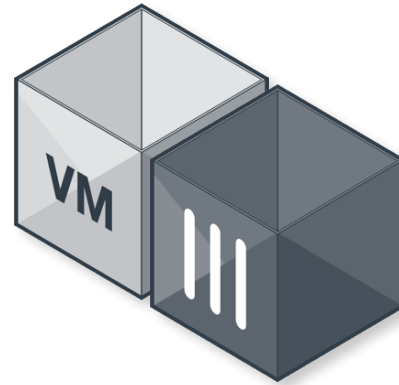**FORTINET**

FortiGate™ Virtual Appliances

Consolidated Security for Virtualized Environments

Complete end-to-end security ecosystem for the Software Defined Data Center. Fortinet enables and facilitates the enterprise's journey through the Data Center consolidation process.

Fortinet delivers both physical and virtualized security appliances to secure unique data planes. It offers on one side, unmatched performance and security capabilities while allowing for the growth and evolution of the consolidating Data Center with no service degradation or bottlenecks, no compromise on security, and with an unmatched ROI — fulfilling the outcomes of a robust software-defined security framework.

FortiGate Virtual Appliances allow you to mitigate blind spots by implementing critical security controls within your virtual infrastructure. They also allow you to rapidly provision security infrastructure whenever and wherever it is needed. FortiGate virtual appliances feature all of the security and networking services common to traditional hardware-based FortiGate appliances. With the addition of virtual appliances from Fortinet, you can deploy a mix of hardware and virtual appliances, operating together and managed from a common centralized management platform.
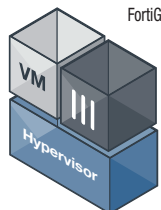
FortiGate Virtual Appliance Benefits

FortiGate virtual appliances offer protection from a broad array of threats, with support for all of the security and networking services offered by the FortiOS operating system. In addition, the appliances offer:

- Increased visibility within virtualized infrastructure monitoring
- Rapid deployment capability
- Ability to manage virtual appliances and physical appliances from a single pane of glass management platform
- Simple licensing with no per-user fees
- Support for multiple virtualization and Cloud platforms
- Full support for FortiHypervisor deployments enabling line-speed security in vCPE requirement
- Wide array of licensing choices to fit any infrastructure requirement
- VDOM-enabled models for multi-tenant environments

FortiGate-VM

FortiADC-VM	FortiAnalyzer-VM	FortiAuthenticator-VM	FortiCache-VM	FortiRecorder-VM
FortiMail-VM	FortiManager-VM	FortiSandbox-VM	FortiVoice-VM	FortiWeb-VM
FortiPortal-VM	FortiSIEM-VM	FortiWAN-VM	FortiWLC-VM	FortiWeb Manager

Fortinet's comprehensive security virtual appliance lineup supports in excess of 16 solutions.

Platforms

Choice of Form Factor

Few organizations use 100% hardware or 100% virtual IT infrastructure today, creating a need for both hardware appliances and virtual appliances in your security strategy. Fortinet allows you to build the security solution that's right for your environment with hardware and virtual appliances to secure the core, the edge and increase visibility and control over communications within the virtualized infrastructure. FortiManager virtual or physical appliances allow you to easily manage and update your Fortinet security assets — hardware, virtual or both — from a single pane of glass.

Multi-Threat Security

Using the advanced FortiOS™ operating system, FortiGate appliances effectively neutralize a wide range of security threats facing your virtualized environment. Whether deployed at the edge as a front-line defense, or deep within the virtual infrastructure for inter-zone security, FortiGate appliances protect your infrastructure with some of the most effective security available today by enabling security features you need.

