The FortiGate-VM on AWS delivers next-generation firewall capabilities for organizations of all sizes, with the flexibility to be deployed as next-generation firewall and/or VPN gateway. It protects against cyber threats with high performance, security efficacy, and deep visibility.

**Security**
- Protects against known exploits and malware using continuous threat intelligence provided by FortiGuard Labs security services
- Identify thousands of applications including cloud applications for deep inspection into network traffic
- Protects against unknown attacks using dynamic analysis and provides automated mitigation to stop targeted attacks
- Automate incident response and threat intelligence from AWS GuardDuty threat detection service

**Certification**
- Independently tested and validated best security effectiveness and performance
- Received unparalleled third-party certifications from NSS Labs, ICSA, Virus Bulletin, and AV Comparatives
- An AWS Security Competency partner

**Networking**
- Delivers extensive routing, switching, and VPN capabilities to consolidate networking and security functionality
- Design for high availability using AWS health checks

**Management**
- Ability to manage virtual appliances and physical appliances from a single pane of glass management platform
- Map your security postures to scale up and down with your EC2
- A wide array of licensing choices to fit any infrastructure requirement
- VDOM-enabled models for multi-tenant environments (VDOM is supported with BYOL only)

**Security Fabric**
- Enables Fortinet and Fabric-ready partners’ products to collaboratively integrate and provide end-to-end security across the entire attack surface

Fortinet's comprehensive security virtual appliance lineup supports on AWS
### Deployment

**Next Generation Firewall (NGFW)**

- Combines threat prevention security capabilities into a single power virtual appliance instance
- Reduces complexity by creating campus topology view and providing granular visibility of devices, users and threat information
- Identifies and stops threats with powerful intrusion prevention beyond port and protocol that examines the actual content of your network traffic
- Extends security capabilities with Security Fabric integration

**VPN Gateway**

- Direct Connect utilizing FortiGate firewalls for SSL and IPsec VPNs into and out of the AWS VPCs
- VGW to FortiGate VPN between VPCs
- Hybrid cloud site to site IPsec VPN
- Remote access VPN

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![FortiGate-VM on AWS deployment as NGFW and VPN Gateway](image)

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### AWS Integration

- Fortinet embeds the latest AWS Auto Scaling functionality and FortiGate CloudFormation template configuration into our cloud security fabric, providing automation based on resource demand from your cloud workloads.
- Accelerate time-to-protection for new threats detected by AWS GuardDuty by deploying native AWS scripting to automatically push malicious IP or DNS addresses into dynamic FortiGate policies.
- Provide service resiliency with AWS native load balancer.
Fortinet Security Fabric

Security Fabric
The Security Fabric delivers broad visibility, integrated AI-driven breach prevention, 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 tied together under a single pane of glass management thereby delivering leading security capabilities across your entire environment while reducing the complexity significantly.

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.
- Improved user experience with innovative SD-WAN capabilities and ability to detect, contain and isolate threats with Intent-based segmentation.

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
Licensing

With a multitude of deployment methods supported across various private and public cloud deployments, FortiGate-VM for AWS supports both on-demand (PAYG) and bring-your-own-license (BYOL) licensing models.

On-demand licensing is a highly flexible option for both initial deployments and growing them as needed. With a wide selection of supported instance types, there is a solution for every use case. This license offers FortiOS with a UTM bundle.

BYOL is ideal for migration use cases, where an existing private cloud deployment is migrated to a public cloud deployment. When using an existing license, the only additional cost would be the price for the AWS instances.

Specifications

FortiGate-VM is available for purchase in all regions, including AWS GovCloud and AWS China.

The following is the system requirement for BYOL licenses:

