□□ Linux Tools for Infrastructure Monitoring

This page covers the best open-source tools for monitoring the health, performance, and security of your Linux infrastructure - whether you're managing a single server or an entire fleet of systems and services.

□□ 1. Grafana

- **Website:** https://grafana.com/
- **Description:** A powerful visualization platform that integrates with dozens of data sources (Prometheus, InfluxDB, Loki, etc.). Create dashboards to track CPU, memory, disk, services, and uptime in real-time.
- □□ Best For: Building beautiful dashboards with historical metrics.

□□ 2. Prometheus

- **Website:** https://prometheus.io/
- **Description:** A time-series database used to collect metrics from systems and services. Designed to work with Grafana for alerting and long-term analysis.
- □□ Best For: Polling server metrics and alerting on thresholds.

□□ 3. Netdata

- **Website:** https://www.netdata.cloud/

- **Description:** Real-time performance monitoring with minimal setup. Tracks hundreds of metrics per second with beautiful visualizations out of the box.
- □□ Best For: Lightweight, real-time local or remote monitoring.

□□ 4. Nagios Core / Icinga

- **Website (Nagios):** https://www.nagios.org/
- **Website (Icinga):** https://icinga.com/
- **Description:** Highly configurable systems used for availability and alerting. Monitor hosts, services, network ports, and more. Icinga is a modern fork with a web-based UI and API.
- □□ Best For: Enterprise monitoring, email alerts, and service uptime.

□□ 5. Fail2Ban

- **Website:** https://www.fail2ban.org/
- **Description:** Protects Linux servers from brute-force attacks by monitoring logs and banning malicious IPs. Supports SSH, web servers, FTP, and more.
- □□ Best For: Security hardening and log-based intrusion response.

□□ 6. Uptime Kuma

- **Website:** https://github.com/louislam/uptime-kuma
- **Description:** Self-hosted uptime monitoring tool with slick UI, notifications, and graphing. Great alternative to services like UptimeRobot.
- □□ Best For: Ping/HTTP/TCP/port checks with alerts and history.

□□ 7. Cockpit

- **Website:** https://cockpit-project.org/

- **Description:** A web-based GUI for managing Linux servers. Includes system monitoring, service control, storage, and terminal access.
- □□ Best For: System admins who want visual system control via browser.

□□ 8. Monit

- **Website:** https://mmonit.com/monit/
- **Description:** Lightweight and scriptable monitoring tool for services, processes, filesystems, and files. Can auto-restart failed services.
- □□ Best For: Simple auto-recovery and alerting for daemon failures.

□□ 9. Logwatch / Logrotate

- **Logwatch:** Summarizes daily logs into human-readable reports
- **Logrotate:** Manages and compresses rotating system logs
- □□ Best For: Keeping log files clean and readable, alerting on anomalies.

□□ 10. Elastic Stack (ELK: Elasticsearch, Logstash, Kibana)

- **Website:** https://www.elastic.co/what-is/elk-stack
- **Description:** A full-featured log management and analytics suite. Used to centralize logs, search them efficiently, and build dashboards.
- □□ Best For: High-scale log aggregation and event correlation.

□□ Summary

These tools help monitor:

- System resources (CPU, RAM, disk)
- Uptime and service health
- Security threats and log anomalies
- Network traffic and performance

They range from real-time dashboards (Netdata, Grafana) to reactive protection tools (Fail2Ban) and enterprise-level observability stacks (ELK, Nagios)

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