Deployment
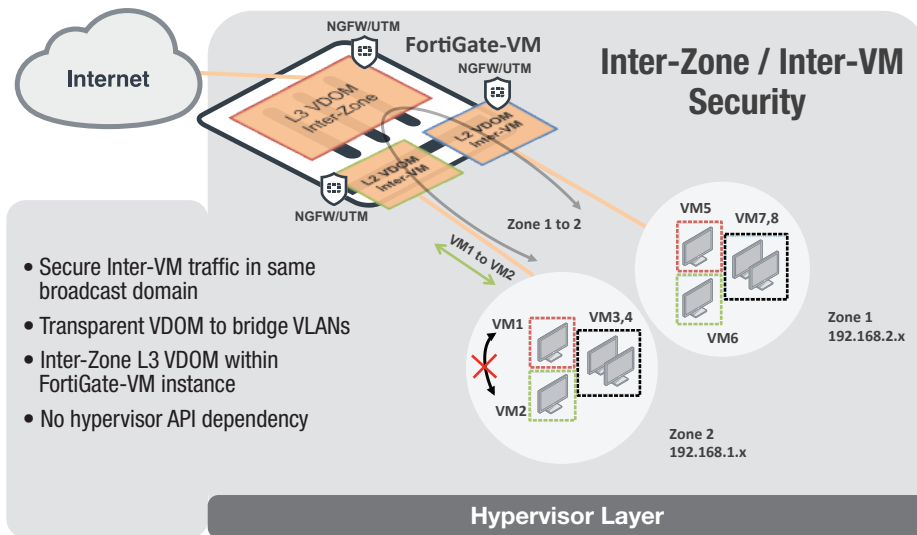
All Inter-VM traffic in Bravo Zones are subject to full UTM scan through L2 VDOM. Inter-Zone traffic subject to full Next Gen Firewall and UTM scan by L3 VDOM. Alpha Zone VMs can all talk to each other freely.
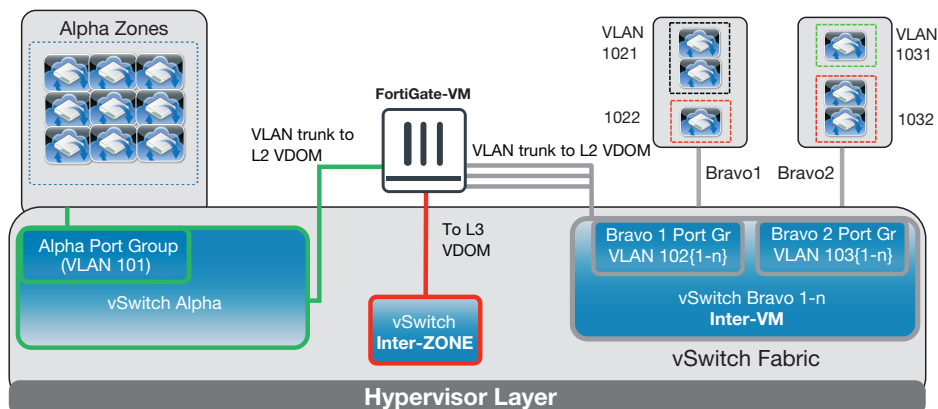
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Fortinet Security Fabric

Security Fabric

The Security Fabric delivers broad visibility, integrated AI-driven breach prevention, and automated operations, orchestration, and response across all Fortinet and its ecosystem deployments. It allows security to dynamically expand and adapt as more and more workloads and data are added. Security seamlessly follows and protects data, users, and applications as they move between IoT, devices, and cloud environments throughout the network. All this is ties together under a single pane of glass management for significantly thereby delivering leading security capabilities across your entire environment while also significantly reducing complexity.

FortiGates are the foundation of Security Fabric, expanding security via visibility and control by tightly integrating with other Fortinet security products and Fabric-Ready Partner solutions.

FortiOS

Control all security and networking capabilities across the entire FortiGate platform with one intuitive operating system. Reduce complexity, costs, and response time with a truly consolidated next-generation security platform.
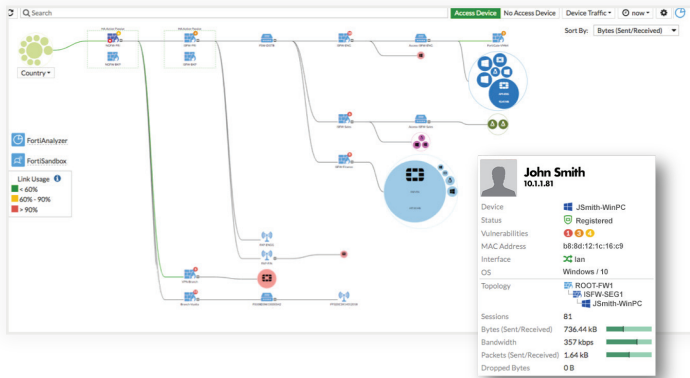
- A truly consolidated platform with a single OS and pane-of-glass for all security and networking services across all FortiGate platforms.
- Industry-leading protection: NSS Labs Recommended, VB100, AV Comparatives, and ICSA validated security and performance. Ability to leverage latest technologies such as deception-based security.
- Control thousands of applications, block the latest exploits, and filter web traffic based on millions of real-time URL ratings in addition to true TLS 1.3 support.
- Prevent, detect, and mitigate advanced attacks automatically in minutes with integrated AI-driven breach prevention and advanced threat protection.
- Fulfil your networking needs with extensive routing, switching, and SD-WAN capabilities along with intent-based segmentation.
- Utilize SPU hardware acceleration to boost security capability performance.

