

Bitdefender®

GravityZone, Security for Virtualized Environments

Bitdefender GravityZone - Security for Virtualized Environments (SVE) is the ultimate and most advanced 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. Integrating into a production environment is however beautifully simple and the technology benefits can be harvested in any size virtual environment.

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, distributed networking.

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

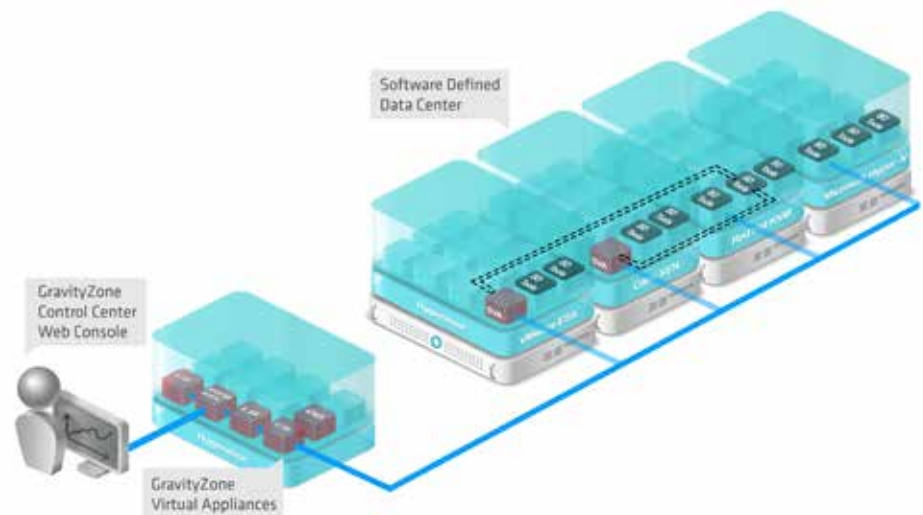
Delivers award-winning Bitdefender protection against malware within file systems, memory, processes, and registry database, leaving no virtual machine behind.

Technology Overview

GravityZone SVE provides antimalware protection using virtual appliances (Security Server) functioning as centralized points of antimalware intelligence, without a traditional security agent installed in each VM. Such an agent would normally require constant updates, monitoring and significant consumption of local resources to operate. Each VM connects to a Security Server to offload the bulk of 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 not scanned more than 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 subject to complete rescanning. 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 security technologies* are built into the security engines and embedded into the virtual appliance architecture. With SVE, the ant-instant-on, protection for every VM in the datacenter.

Amazon Web Services (AWS) - SVE is available on AWS Marketplace as a per-instance, hourly purchase. Both the Security Server instances and Security Center management console are provided as a service by Bitdefender, hosted from within AWS. All that is needed is to deploy Bitdefender Tools to instances to enable the same centralized and deduplicated security that SVE delivers in private virtualized environments.



“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

*Patented technologies include B-Have: an emulation technology whereby unknown processes are tested before being allowed to run. AVC: A complex set of real-time analytic methods that leverages awareness of process activity across kernel-level and user-mode, consisting of more than 300 heuristics evaluating all operations as they occur, protecting against zero-day attacks and advanced persistent threats.

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The entire arsenal of award-winning Bitdefender security technologies* are built into the security engines and embedded into the virtual appliance architecture. With SVE the antimalware protection is more robust than ever before, providing high availability protection for every VM in the datacenter.

Bitdefender Tools 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 Bitdefender Tools must be deployed to each VM. The characteristics of Bitdefender Tools are:

Low system impact:

- Less than 100 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

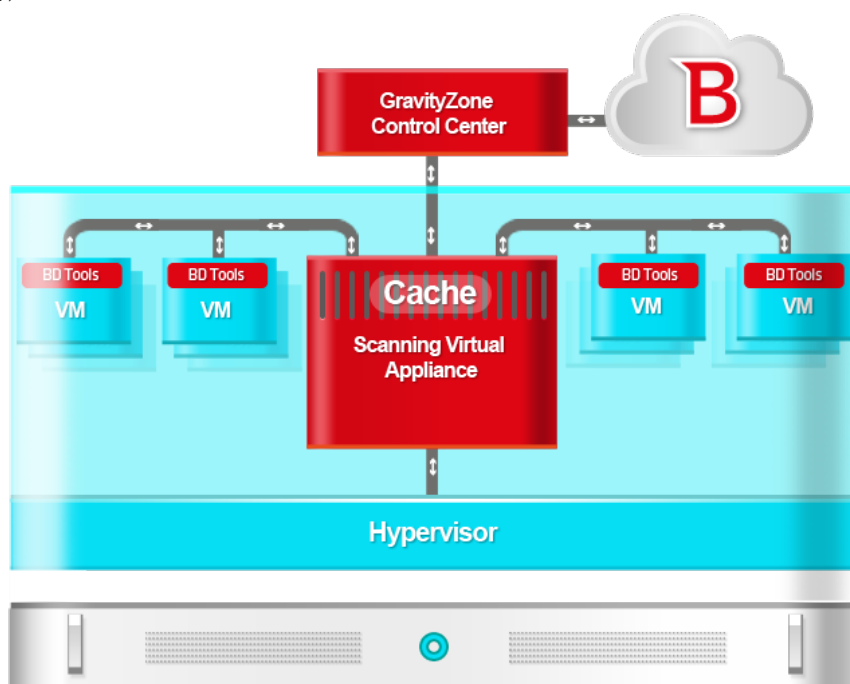
Primary functions:

