



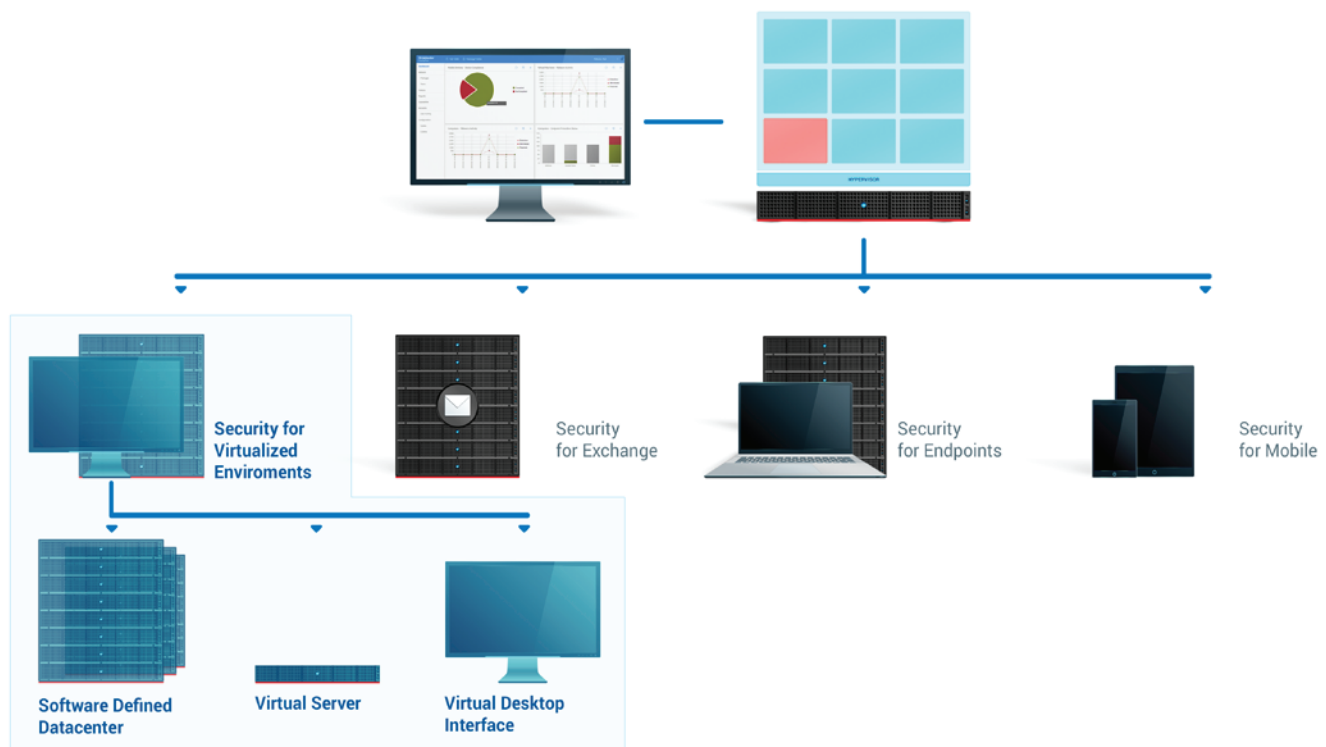
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Bitdefender®

GravityZone Security for Virtualized Environments

Don't let your virtualization protection bog down your infrastructure. Security and performance can co-exist in the cloud and virtualized data centers. GravityZone offers a low-profile security service that helps businesses manage IT risks without losing the benefits of scalable infrastructure.

GravityZone is built from the ground up for virtualization and cloud to deliver business security services to physical endpoints, mobile devices, virtual machines in private, public cloud and Exchange mail servers.



Bitdefender GravityZone Enterprise Security for Virtualized Environments (SVE) is the most advanced virtualized datacenter security solution on the market when it comes to antimalware protection for virtual machines, optimizing not only consolidation ratios but also operational costs.

GravityZone SVE is designed as an enterprise solution capable of supporting the largest datacenters. Integration into a production environment is, however, beautifully simple, and the technology benefits can be harvested in a virtual environments of any size.

HIGHLIGHTS

Supports VMware, Microsoft Hyper-V, Citrix XenServer, Red Hat Enterprise Virtualization (with KVM) and others.

Protects virtual machines running Microsoft and major Linux distributions.

Leverages vShield Endpoint in VMware deployments and provides Bitdefender proprietary technologies to enhance or entirely replace vShield Endpoint protection.

Integrates deeply with unlimited instances of VMware vCenter, allowing security management policy based on objects such as resource pools, folders and distributed networking.

Eliminates single points of failure and bottlenecks while providing unparalleled availability of antimalware protection.

Delivers award-winning Bitdefender protection against malware within file systems, memory, processes and registry database, leaving no virtual machine behind.



