FortiGate® Virtual Appliances
Consolidated Security for Virtualized Environments

Complete end-to-end security ecosystem for the software-defined datacenter. Fortinet enables and facilitates the enterprise’s journey through the datacenter 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 datacenter 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.

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

Benefits
- Protection from a broad array of threats, with support for all of the security and networking services that the FortiOS operating system offers
- Increased visibility within virtualized infrastructure monitoring
- Rapid deployment capability
- Ability to manage virtual 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
PLATFOMS

Choice of Form Factor

Few organizations use 100% hardware or 100% virtual IT infrastructure today, creating a need for both hardware and virtual appliances in your security strategy. Fortinet allows you to build the security solution that is right for your environment with hardware and virtual appliances to secure the core and 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

Public Cloud

High Degree of Automation

Fabric Connectors VNF Orchestration

Cloud Init

Advanced Security

SD-WAN VPN IPS Carrier-FW

Threat intel URL Filtering AV Sandboxing

Intent-based / Micro Segmentation

Private Cloud

Enterprise Edge

MSSP

Gain comprehensive visibility and apply consistent control
FORTINET SECURITY FABRIC

Security Fabric
The industry’s highest-performing cybersecurity platform, powered by FortiOS, with a rich ecosystem designed to span the extended digital attack surface, delivering fully automated, self-healing network security.

- **Broad**: Coordinated detection and enforcement across the entire digital attack surface and lifecycle with converged networking and security across edges, clouds, endpoints and users
- **Integrated**: Integrated and unified security, operation, and performance across different technologies, location, deployment options, and the richest Ecosystem
- **Automated**: Context aware, self-healing network & security posture leveraging cloud-scale and advanced AI to automatically deliver near-real-time, user-to-application coordinated protection across the Fabric

The Fabric empowers organizations of any size to secure and simplify their hybrid infrastructure on the journey to digital innovation.

**FortiOS™ Operating System**
FortiOS, Fortinet’s leading operating system enable the convergence of high performing networking and security across the Fortinet Security Fabric delivering consistent and context-aware security posture across network endpoint, and clouds. The organically built best of breed capabilities and unified approach allows organizations to run their businesses without compromising performance or protection, supports seamless scalability, and simplifies innovation consumption.

The release of FortiOS 7 dramatically expands the Fortinet Security Fabric’s ability to deliver consistent security across hybrid deployment models consisting on appliances, software and As-a-Service with SASE, ZTNA and other emerging cybersecurity solutions.

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™ Services**
Fortinet is dedicated to helping our customers succeed, and every year FortiCare services help thousands of organizations get the most from their Fortinet Security Fabric solution. We have more than 1,000 experts to help accelerate technology implementation, provide reliable assistance through advanced support, and offer proactive care to maximize security and performance of Fortinet deployments.
## SPECIFICATIONS

### Technical Specifications

<table>
<thead>
<tr>
<th>SKU</th>
<th>VM-01/01V/01S</th>
<th>VM-02/02V/02S</th>
<th>VM-04/04V/04S</th>
<th>VM-08/08V/08S</th>
<th>VM-16/16V/16S</th>
<th>VM-32/32V/32S</th>
<th>VM-UL/ULV/ULS</th>
</tr>
</thead>
<tbody>
<tr>
<td>vCPU Support (Minimum / Maximum)</td>
<td>/ 1</td>
<td>/ 1</td>
<td>/ 2</td>
<td>/ 4</td>
<td>/ 8</td>
<td>/ 16</td>
<td>/ 32</td>
</tr>
<tr>
<td>Storage Support (Minimum / Maximum)</td>
<td>32 GB / 2 TB</td>
<td>32 GB / 2 TB</td>
<td>32 GB / 2 TB</td>
<td>32 GB / 2 TB</td>
<td>32 GB / 2 TB</td>
<td>32 GB / 2 TB</td>
<td>32 GB / 2 TB</td>
</tr>
<tr>
<td>Wireless Access Points Controlled (Tunnel / Global)</td>
<td>/ 32</td>
<td>/ 64</td>
<td>/ 512 / 1,024</td>
<td>/ 512 / 1,024</td>
<td>/ 1,024 / 4,096</td>
<td>/ 1,024 / 4,096</td>
<td>/ 1,024 / 4,096</td>
</tr>
<tr>
<td>Virtual Domains (Default / Maximum)</td>
<td>10 / 10</td>
<td>10 / 25</td>
<td>10 / 50</td>
<td>10 / 500</td>
<td>10 / 500</td>
<td>10 / 500</td>
<td>10 / 500</td>
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<tr>
<td>Firewall Policies</td>
<td>10,000</td>
<td>10,000</td>
<td>10,000</td>
<td>200,000</td>
<td>200,000</td>
<td>200,000</td>
<td>200,000</td>
</tr>
<tr>
<td>Maximum Number of Registered Endpoints</td>
<td>2,000</td>
<td>2,000</td>
<td>8,000</td>
<td>20,000</td>
<td>20,000</td>
<td>20,000</td>
<td>20,000</td>
</tr>
<tr>
<td>Unlimited User License</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Note: All performance values are “up to” and vary depending on system configuration.