Services

FortiGuard™ Security Services

FortiGuard Labs offers real-time intelligence on the threat landscape, delivering comprehensive security updates across the full range of Fortinet's solutions. Comprised of security threat researchers, engineers, and forensic specialists, the team collaborates with the world's leading threat monitoring organizations and other network and security vendors, as well as law enforcement agencies.

FortiCare™ Support Services

Our FortiCare customer support team provides global technical support for all Fortinet products. With support staff in the Americas, Europe, Middle East, and Asia, FortiCare offers services to meet the needs of enterprises of all sizes.

For more information, please refer to forti.net/fortiguard and forti.net/forticare

Specifications

	FORTIGATE-VM00	FORTIGATE-VM01/01V	FORTIGATE-VM02/02V	FORTIGATE-VM04/04V
Technical Specifications				
vCPU Support (Minimum / Maximum)	1 / 1	1 / 1	1 / 2	1 / 4
Memory Support (Minimum / Maximum)	1 GB / 2 GB *	1 GB / 2 GB	1 GB / 4 GB	1 GB / 6 GB
Storage Support (Minimum / Maximum)	32 GB / 2 TB	32 GB / 2 TB	32 GB / 2 TB	32 GB / 2 TB
Wireless Access Points Controlled (Tunnel / Global)	32 / 32	32 / 64	256 / 512	256 / 512
Virtual Domains (Default / Maximum) **	2 / 2	10 / 10	10 / 25	10 / 50
Firewall Policies	10,000	10,000	10,000	10,000
Maximum Number of FortiTokens	1,000	1,000	1,000	5,000
Maximum Number of Registered Endpoints	200	2,000	2,000	8,000
Unlimited User License	Yes	Yes	Yes	Yes

	FORTIGATE-VM08/08V	FORTIGATE-VM16/16V	FORTIGATE-VM32/32V	FORTIGATE-VMUL/ULV
Technical Specifications				
vCPU Support (Minimum / Maximum)	1 / 8	1 / 16	1 / 32	1 / unlimited
Memory Support (Minimum / Maximum)	1 GB / 12 GB	1 GB / 24 GB	1 GB / 48 GB	1 GB / Unlimited GB
Storage Support (Minimum / Maximum)	32 GB / 2 TB	32 GB / 2 TB	32 GB / 2 TB	32 GB / 2 TB
Wireless Access Points Controlled (Tunnel / Global)	1,024 / 4,096	1,024 / 4,096	1,024 / 4,096	1,024 / 4,096
Virtual Domains (Default / Maximum) **	10 / 500	10 / 500	10 / 500	10 / 500
Firewall Policies	200,000	200,000	200,000	200,000
Maximum Number of FortiTokens	5,000	5,000	5,000	5,000
Maximum Number of Registered Endpoints	20,000	20,000	20,000	20,000
Unlimited User License	Yes	Yes	Yes	Yes

Network Interface Support

The maximum number of network interfaces consumable by a FortiGate instance is 18 starting with the FortiGate versions 5.6.6 and 6.0.3. Prior versions allow 10. The minimum number is 1. The actual number of network interfaces attachable to instances will vary depending on cloud platforms and instance types, and they may not allow you to attach the greater number of interfaces to an instance than their maximum limits even while FortiGate allows up to 18.

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* Applicable to VM running on 5.6 and above.

** Not applicable to older versions of FG-VMxxV series which do not support VDOM addition. See ORDER INFORMATION for VDOM SKUs and the versions of VDOM-capable FG-VMxxV.

Special licenses for offline network environments are available for VMxxV series (01V to ULV), and they have the same specifications as those of VMxxV shown in the table above. For ordering offline licenses, please consult Fortinet sales representatives.