TECHNOLOGY OVERVIEW

GravityZone SVE provides the option of delivering antimalware protection using security virtual appliances (Security Servers) functioning as centralized points of antimalware intelligence, without a traditional security agent installed in each VM. A traditional agent would require constant updates and monitoring and consume significant local resources to operate. Each VM connects to a Security Server to offload most antimalware functionality, covering file system, memory, process and registry scanning on both Windows and Linux.

GravityZone SVE uses a multi-layered caching mechanism that contributes to leading performance. First, a local cache is maintained within each VM so objects are scanned only once. Second, a shared cache is maintained at each security server so that objects scanned on one VM are not scanned on another. Finally, a series of file block-level caches bring deduplication of scanning down to the level of file chunks, meaning that files with few differing blocks of interest to the antimalware engines on Security Server are not completely rescanned. The net result of these Bitdefender-exclusive technologies is the secret behind the performance achievements of GravityZone SVE.

The entire arsenal of award-winning Bitdefender threat protection technologies is built into the security engines and embedded into the virtual appliance architecture. With SVE, antimalware protection is more robust than ever, providing leading protection and highly available, instant-on protection for every VM in the datacenter.

BITDEFENDER ENDPOINT SECURITY TOOLS – CENTRAL SCAN AT A GLANCE

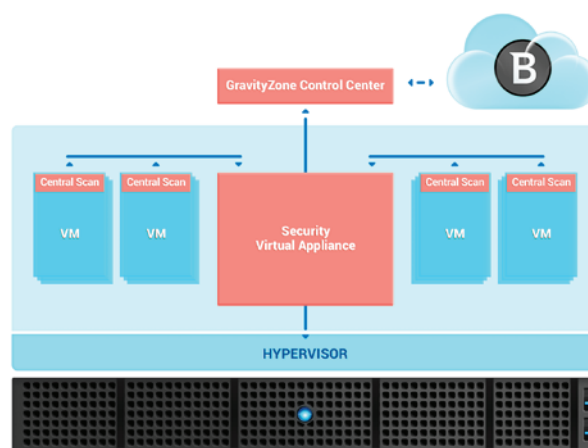
For Security Server to access the file system of each VM, along with memory, registry and running processes and other required features, a supporting set of services delivered as Central Scan must be deployed to each VM. The characteristics of Central Scan are:

Low system impact:

- Less than 110 MB storage during runtime (including runtime cache)
- 10-20 MB local memory during runtime (on-access scanning)
- Peak CPU load of 1-2%, on a single virtual CPU for on-access scanning

Primary functions:

- Establishes connection to an available authorized Security Server (virtual appliance), allowing local access to file system, registry, memory and processes.
- Switches connection to alternate Security Servers in case of slow response time or sudden unavailability.
- Manages local disinfection, quarantine and process blocking.
- Maintains local cache of scanned items for performance gains.
- Runs as a local service with all administrative privileges removed, guarding against attacks that attempt to shut-down protection locally.
- Optionally provides a User Interface inside the VM with desktop pop-up notifications.
- Deployment of Central Scan (available in both a Windows and Linux version) is simple and requires no reboot of the virtual machines, while deployment of Security Server likewise does not require a reboot of machines hosting VMs.
- Central Scan can also be baked into templates and VDI images to minimize management overhead.





GravityZone unique architectural design creates several advantages:

- Virtual Machines have no local antimalware scanning engines and definitions, and will always be protected by an available Security Server.
- Eliminates the possibility of AV Storms.
- Multi-level caching across individual VM and Security Server ensures unique files are scanned only once.
- Eliminates boot time performance and security gaps encountered as VMs start.
- No single point of failure in the protection, as Central Scan automatically connects or reconnects to an available Security Server, as defined by policy.
- Centralized protection without bottlenecks, since Central Scan can automatically switch to another Security Server with a faster response time.
- Non-persistent virtual machines are automatically protected and governed by the correct security policy (when Central Scan is installed on the image and the security policy is applied to a resource pool or folder, the VM instance will inherit the policy accordingly).
- Increases VM density, as a consequence of reduced memory, disk space, CPU and I/O activity.
- VMs are invariably protected by the latest, up-to-date, technologies, even if restored to an older snapshot/backup or if booted after an extended period offline.
- No need to monitor AV installations on individual virtual machines after Central Scan has been installed.

UNSURPASSED PERFORMANCE

SVE was designed to solve the issues related to running AV in a virtualized environment and has been continuously improved, with a focus on protection, simplicity, performance and compatibility.

Our extensive performance testing proves that SVE has the lowest performance impact of all major AV solutions on the market, while also providing Bitdefender award-winning protection. As such, you should be able to reclaim up to 17% of your host's computing power and reduce latency compared to your current AV solution, while cutting operational cost due to a radical reduction in maintenance and monitoring.

White paper:

http://download.bitdefender.com/resources/media/materials/white-papers/en/Bitdefender_Enterprise_WP_VDI_en.pdf

OPTIONAL VSHIELD INTEGRATION

When vShield Endpoint is leveraged, it provides file system access to the Security Server through the hypervisor layer - this is also referred to as agentless protection. In Bitdefender's vShield integrated version of SVE, this limited protection can be extended to also cover memory, registry and running processes, by cooperation between VMware Tools and Central Scan Endpoint Security Tools. In this version you are limited to a single Security Server per host with no failover or load balance.

