

8 tech tips to get reliable workload performance

Reliable performance takes more than good hardware—it takes the right tools and a repeatable process. Here are 8 tech tips for tuning, monitoring, and troubleshooting workload performance on Red Hat® Enterprise Linux®.

1 Optimize workload performance with profile-based tuning

Profile-based tuning lets organizations apply validated performance settings for different workloads in a single command—without manually researching dozens of kernel parameters. Tuned, the tuning service built in to Red Hat Enterprise Linux, ships with profiles for databases, virtualization, high-performance computing (HPC), network-intensive applications, and more. Organizations can select the right profile to get validated performance gains without manual tuning. Experiment and learn about [profile-based tuning](#) (login required).

2 Get real-time observability with Cockpit

Cockpit, the Red Hat Enterprise Linux web console, gives you a single, unified dashboard for central processing unit (CPU), memory, storage, and network performance metrics—with the ability to apply tuning profiles directly from the browser. Whether organizations are managing systems in a datacenter, a public cloud, or on edge devices, they can see live statistics and historical data, making it easy to get a complete picture of the environment. Find out more about [Cockpit](#) (login required).

3 Analyze performance with eBPF dynamic tracing

Organizations can observe system behavior without adding overhead with eBPF, a kernel technology for tracing and analyzing performance in production—[using minimal CPU and memory](#) even

under heavy tracing. The `bcc-tools` package delivers ready-to-use eBPF programs for profiling specific metrics, from disk I/O latency to CPU scheduling to network connection lifecycle. For custom tracing, `python3-bcc` lets organizations write their own eBPF programs in Python or integrate eBPF metrics directly into Performance Co-Pilot (PCP) with `pcp-pmda-bcc` for continuous dashboarding. Take an [interactive lab on eBPF tracing](#) (login required).

4 Capture and analyze historical metrics with Performance Co-Pilot

Continuous metric collection is the foundation of data-driven performance tuning. PCP is a lightweight framework that gives organizations a complete view of more than 1,000 metrics across their environment. With historical data capture, they can see use, saturation, and error metrics for CPU, memory, storage, and network—all graphed in a historical table in the web console—and review any point in time without waiting for the issue to recur. To resolve issues faster, organizations can access the historical metrics data and share it directly with the Red Hat Support team. Learn more about [PCP](#).

5 Deliver performance visualizations with integrated dashboarding

Performance dashboarding brings metrics to life. Grafana, an open source analytics application, integrates with PCP to build visualizations on top of performance data. By combining the