VENDOR
Private Clouds (Hypervisors)
VMware ESXi v5.5 / v6.0 / v6.5 / v6.7
VMware NSX-T v2.3*
Microsoft Hyper-V Server 2008 R2 / 2012 / 2012 R2 / 2016
Microsoft AzureStack
Citrix Xen XenServer v5.6 sp2, v6.0, v6.2 and later
Open source Xen v3.4.3, v4.1 and later
KVM qemu 0.12.1 & libvirt 0.10.2 and later for Red Hat Enterprise Linux / CentOS 6.4 and later / Ubuntu 16.04 LTS (generic kernel)
KVM qemu 2.3.1 for SuSE Linux Enterprise Server 12 SP1 LTSS
Nutanix AHV (AOS 5.10, Prism Central 5.10)**
Cisco Cloud Services Platform 2100**

* FortiGate-VM 6.0.4+ supports VMware NSX-T.

** FortiGate-VM 6.0.3+ supports Nutanix AHV and Cisco CSP 2100.

VENDOR
Public Clouds (Market Places)
Amazon AWS (including GovCloud and AWS China)
VMware Cloud on AWS*
Microsoft Azure (including regional Azure: US Gov, Germany, and China) and AzureStack syndication
Google GCP (Google Cloud Platform)
Oracle OCI
Alibaba Cloud (AliCloud)

Virtualization/Cloud Platform Support varies by model and FortiOS builds. Please refer to appropriate release notes. FG-VMxxV series require FortiOS 5.4.8+ / 5.6.1+ / 6.0.0+.

* FortiGate-VM 6.0.4+ supports VMware Cloud on AWS.

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Order Information

Product	SKU	Description
FortiGate-VM00	FG-VM00	FortiGate-VM 'virtual appliance'. 1x vCPU core, (up to) 2 GB RAM. No Extreme DB support.
FortiGate-VM01	FG-VM01, FG-VM01V	FortiGate-VM 'virtual appliance'. 1x vCPU core and (up to) 2 GB RAM. No VDOM by default for FG-VM01V model.
FortiGate-VM02	FG-VM02, FG-VM02V	FortiGate-VM 'virtual appliance'. 2x vCPU cores and (up to) 4 GB RAM. No VDOM by default for FG-VM02V model.
FortiGate-VM04	FG-VM04, FG-VM04V	FortiGate-VM 'virtual appliance'. 4x vCPU cores and (up to) 6 GB RAM. No VDOM by default for FG-VM04V model.
FortiGate-VM08	FG-VM08, FG-VM08V	FortiGate-VM 'virtual appliance'. 8x vCPU cores and (up to) 12 GB RAM. No VDOM by default for FG-VM08V model.
FortiGate-VM16	FG-VM16, FG-VM16V	FortiGate-VM 'virtual appliance'. 16x vCPU cores and (up to) 24 GB RAM. No VDOM by default for FG-VM016V model.
FortiGate-VM32	FG-VM32, FG-VM32V	FortiGate-VM 'virtual appliance'. 32x vCPU cores and (up to) 48 GB RAM. No VDOM by default for FG-VM032V model.
FortiGate-VMUL	FG-VMUL, FG-VMULV	FortiGate-VM 'virtual appliance'. Unlimited vCPU cores and RAM. No VDOM by default for FG-VMULV model.
Optional Accessories		
Virtual Domain License Add 5	FG-VDOM-5-UG	Upgrade license for adding 5 VDOMs to FortiOS 5.4 and later, limited by platform maximum VDOM capacity.
Virtual Domain License Add 15	FG-VDOM-15-UG	Upgrade license for adding 15 VDOMs to FortiOS 5.4 and later, limited by platform maximum VDOM capacity.
Virtual Domain License Add 25	FG-VDOM-25-UG	Upgrade license for adding 25 VDOMs to FortiOS 5.4 and later, limited by platform maximum VDOM capacity.
Virtual Domain License Add 50	FG-VDOM-50-UG	Upgrade license for adding 50 VDOMs to FortiOS 5.4 and later, limited by platform maximum VDOM capacity.
Virtual Domain License Add 240	FG-VDOM-240-UG	Upgrade license for adding 240 VDOMs to FortiOS 5.4 and later, limited by platform maximum VDOM capacity.

FG-VMxx"V" 5.4.9+, 5.6.4+, and 6.0.0+ support VDOM by adding separate VDOM licenses. The number of configurable VDOMs can be stacked up to the maximum number of supported VDOMs per vCPU model. Please refer to Virtual Domains (Maximum) under SPECIFICATIONS. FortiCarrier Upgrade licenses are available for FG-VM08(V), VM16(V), VM32(V), and VMUL(V). Please consult your Fortinet sales representative for the order.

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