

The provided script will introduce a scenario that might generate zombie processes on the system. You will then need to identify and remove these processes to maintain system health.

## Solution :-

### Step 1 :- Start the Ubuntu VM and Login

- Start Ubuntu Vm and Login with root user.

### Step 2 :- Download Script and Check

- Download below script for setup of scenario of Zombie Process.  
<https://raw.githubusercontent.com/INTERNSHIPTASKS/Basic-Linux/main/Task2>
- Command :-  
"wget <https://raw.githubusercontent.com/INTERNSHIPTASKS/Basic-Linux/main/Task2>"
- Execute **ls** command to check whether a file is downloaded or not.

```
root@ubuntu:~# wget https://raw.githubusercontent.com/INTERNSHIPTASKS/Basic-Linux/main/Task2
--2024-06-25 07:11:31-- https://raw.githubusercontent.com/INTERNSHIPTASKS/Basic-Linux/main/Task2
Resolving raw.githubusercontent.com (raw.githubusercontent.com)... 2606:50c0:8002::154, 2606:50c0:8001::154, 2606:50c0:8000::154, ...
Connecting to raw.githubusercontent.com (raw.githubusercontent.com)|2606:50c0:8002::154|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 1085 (1.1K) [text/plain]
Saving to: 'Task2'

Task2
      100%[=====] 1.06K --.-KB/s  in 0s

2024-06-25 07:11:31 (10.9 MB/s) - 'Task2' saved [1085/1085]

root@ubuntu:~# ls
'!' docfile Dockerfile hello.py helloworld.c index.html one.py ping.sh snap Task2
root@ubuntu:~#
```

### Step 3 :- Execute[x] permission to Task2

- Check Task2 permission with command **ls -l Task2** .

```
root@ubuntu:~# ls -l Task2
-rw-r--r-- 1 root root 1085 Jun 25 07:11 Task2
```

- Give Execute[x] permission if not present.

```
root@ubuntu:~# chmod +x Task2
root@ubuntu:~# ls -l Task2
-rwxr-xr-x 1 root root 1085 Jun 25 07:11 Task2
```

### Step 4 :- Run the script

- Run the script use **./Task2** command.

```
root@ubuntu:~# ./Task2
/root
root@ubuntu:~#
```

## Step 5 :- Check the Zombie Process

- Execute **ps aux | grep 'Z'** command to check zombie process.
- Filtering for entries with "Z" in the STAT column (zombie state) or "defunct" in the last column.

```
root@ubuntu:~# ps aux | grep 'Z'
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root      1557  0.0  0.0      0     0 tty1    Z   07:24   0:00 [mytest] <defunct>
root      1568  0.0  0.0   6432   720 tty1    S+  07:28   0:00 grep --color=auto Z
root@ubuntu:~#
```

## Step 6 :- Kill the parent process

- We cannot directly kill zombie processes as they are already dead.
- So we need to kill their parent process.
- Verify the parent id of that process and kill the process with PID.

```
root@ubuntu:~# ps aux | grep 'Z'
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root      1557  0.0  0.0      0     0 tty1    Z   07:24   0:00 [mytest] <defunct>
root      1568  0.0  0.0   6432   720 tty1    S+  07:28   0:00 grep --color=auto Z
root@ubuntu:~#
```

- Execute **kill 1557** command to kill the parent process.

```
root@ubuntu:~#
root@ubuntu:~#
root@ubuntu:~# kill 1557
root@ubuntu:~#
```

## Step 7 :- Check whether process get killed or not

- Execute **ps aux | grep 'Z'** command to recheck whether process get killed or not.

```
root@ubuntu:~# ps aux | grep 'Z'
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root      1601  0.0  0.0   6432   720 tty1    S+  07:34   0:00 grep --color=auto Z
root@ubuntu:~#
```

**Congratulations you have successfully killed the zombie process!...**

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