<table>
<thead>
<tr>
<th>VM-01/01V/01S</th>
<th>VM-02/02V/02S</th>
<th>VM-04/04V/04S</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>System Requirement</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vCPU (Minimum / Maximum)</td>
<td>1 / 1</td>
<td>1 / 2</td>
</tr>
<tr>
<td><strong>Technical Specifications</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network Interface Support (Minimum / Maximum)</td>
<td>1 / 18</td>
<td>1 / 18</td>
</tr>
<tr>
<td>Virtual Domains (Default / Maximum)</td>
<td>10 / 10</td>
<td>10 / 25</td>
</tr>
<tr>
<td>Firewall Policies</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Specifications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Requirement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>vCPU (Minimum / Maximum)</td>
<td>1 / 1</td>
<td>1 / 2</td>
</tr>
<tr>
<td><strong>Technical Specifications</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network Interface Support (Minimum / Maximum)</td>
<td>1 / 18</td>
<td>1 / 18</td>
</tr>
<tr>
<td>Virtual Domains (Default / Maximum)</td>
<td>10 / 10</td>
<td>10 / 25</td>
</tr>
<tr>
<td>Firewall Policies</td>
<td>10,000</td>
<td>10,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Specification</th>
<th>VM-01/01V/01S</th>
<th>VM-02/02V/02S</th>
<th>VM-04/04V/04S</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Sessions / Second (TCP)</td>
<td>92,000</td>
<td>210,000</td>
<td>210,000</td>
</tr>
<tr>
<td>IPS Throughput in Mbps</td>
<td>6,200</td>
<td>20,000</td>
<td>20,000</td>
</tr>
<tr>
<td>IPS HTTP 1M in Mbps</td>
<td>13,000</td>
<td>13,000</td>
<td>13,000</td>
</tr>
<tr>
<td>Application Control Throughput in Mbps</td>
<td>6,400</td>
<td>13,200</td>
<td>13,200</td>
</tr>
<tr>
<td>NGFW Throughput</td>
<td>1,100</td>
<td>2,100</td>
<td>2,100</td>
</tr>
<tr>
<td>IPS HTTP 1M with UDP 1518 bytes</td>
<td>1,600</td>
<td>1,960</td>
<td>1,960</td>
</tr>
<tr>
<td>Threat Protection Throughput</td>
<td>1,960</td>
<td>1,960</td>
<td>1,960</td>
</tr>
</tbody>
</table>

Actual performance may vary depending on the network and system configuration. Please note that these metrics are updated periodically as the product performance keeps improving through internal testing. The discrepancy in the performance numbers may be noted in different versions of the document so please make sure to refer to the latest datasheets.

Performance metrics were observed using FortiGate-VM BYOL instances using FOS v6.2.1 and FortiTester-VM running on AWS.

1. The number of consumable network interfaces varies depending on AWS instance types/sizes. 2. The latest information about AWS bandwidth is found on https://aws.amazon.com/ec2/instance-types/. 3. IPS performance is measured using Enterprise Traffic Mix and 1.5 Mbyte HTTP. 4. Application Control performance is measured with 64 Kbyte HTTP traffic. 5. NGFW performance is measured with IPS and Application Control enabled, based on Enterprise Traffic Mix. 6. Threat Protection performance is measured with IPS and Application Control and Malware protection enabled, based on Enterprise Traffic Mix.

* Not applicable to FG-VMxxV series as VDOMs are not supported by default. VDOMs can be added with separately purchased VDOM licenses. See ORDER INFORMATION for VDOM SALs.
### Specifications

FortiGate-VM is available for purchase in all regions, including AWS GovCloud and AWS China.

The following is the system requirement for BYOL licenses:

<table>
<thead>
<tr>
<th>System Requirement</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 (Minimum / Maximum)</td>
<td>1 / 8</td>
<td>1 / 16</td>
<td>1 / 32</td>
<td>1 / Unlimited</td>
</tr>
<tr>
<td>Technical Specifications</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network Interface Support (Minimum / Maximum)</td>
<td>1 / 18</td>
<td>1 / 18</td>
<td>1 / 18</td>
<td>1 / 18</td>
</tr>
<tr>
<td>Virtual Domains (Default / Maximum) *</td>
<td>10 / 500</td>
<td>10 / 500</td>
<td>10 / 500</td>
<td>10 / 500</td>
</tr>
<tr>
<td>Firewall Policies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENA Driver - Yes</td>
<td>Up to 25 Gbps</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instance to be Measured</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D5n.2xlarge</td>
<td>200,000</td>
<td>200,000</td>
<td>200,000</td>
<td></td>
</tr>
<tr>
<td>AWS Bandwidth *</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firewall Throughput (UDP Packets) in Mbps</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Sessions / Second (TCP)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPS Throughput in Mbps *</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPS HTTP 1M in Mbps *</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Application Control Throughput in Mbps</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NGFW Throughput *</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Threat Protection Throughput *</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPSec VPN Throughput (SMAC-256) with UDP 1518 bytes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Actual performance may vary depending on the network and system configuration. Please note that these metrics are updated periodically as the product performance keeps improving through internal testing. The discrepancy in the performance numbers may be noted in different versions of the document so please make sure to refer to the latest datasheets.

