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# RelianceOne™ for KVM

## Extend RelianceOne Technology Protection to Secure the Linux® KVM Hypervisor Host and Guest Virtual Machines

**RelianceOne™ for Kernel-based Virtual Machine (KVM) enables customers to deploy virtualized systems that simultaneously abide by U.S. government security guidelines and meet strict performance requirements.** The solution supports conventional virtualization use cases for the A&D market such as legacy software reuse, hardware consolidation, and system disaggregation. KVM is included and supported by the Red Hat® Enterprise Linux (RHEL) distribution with Security Technical Implementation Guide (STIG), and RelianceOne for KVM ships with source code for all kernel and virtualization stack modifications. This ensures RelianceOne for KVM integrates seamlessly with existing systems while still supporting options for tailoring and supply chain controls.

### HARDENED KVM HOST

▪ Extend Secure/Measured Boot from host to guest VM images and configuration.

▪ Configuration and Mandatory Access Control (MAC) policy to lockdown the host runtime.

▪ Replacement virtualization stack with greater security capability, package/policy granularity, built with runtime hardening.

### ADVANCED DATA PROTECTIONS

▪ Leverages full feature set of RelianceOne to safeguard privileged virtualization stack and guest VM's image, configuration, and runtime.

▪ At-rest and at-runtime confidentiality and authenticity guarantees provided by RelianceOne for Linux AuthFS and FortiFS stacked filesystems.

▪ Tailored MAC policy and advanced features of RelianceOne for Linux enforce principle of least-privilege for virtualization stack and KVM host management software.

### RELIANCEONE FOR KVM BENEFITS

▪ Addresses the privileged attack surface introduced by the adoption of virtualization technologies.

▪ Provides authenticity and confidentiality to guest images and guest configuration - including device/resource assignment.

▪ Reduces future program risk by addressing Foreign Military Sales (FMS) requirements while also providing cyber resiliency for domestic uses cases.

**50%**

**RELIANCEONE MINIMIZES THE ATTACK SURFACE BY REDUCING THE NUMBER AND SIZE OF UNNECESSARY SOFTWARE PACKAGES BY UP TO 50%.**

## WHY KVM?

For U.S. government programs leveraging Linux, Red Hat Enterprise Linux (RHEL) is by far the distribution of choice due to its long-term stability, support, and compliance guarantees. KVM and its supporting tool stack are supplied with and well supported by RHEL while also being familiar to most Linux developers. However, the versions of these tools included with RHEL are intended for workstation or enterprise server usage and generally lack customizations appropriate for more demanding mission-critical and embedded operating environments. RelianceOne for KVM provides drop-in replacements for these tools with an improved feature set, performance optimizations, and security controls that can be easily adopted by developers already familiar with KVM-based virtualization.

KVM is open source and RelianceOne for KVM ships with full source code for all included tools. This gives programs unlimited freedom to analyze and customize systems to modify their security posture, embed/fit observability capabilities, and adequately test and assess their final solution before deployment. An open solution like RelianceOne for KVM enables programs to avoid vendor lock-in to maintain agility and FMS-readiness as unique technology protection requirements can be more quickly and easily integrated, either independently or with Mercury's assistance.

A&D programs must consider long-term technology risk when selecting software due to prolonged system support lifetimes. KVM is the most popular and well-supported open-source virtualization solution on the market today. Programs can be confident that KVM will be externally supported for a long time to come, minimizing the need for costly targeted maintenance.

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