

```
#!/bin/bash
```

```
# Function to collect and log system metrics
```

```
collect_metrics() {
```

```
    # Collect CPU usage
```

```
    cpu_usage=$(top -bn1 | grep "Cpu(s)" | awk '{print $2}' | awk -F. '{print $1}')
```

```
    # Collect memory usage
```

```
    memory_usage=$(free | grep Mem | awk '{print $3/$2 * 100.0}' | awk -F. '{print $1}')
```

```
    # Collect disk I/O usage
```

```
    disk_io=$(iostat -d -x | grep 'sda' | awk '{print $12}')
```

```
    # Collect network usage
```

```
    network_usage=$(ifstat | grep -m 1 'Total' | awk '{print $8}')
```

```
    # Define thresholds
```

```
    cpu_threshold=90
```

```
    memory_threshold=90
```

```
    disk_io_threshold=50
```

```
    network_threshold=1024 # 1 MBps
```

```
    # Check and log resource usage
```

```
    if [ "$cpu_usage" -ge "$cpu_threshold" ] || [ "$memory_usage" -ge  
"$memory_threshold" ] || [ "$disk_io" -ge "$disk_io_threshold" ] ||
```

```
[ "$network_usage" -ge "$network_threshold" ]; then
```

```
        echo "CPU Usage: $cpu_usage%" >> /var/log/metrics.txt
```

```
        echo "Memory Usage: $memory_usage%" >> /var/log/metrics.txt
```

```
        echo "Disk I/O Usage: $disk_io%" >> /var/log/metrics.txt
```

```
        echo "Network Usage: $network_usage KBps" >> /var/log/metrics.txt
```

```
        echo "-----" >> /var/log/metrics.txt
```

```
    fi
```

```
}
```

```
# Run the script in a loop
```

```
while true; do
```

```
    collect_metrics
```

```
    sleep 60 # Collect metrics every 60 seconds (adjust as needed)
```

```
done
```