### Network Interface Support

The maximum number of network interfaces consumable by a FortiGate instance is 24 starting with FortiGate version 6.4.0. Prior versions allow 18. The minimum number is 1. The actual number of network interfaces attachable to instances varies 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 24.

**FG-VMxVxV and FG-VMxSxS series do not come with a multi-VDOM feature by default. You can add it by applying separate VDOM addition perpetual licenses. See ORDER INFORMATION for VDOM SKUs.**

### VENDOR

#### Private Clouds (Hypervisors)

- VMware ESXi v5.5 / v6.0 / v6.5 / v6.7 / v7.0
- VMware NSX-T v3.3 / v3.5 / v3.7 / v3.9
- Microsoft Hyper-V Server 2008 R2 / 2012 / 2012 R2 / 2016 / 2019
- Citrix XenServer 6.2 and later
- Citrix XenDesktop
- Citrix XenApp 6.5 and later
- Microsoft Azure (including regional Azure: US Gov, Germany, and China) and AzureStack
- KVM qemu 0.12.1 & libvirt 0.10.2 and later for Red Hat Enterprise Linux / CentOS 6.4 and later
- KVM qemu 2.11 for SuSE Linux Enterprise Server 12 SLES 12
- Ubuntu 16.04 LTS (generic kernel)
- KVM qemu 2.3.1 for SuSE Linux Enterprise Server 12 SLES 12
- Nutanix AHV (AOS 5.10, Prism Central 5.10)
- Cisco ENCS (NFVIS 3.12.3)***
- Open source Xen v4.4, v4.6 and later
- Open source Xen v3.4.3, v4.3 and later

*See the NSX-T on VMware Compatibility Guide for the latest supported platforms.

**FortiGate-VM 6.2.3+ supports Microsoft Hyper-V 2019.

*** FortiGate-VM 6.0.3+ supports Nutanix AHV and Cisco CSP 2000.

**** FortiGate-VM 6.2.3+ supports Cisco NFVIS 3.12.3.

#### Public Clouds (Marketplaces)

- Amazon AWS (Including GovCloud and AWS China)
- VMware Cloud on AWS*
- VMware Cloud on Del EMC**
- VMware Cloud on Dell EMC
- IBM Cloud (Gen1 / Gen2)****
- Alibaba Cloud

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

** FortiGate-VM 6.2.3+ supports VMware Cloud on Del EMC.

**** IBM Cloud does not support the marketplace and requires manual deployment. FortiGate-VM 6.4.2+ supports IBM Cloud.

#### Virtualization/Cloud Platform Support

- Microsoft Azure (including regional Azure: US Gov, Germany, and China) and AzureStack
- Citrix XenDesktop
- Citrix XenApp 6.5 and later
- Microsoft Azure (including regional Azure: US Gov, Germany, and China) and AzureStack
- KVM qemu 0.12.1 & libvirt 0.10.2 and later for Red Hat Enterprise Linux / CentOS 6.4 and later
- KVM qemu 2.11 for SuSE Linux Enterprise Server 12 SLES 12
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### ORDERING INFORMATION

The following SKUs adopt the perpetual licensing scheme: available with marketplace-listed products.

<table>
<thead>
<tr>
<th>Product</th>
<th>SKU</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FortiGate-VM01</td>
<td>FG-VM01, FG-VM01V</td>
<td>FortiGate-VM Virtual appliance: 1x vCPU core. No VDOM by default for FG-VM01V model.</td>
</tr>
<tr>
<td>FortiGate-VM02</td>
<td>FG-VM02, FG-VM02V</td>
<td>FortiGate-VM Virtual appliance: 2x vCPU cores. No VDOM by default for FG-VM02V model.</td>
</tr>
<tr>
<td>FortiGate-VM04, FG-VM04V</td>
<td></td>
<td>FortiGate-VM Virtual appliance: 4x vCPU cores. No VDOM by default for FG-VM04V model.</td>
</tr>
<tr>
<td>FortiGate-VM08</td>
<td>FG-VM08, FG-VM08V</td>
<td>FortiGate-VM Virtual appliance: 8x vCPU cores. No VDOM by default for FG-VM08V model.</td>
</tr>
<tr>
<td>FortiGate-VM16</td>
<td>FG-VM16, FG-VM16V</td>
<td>FortiGate-VM Virtual appliance: 16x vCPU cores. No VDOM by default for FG-VM16V model.</td>
</tr>
<tr>
<td>FortiGate-VM32, FG-VM32V</td>
<td></td>
<td>FortiGate-VM Virtual appliance: 32x vCPU cores. No VDOM by default for FG-VM32V model.</td>
</tr>
<tr>
<td>FortiGate-VMUL</td>
<td>FG-VMUL, FG-VMULV</td>
<td>FortiGate-VM Virtual appliance: Unlimited vCPU cores. No VDOM by default for FG-VMULV model.</td>
</tr>
</tbody>
</table>