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 Bitdefender Tools (available in both a Windows and Linux version) is simple and requires no reboot of either the virtual machines, while deployment of Security Server likewise does not require a reboot of machines hosting VMs.
- Bitdefender Tools can also be baked-in templates and VDI images to minimize management overhead.

This 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 that 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 Bitdefender Tools automatically connects or reconnects to an available Security Server, as defined by policy.
- Centralized protection without bottlenecks, since Bitdefender Tools 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 Bitdefender Tools 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).



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- 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 being offline for an extended period of time.
- No need to monitor AV installations on individual virtual machines after Bitdefender Tools 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 focus on protection, simplicity, performance and compatibility.

Our extensive performance testing proves that SVE has the lowest performance impact of all major AV solutions available on the market, while also providing Bitdefender award-winning protection. As such, you should expect an increase in VM density of 30% compared to your current AV solution, while operational cost is lowered due to a radical reduction in maintenance and monitoring. For more information consider reading the White Paper: The impact of virtualization security on your VDI environment.

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 Bitdefenders 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 Bitdefender Tools. In this version you are limited to a single Security Server per host with no failover or load balance.

Security-as-a-Service for Amazon Web Services (AWS)

SVE is available on AWS Marketplace https://aws.amazon.com/marketplace/pp/B0096BADNI/ref=srh_res_product_title?ie=UTF8&sr=0-2&qid=1407249052772 as a per-instance, hourly service fully integrated with Amazon EC2 platform for ease of administration. Both the Security Server instances and Security Center management console are provided as a service by Bitdefender, hosted from within AWS. An essential benefit offered by Bitdefender SaaS for AWS is the ability to scale on demand or instantly-provision resources to accommodate business growth. Enforcing protection across the AWS environment is a nearly-automated process that is streamlined by the use of instance tagging. Once deployed on the EC2 instance, Bitdefender Tools will enable the same centralized and deduplicated security that SVE delivers in private virtualized environments.

Flexible licensing:

GravityZone SVE introduces a simple licensing model as either per CPU socket 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 runs as a module within GravityZone Control Center, the unified platform which is capable of managing all other Bitdefender enterprise solutions. In addition to VM security, GravityZone also covers physical computers (Windows, Linux, Mac) and mobile devices (Android, iOS).

GravityZone consists of a unique architecture based on a turnkey virtual appliance which 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 another 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.

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, which you will be able to deploy and evaluate in your own environment by investing just a few hours, including the time it takes to download the GravityZone virtual appliance. There is no scripting 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 end-up recommending a purchase.

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System Requirements

Supported Virtualization Platforms:

Operation Systems Coverage

Guest OS

Microsoft Windows

Windows 8, 8.1 Windows 7, Windows Vista,

Windows XP (SP3)

Windows Server 2012, Windows Server 2008,

Windows Server 2008 R2

Windows Server 2003, Windows Server 2003 R2

Oracle

Solaris 11, 10

Linux

Red Hat Enterprise 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 Enterprise Server 11

OpenSUSE 12, 11

Fedora 16, 15

Delivery method

GravityZone – SVE is delivered within a Linux-based Security Server for centralized scanning and is managed from GravityZone Control Center, the unified management platform for physical, virtual and mobile endpoints.

Note: Agentless version (VMware vShield platform) support for Windows 8 and Windows Server 2012 depends upon VMware vShield Endpoint compatibility, and it is available starting with VMware vShield Manager version 5.5.

Virtualization Platforms

VMware

- VMware vSphere 5.5, 5.1, 5.0 P1 or 4.1 P3
- ESXi 4.1, 5.0, 5.1, 5.5
- VMware vCenter Server 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

- Citrix XenDesktop 7.5, 5.5, 5.0
- Citrix XenServer 6.0, 5.6 or 5.5 including
- Citrix Xen Hypervisor
- Citrix VDI-in-a-Box 5.x
- Citrix Profile Streaming

Microsoft

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

Linux

- Red Hat Enterprise 3.0 including
- Red Hat KVM Hypervisor
- Oracle
- Oracle VM 3.0

Try Bitdefender GravityZone now! Free trial and more information available on our website
<http://enterprise.bitdefender.com/solutions/gravityzone/virtualization-security.html>
Contact us for 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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