FLEXIBLE LICENSING FOR DATACENTERS AND INDIVIDUAL VMS

GravityZone SVE introduces a simple licensing model as either per CPU socket in datacenter or VM-based purchasing options. VM licensing is split between virtual servers and VDI to comply with dynamic and highly virtualized infrastructures.

UNIFIED MANAGEMENT

GravityZone SVE is one of the security services delivered by GravityZone Enterprise Security unified platform and is managed through the Control Center web interface. In addition to VM security, GravityZone Enterprise Security covers physical workstations and servers (Windows, Linux, Mac), mobile devices (Android, iOS), and Exchange mail servers.

GravityZone consists of a unique architecture based on a turnkey virtual appliance that can be cloned as load requires, with each instance playing one or more roles. This simple yet powerful model give GravityZone the edge to horizontally scale to meet the demands of the largest environments as a single deployment.

For example, three appliances running the open-source, cloud-centric database included in GravityZone may run in San Francisco, with two in New York, while a similar number of communication servers are geographically dispersed where needed. GravityZone virtual appliances can also be configured as load balancers. As one geographic point grows, it's as simple as spinning-up more GravityZone virtual appliances, selecting the appropriate roles, and allowing the load of the existing deployment to flow onto the new appliances. This ground-breaking, cloud-based architecture provides customers fast and easy access to scale, maintenance, monitoring and reporting.



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In a geographically dispersed environment, GravityZone brings datacenters together, delivering control of virtualized environments across heterogeneous hypervisors, physical endpoints (laptops, desktops, servers) and mobile device, simultaneously.

EVALUATING OUR SOLUTION

GravityZone SVE is an un-matched security solution that you can deploy and evaluate in your own environment in just a few hours, including the time it takes to download the GravityZone virtual appliance. No scripting is involved, as all the configuration is performed through the appliance CLI and the GravityZone intuitive web interface. This has led more than 85% of administrators who evaluate the Bitdefender SVE solution to recommend a purchase.

"For us, the key to passing the test would be the product's performance in our virtualized environment, how much the product would or wouldn't interfere with users' productivity and the responsiveness of the professional services team." Mikael Korsgaard Jensen, Server Manager, Herning Kommune, Denmark

"Since Bitdefender is a VMware Technology Alliance Partner, integrating with vShield and vCenter, it allows us to both increase our competitive advantage and differentiate our hosted VDI service by bundling it with best-in-class security of the hosted VDI environment." Jose Uribe, COO, Webhosting.net, USA

OS COVERAGE

WIDEST VIRTUALIZATION AND OPERATION SYSTEMS COVERAGE THROUGH TECHNOLOGY PARTNERSHIPS

VMware vSphere 6.0, 5.5, 5.1, 5.0 P1 or 4.1 P3
ESXi 4.1, 5.0, 5.1, 5.5
VMware vCenter Server 6.0, 5.5, 5.1, 5.0 or 4.1
VMware vShield Manager 5.5, 5.1, 5.0
VMware vShield Endpoint
VMware vCNS 5.5
VMware Tools 8.6.0 build 446312
VMware View 5.1, 5.0

Citrix XenDesktop 5.5, 5.0
Citrix XenServer 6.0, 5.6 or 5.5 including
Citrix Xen Hypervisor
Citrix VDI-in-a-Box 5.x

Microsoft
Microsoft Hyper-V Server 2012, 2008 R2 including
Microsoft Hyper-V Hypervisor

Linux
Red Hat Enterprise 3.0 including
Red Hat KVM Hypervisor

Oracle
Oracle VM 3.0

OPERATING SYSTEMS COVERAGE

Windows

Workstation: 8.1, 8, 7, Vista (SP1), XP (SP3)
Server: 2012 (R2), 2008 (R2), 2003 (R2, SP1), Home, SBS 2011, 2008, 2003

Linux:

Red Hat Ent. 6.2, 6.1, 5.7, 5.6; CentOS 6.5, 6.2, 6.1, 5.7, 5.6;
Ubuntu 14.04, 11.04, 10.04;
SUSE Ent. Server 11, OpenSUSE 12, 11;
Fedora 16, 15

Oracle Solaris 11, 10

Try GravityZone now! Free trial and more information available on our website:

<http://www.bitdefender.com/business/>

CONTACT U.S. Business Sales by phone:

1-800-388-8062 • enterprisesales@bitdefender.com



Bitdefender delivers security technology in more than 100 countries through a cutting-edge network of value-added alliances, distributors and reseller partners. Since 2001, Bitdefender has consistently produced market-leading technologies for businesses and consumers and is one of the top security providers in virtualization and cloud technologies. Bitdefender has matched its award-winning technologies with sales alliances and partnerships and has strengthened its global market position through strategic alliances with some of the world's leading virtualization and cloud technology providers.

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