### Optional Accessories/Spares

<table>
<thead>
<tr>
<th>SKU</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FG-VDOM-5-UG</td>
<td>Upgrade license for adding 5 VDOMs to FortiOS 5.4 and later, limited by platform maximum VDOM capacity.</td>
</tr>
<tr>
<td>FG-VDOM-10-UG</td>
<td>Upgrade license for adding 10 VDOMs to FortiOS 5.4 and later, limited by platform maximum VDOM capacity.</td>
</tr>
<tr>
<td>FG-VDOM-20-UG</td>
<td>Upgrade license for adding 20 VDOMs to FortiOS 5.4 and later, limited by platform maximum VDOM capacity.</td>
</tr>
<tr>
<td>FG-VDOM-30-UG</td>
<td>Upgrade license for adding 30 VDOMs to FortiOS 5.4 and later, limited by platform maximum VDOM capacity.</td>
</tr>
<tr>
<td>FG-VDOM-50-UG</td>
<td>Upgrade license for adding 50 VDOMs to FortiOS 5.4 and later, limited by platform maximum VDOM capacity.</td>
</tr>
</tbody>
</table>

FortiGate-VM 6.2.2 no longer has RAM restriction on all vCPU models while prior versions still restrict RAM sizes per model. Upgrade to 6.2.2 is necessary to remove the restriction.
ORDERING INFORMATION

The following SKUs adopt the annual subscription licensing scheme:

<table>
<thead>
<tr>
<th>Product</th>
<th>SKU</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FortiGate-VM01-S</td>
<td>FC1-10-FOVVS-&lt;Support Bundle&gt;-02-DD</td>
<td>Subscriptions license for FortiGate-VM (1 vCPU core)</td>
</tr>
<tr>
<td>FortiGate-VM02-S</td>
<td>FC2-10-FOVVS-&lt;Support Bundle&gt;-02-DD</td>
<td>Subscriptions license for FortiGate-VM (2 vCPU cores)</td>
</tr>
<tr>
<td>FortiGate-VM04-S</td>
<td>FC3-10-FOVVS-&lt;Support Bundle&gt;-02-DD</td>
<td>Subscriptions license for FortiGate-VM (4 vCPU cores)</td>
</tr>
<tr>
<td>FortiGate-VM08-S</td>
<td>FC4-10-FOVVS-&lt;Support Bundle&gt;-02-DD</td>
<td>Subscriptions license for FortiGate-VM (8 vCPU cores)</td>
</tr>
<tr>
<td>FortiGate-VM16-S</td>
<td>FC5-10-FOVVS-&lt;Support Bundle&gt;-02-DD</td>
<td>Subscriptions license for FortiGate-VM (16 vCPU cores)</td>
</tr>
<tr>
<td>FortiGate-VM32-S</td>
<td>FC6-10-FOVVS-&lt;Support Bundle&gt;-02-DD</td>
<td>Subscriptions license for FortiGate-VM (32 vCPU cores)</td>
</tr>
<tr>
<td>FortiGate-VMUL-S</td>
<td>FC7-10-FOVVS-&lt;Support Bundle&gt;-02-DD</td>
<td>Subscriptions license for FortiGate-VM (Unlimited vCPU cores)</td>
</tr>
</tbody>
</table>

Support Bundle

- **258**: FortiCare services (only) included
- **815**: Enterprise Bundle included
- **820**: 360 Protection Bundle included
- **990**: UTP Bundle included

FortiOS 6.2.3+ and 6.4.0+ support the FortiGate-VM S-series. The FortiGate-VM S-series does not have RAM restrictions on all vCPU levels. FortManager 6.2.3+ and 6.4.0+ support managing FortiGate-VM S-series devices.

BUNDLES

FortiGuard Labs delivers a number of security intelligence services to augment the FortiGate firewall platform. You can easily optimize the protection capabilities of your FortiGate with one of these FortiGuard Bundles.

<table>
<thead>
<tr>
<th>Bundles</th>
<th>360 Protection</th>
<th>Enterprise Protection</th>
<th>Unified Threat Protection</th>
<th>Advanced Threat Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>FortiCare</td>
<td></td>
<td>24/7</td>
<td>24/7</td>
<td>24/7</td>
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<tr>
<td>FortiGuard App Control Service</td>
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<tr>
<td>FortiGuard IPS Service</td>
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<tr>
<td>FortiGuard Advanced Malware Protection (AMP) — Antivirus, Mobile Malware, Botnet, CDR, Virus Outbreak Protection and FortiSandbox Cloud Service</td>
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<tr>
<td>FortiGuard Antispam Service</td>
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<tr>
<td>FortiGuard IoT Detection Service</td>
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<tr>
<td>FortiConverter Service</td>
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<tr>
<td>SD-WAN Cloud Assisted Monitoring</td>
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<tr>
<td>SD-WAN Overlay Controller VPN Service</td>
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<tr>
<td>Fortinet SOCaaS</td>
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<tr>
<td>FortiAnalyzer Cloud</td>
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<tr>
<td>FortiManager Cloud</td>
<td></td>
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</table>

1. 24×7 plus Advanced Services Ticket Handling 2. Available when running FortiOS 7.0