Problem statement -

Create a bash script that monitors system resources (CPU, Memory, Disk I/O, Network) and sends alerts when thresholds are crossed. The script will also gather logs and system status for diagnostics.

System Deployment:

Set up a Linux server with a LAMP (Linux, Apache, MySQL, PHP) stack in AWS

- Ensure that the server is secured (using firewalls and implementing security best practice).
- (deploy previous bash script on LAMP stack) and alert if any metric goes above a threshold
- Configure a static IP on your Linux box, then revert it to DHCP. Analyze the behavior.

Introduction

The script is providing system monitoring information on the linux system. The script can be useful for quickly assessing the health and status of the linux system. It checks the following system matrices:

1. CPU usage
2. Memory usage
3. Disk usage of root directory
4. Network connectivity

Overview of script

The script is structured as follow:

1. It defines four functions: **cpu_usage, memory_usage, disk_usage** and **network_check.**
2. Each function retrieves and displays specific system information related to CPU usage, memory usage, disk usage and network connectivity.

Functions

cpu_usage - This function uses the **top** command to display the CPU usage information. It extracts the CPU usage percentage and prints it to the console.

memory_usage - This function uses the **free** command to display memory usage information. It extracts used memory and prints it to the console.

disk_usage - This function uses the **df** command to display s disk usage information for the root directory.

network_check - This function checks network connectivity by pinging a website (google.com) and reports whether the connectivity is successful or failed.

Running the script

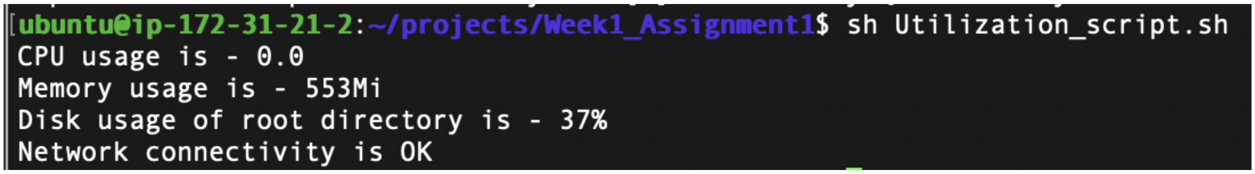
To run the script, follow these steps:

1. Open a terminal window.
2. Navigate to the directory where the script is located using **cd** command
3. Execute the script by running following command:

```
sh script_name.sh OR ./script_name.sh
```

Sample output

Here is an example of how script can be run and what the output might look like:



```
[ubuntu@ip-172-31-21-2:~/projects/Week1_Assignment1$ sh Utilization_script.sh
CPU usage is - 0.0
Memory usage is - 553Mi
Disk usage of root directory is - 37%
Network connectivity is OK
```