



NanoVMs vs. Red Hat Linux

As a next generation cloud infrastructure unikernels can improve performance and security while reducing the need for costly servers. NanoVMs offers a production-ready unikernel platform that enables organizations to run their applications faster, safer and with less cost.

NanoVMs can offer significant advantages over Red Hat Linux in security, performance and scalability.

Security

NanoVMs is built from the ground up with strong security. It is a single process system that has a reduced attack surface with no users or shells. Because it can only run one program inside of the virtual machine at a time, it eliminates the possibility of shell code exploits and remote code execution. NanoVMs has less code and doesn't run hundreds of other processes with thousands of libraries. As a multi-systems process developed decades ago, Linux can not stand up to today's complex attacks. In May, the world was reminded of the frailty of shell scripts when a critical Linux flaw opened the door to full root access offering hackers control to enterprise endpoints.

Need for Infrastructure

NanoVMs requires less infrastructure than Red Hat Linux. Virtual machines can be as small as 30MB because unikernel images are compiled with only the OS components needed for a single operation. This small size enables developers to do more with less infrastructure. Whereas Red Hat Linux platforms can only run up to 6 VMs, NanoVMs can support more than 1,000 VMS.

Performance

NanoVMs can run applications up to 20 percent faster than Red Hat Linux. NanoVMs uses fewer system resources, doesn't require system calls or context switching, and offers faster boot times. Whereas RedHat Linux can take minutes to make VMs, NanoVms can accomplish this in only seconds. NanoVMs offers a suite of tools to orchestrate web applications with the click of a button, eliminating the need to use Makefiles or figure out what libraries need to be included.

Cost

NanoVMs offers superior performance at a lower operational cost. The small size of the VMs enables organizations to use fewer system resources and reduce their CAPEX and OPEX. With fewer moving parts, this means you'll also need fewer devops engineers to configure and administer your systems.

	NanoVMs	Red Hat Linux
Security	Eliminates possibility of shell code exploits because it can only run one program at a time.	Vulnerable to shell code exploits.
Performance	Seconds to boot VMs; runs applications up to 20 percent faster	Minutes to boot VMs
Infrastructure	Can run more than 1,000 VMs	Can run up to 6 VMs
Cost	Requires fewer servers and engineers to administer systems	Traditional CAPEX and OPEX

CONTACT US

833.626.6867
sales@nanovms.com
www.nanovms.com

THE ENTERPRISE SERVICES UNIKERNEL COMPANY

NanoVMs is the only production ready, fully managed unikernel platform in the industry today.

We save companies money on infrastructure and ops cost while at the same time taking real proactive security measures to limit attacks.