

Week 2: Security Planning and Performance Testing

1. Installing Monitoring Tools

Explanation:

Installed essential tools (`htop`, `sysstat`, `ifstat`, `nload`) to monitor CPU, memory, disk, and network performance on the server. These tools will be used in later weeks to test system performance under different workloads.

```

uboxuser@ubuntuS:~$ free -h
              total        used        free      shared  buff/cache   available
Mem:       4.8Gi       461Mi    3.9Gi    1.0Gi     620Mi     4.3Gi
Swap:          0B          0B          0B

uboxuser@ubuntuS:~$ sar -r 5 5
Linux 6.8.0-88-generic (ubuntus) 12/15/2025 _x86_64_ (2 CPU)

01:48:59 AM kbmemfree  kbauwkill kbmemused  xmemused kbbuffers  kbcached  kbcommit  xcommit  kbactive  kbinact  kbdirty
01:49:04 AM 4120232  4534996  197396  3.94  24764  585636  279676  5.59  225736  417636  12
01:49:09 AM 4120232  4534996  197388  3.94  24764  585644  279676  5.59  225736  417636  28
01:49:15 AM 4120232  4535004  197388  3.94  24764  585644  279676  5.59  225748  417644  0
01:49:20 AM 4120232  4535004  197388  3.94  24764  585644  279676  5.59  225748  417644  0
01:49:25 AM 4120232  4535004  197388  3.94  24764  585644  279676  5.59  225748  417644  0
Average: 4120232  4535004  197390  3.94  24764  585642  279676  5.59  225743  417641  8
uboxuser@ubuntuS:~$ dd if=/dev/zero of=testfile bs=1M count=1024_

```

```
Lynis security scan details:  
Hardening index : 63 [██████████] Tests performed : 260  
Plugins enabled : 1  
Components:  
- Firewall [OK]  
- Malware scanner [OK]  
Scan mode: Normal [OK] Forensics [ ] Integration [ ] Pentest [ ]  
Lynis modules:  
- Compliance status [?]  
- Security audit [OK]  
- Vulnerability scan [OK]  
Files:  
- Test and debug information : /var/log/lynis.log  
- Report data : /var/log/lynis-report.dat  
  
Lynis 3.0.9  
Auditing, system hardening, and compliance for UNIX-based systems  
(Linux, macOS, BSD, and others)  
2007-2021, CISOFy - https://cisoxy.com/lynis/  
Enterprise support available (compliance, plugins, interface and tools)  
  
[INFO]: Enhance Lynis audits by adding your settings to custom.pdf (see /etc/lynis/default.pdf for all settings)  
whoami@ubuntu:~$
```

```
tunts security scan details:
TUNTS_DECODED : 800 [XXXXXXXXXX]
TUNTS_ENCODED : 1
Components:
- Malware Scanner [X]
Normal [X] Forensics [ ] Integration [ ] Pentest [ ]
Tunts modules:
- Status [X]
- Vulnerability Scan [X]
Tunts and debug information:
Report file path: /var/log/tunts.log
Log file path: /var/log/tunts-report.dat
=====
TUNTS 0.6.9
Auditing, system hardening and compliance for UNIX-based systems
Copyright © 2019-2021 Cisory. https://cisory.com/vn
Powered by available tunts modules (plugins, interface and tools)
=====
[INFO] Enhance Tunts audits by adding your settings to custom.conf (see zetc/tunts/default.conf for all settings)
```