For sizing guide, please refer to the sizing document available on www.fortinet.com

### Order Information

The following are SKUs that can be acquired for BYOL scheme. For PAYG/On-Demand subscription, various instance/VM types are available on Marketplace. BYOL is perpetual licensing, as opposed to PAYG/On-Demand, which is an hourly subscription 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: 1 x 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: 2 x vCPU cores. No VDOM by default for FG-VM02V model.</td>
</tr>
<tr>
<td>FortiGate-VM04</td>
<td>FG-VM04, FG-VM04V</td>
<td>FortiGate-VM virtual appliance: 4 x 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: 8 x 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: 16 x vCPU cores. No VDOM by default for FG-VM16V model.</td>
</tr>
<tr>
<td>FortiGate-VM32</td>
<td>FG-VM32, FG-VM32V</td>
<td>FortiGate-VM virtual appliance: 32 x 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>

<table>
<thead>
<tr>
<th>Optional Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virtual Domain License Add 5</td>
</tr>
<tr>
<td>Virtual Domain License Add 15</td>
</tr>
<tr>
<td>Virtual Domain License Add 25</td>
</tr>
<tr>
<td>Virtual Domain License Add 50</td>
</tr>
<tr>
<td>Virtual Domain License Add 240</td>
</tr>
</tbody>
</table>

*Not applicable to FG-VMxxV series as VDOMs are not supported by default. VDOMs can be added with separately purchased VDOM licenses. See ORDER INFORMATION for VDOM SKUs.*

1. The number of consumable network interfaces varies depending on AWS instance type/sizes.
2. The latest information about AWS bandwidth is found on https://aws.amazon.com/ec2/instance-types/.
3. IPS performance is measured using Enterprise Traffic Mix and 1 Megs HTTP.
4. Application Control performance is measured with 64 Kbyte HTTP traffic.
5. IPS/W performance is measured with IPS and Application Control enabled, based on Enterprise Traffic Mix.
6. Threat Protection performance is measured with IPS and Application Control and Malware protection enabled, based on Enterprise Traffic Mix.

For sizing guide, please refer to the sizing document available on www.fortinet.com

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* FG-VMxxV 6.0.0 supports 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.
Order Information

The following SKUs adopt 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-FGVVS-Support Bundle - 02-02-DD</td>
<td>Subscriptions license for FortiGate-VM (1 vCPU core)</td>
</tr>
<tr>
<td>FortiGate-VM02-S</td>
<td>FC2-10-FGVVS-Support Bundle - 02-02-DD</td>
<td>Subscriptions license for FortiGate-VM (2 vCPU cores)</td>
</tr>
<tr>
<td>FortiGate-VM04-S</td>
<td>FC3-10-FGVVS-Support Bundle - 02-02-DD</td>
<td>Subscriptions license for FortiGate-VM (4 vCPU cores)</td>
</tr>
<tr>
<td>FortiGate-VM08-S</td>
<td>FC4-10-FGVVS-Support Bundle - 02-02-DD</td>
<td>Subscriptions license for FortiGate-VM (8 vCPU cores)</td>
</tr>
<tr>
<td>FortiGate-VM16-S</td>
<td>FC5-10-FGVVS-Support Bundle - 02-02-DD</td>
<td>Subscriptions license for FortiGate-VM (16 vCPU cores)</td>
</tr>
<tr>
<td>FortiGate-VM32-S</td>
<td>FC6-10-FGVVS-Support Bundle - 02-02-DD</td>
<td>Subscriptions license for FortiGate-VM (32 vCPU cores)</td>
</tr>
<tr>
<td>FortiGate-VMUL-S</td>
<td>FC7-10-FGVVS-Support Bundle - 02-02-DD</td>
<td>Subscriptions license for FortiGate-VM (Unlimited vCPU cores)</td>
</tr>
</tbody>
</table>

Support Bundle

- 258: FortiCare services (only) included
- 990: UTM Bundle included
- 991: Enterprise Bundle included
- 992: Protection Bundle included

For more information on contracts and services, contact your Fortinet sales representative. FortiGate-VM S-series is supported on FortiOS 6.2.3+ and does not have RAM restriction on all vCPU levels. Upgrades of CPU numbers and support bundle types during the contracted term are available. Downgrades are not supported. Ask Fortinet sales correspondent for more detail.

Bundles

FortiGuard Bundle

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>UTM Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>FortiCare</td>
<td>AS1</td>
<td>V-I</td>
<td>V-I</td>
</tr>
<tr>
<td>FortiGuard App Control Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FortiGuard IPS Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FortiGuard Advanced Malware Protection (AMP) — Antivirus, Mobile Malware, Botnet, CDR, Virus Outbreak Protection and FortiSandbox Cloud Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FortiGuard Web Filtering Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FortiGuard Antispam Service</td>
<td></td>
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<tr>
<td>FortiGuard Security Rating Service</td>
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<td></td>
<td></td>
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<tr>
<td>FortiGuard Industrial Service</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>FortiCASB SaaS-only Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FortiConverter Service</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>SD-WAN Cloud Assisted Monitoring</td>
<td></td>
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<tr>
<td>SD-WAN Overlay Controller VPN Service</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>FortiAnalyzer Cloud 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FortiManager Cloud 2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. 24x7 plus Advanced Services Ticket Handling
2. Available when running FortiOS 6.2
3. FG VMxS series does not include FortiCASB in its Enterprise and 360 protection bundles