



ORDERING GUIDE

Fortinet Cloud NGFW Solutions

FortiOS powers all of Fortinet's next generation firewall (NGFW) offerings, including cloud network security solutions. Customers can purchase these solutions in flexible ways that suit their requirements, such as virtual machines (VM) for private and public cloud networks and software-as-a-service solutions for public cloud networks. They can also buy subscription licenses from cloud marketplaces and choose between pay as you go options or annual commitment contracts. To help customers select the most suitable cloud network security solution, this guide provides different options:

- **FortiGate-VM:** for customers seeking to protect private cloud workloads or tailor FortiGate-VM deployment to their needs in the public cloud, FortiGate-VM is the best (and only) option. It allows them to specifically design network integration and use the latest FortiOS enhancements. FortiGate-VM is the only cloud NGFW solution currently offering NAT, VPN, and SD-WAN functionality.
- **FortiGate-CNF:** best for customers looking to invest the minimum amount of time in network design and integration. It offers rich automation capabilities, and customers do not need FortiOS expertise to secure their cloud networks. FortiGate-CNF is only supported for AWS and can be purchased through the AWS marketplace.
- **FortiFlex (formerly Flex-VM):** allows customers to consume FortiGate-VM and other Fortinet products on-demand using a points-based system, but does not provide unique technical capabilities.

FORTIGATE-VM VIRTUAL NGFW

FortiGate is the flagship NGFW product family from Fortinet that delivers high-speed networking, increased scalability, and optimized performance features. Operators using the FortiGate NGFW can manage all of their security risks with the industry's best-of-breed IPsec, GTP, PFCP, IPS, and TLS inspection; and threat protection. FortiGate comes in different form factors and sizes and you can deploy it at the network edge, the core data center, and the public cloud. Fortinet offers FortiGate as appliances or virtual machines with different options for interface types, port density, security efficacy, and throughput to keep your network connected and secure wherever it is needed.

FortiGate-VM is available as a virtual appliance and for several cloud flavors, such as:

- **Public clouds:** Amazon Web Services (AWS), Microsoft Azure, Google Cloud Platform (GCP), Oracle Cloud Infrastructure (OCI), IBM Cloud, and Alibaba Cloud (AliCloud)
- **Private clouds/hypervisors:** VMware (vSphere/NSX-T), OpenStack/KVM, Microsoft Hyper-V, and Citrix-Xen

PRODUCT OFFERINGS - SECURITY

Fortinet offers FortiGate-VM in the following license schemes:

- **Term-based subscription:** FortiGate-VM s-series
- **FortiFlex:** points-based consumption model for enterprise and managed security service providers (MSSP) (12-, 36-, or 60-month subscription)
- **Public cloud pay-as-you-go (PAYG):** per-hour priced (based in number of vCPUs) PAYG offers available in AWS, Azure, GCP, and OCI marketplace

	ATP	UTP	ENTERPRISE
Security Updates and Services			
Device/OS Detection	☑	☑	☑
SaaS Database (ISDB)	☑	☑	☑
Application Control	☑	☑	☑
Certificates	☑	☑	☑
IPS	☑	☑	☑
Antivirus	☑	☑	☑
Botnet DB	☑	☑	☑
Mobile Malware	☑	☑	☑
FortiGate Cloud Sandbox	☑	☑	☑
Outbreak Prevention	☑	☑	☑
Web Filtering		☑	☑
Video Filtering		☑	☑
Secure DNS Filtering		☑	☑
AntiSpam		☑	☑
IoT Mac Database		☑	☑
IoT Query Service			☑
Fortinet Security Fabric Rating			☑
Industrial Signature Service			☑
Networking and Management Services			
DDNS	☑	☑	☑
IPv6 DDNS	☑	☑	☑
GeoIP Updates	☑	☑	☑
FortiCare Support Services			
Enhanced Support (24x7)	☑	☑	☑
FortiConverter			☑

FortiGate-VMs with **eight or more vCPUs** are eligible to run the full extended database (DB). Any FortiGate-VM with less than eight cores receives a slim DB for performance, which is a smaller version of the full-extended DB that contains top active IPS signatures. The customer can choose eight or more vCPUs for full IPS protection or lower vCPUs for cost and performance.

For details, see [Support full extended IPS database for FortiGate VMs with eight cores or more](#).

PRODUCT OFFERINGS - PERFORMANCE

FortiGate-VM delivers high performance by combining technologies such as single root I/O virtualization (SR-IOV) and Fortinet vSPU. SR-IOV allows the partition of a single physical network controller into multiple virtual interfaces called virtual functions. The Fortinet vSPU refers to the combination of FortiOS vNP and DPDK libraries in the FortiGate-VM. The vSPU enhances FortiGate-VM performance by offloading part of packet processing to userspace while bypassing kernel within the operating system. The vNP is the software emulation of a subset of Fortinet's network processor (NP).

For performance information, see the [FortiGate-VM ESXi datasheet](#) and [FortiGate-VM KVM datasheet](#).

ORDER INFORMATION - PUBLIC CLOUD

PUBLIC CLOUD		
1 vCPU	Order Information	Recommended Instance*
AWS	FC1-10-FGVVS-990-02-DD	t2.small / c7gn.medium
Azure		Standard_D2s_v5
GCP		n1-standard-1 / t2a-standard-1
2 vCPU		
AWS	FC2-10-FGVVS-990-02-DD	c6i.large / c7gn.large
Azure		Standard_D2s_v5
GCP		n2-standard-2 / t2a-standard-2
Oracle		VM.Standard3.Flex (1 OCPU) / VM.Standard.A1.Flex (2 OCPU)
AliCloud		ecs.c6.large
4 vCPU		
AWS	FC3-10-FGVVS-990-02-DD	c6i.xlarge / c7gn.xlarge
Azure		Standard_D4s_v5
GCP		n2-standard-4 / t2a-standard-4
Oracle		VM.Standard3.Flex(2 OCPU) / VM.Standard.A1.Flex (4 OCPU)
AliCloud		ecs.c6.xlarge
8 vCPU		
AWS	FC4-10-FGVVS-990-02-DD	c6i.2xlarge / c7gn.2xlarge
Azure		Standard_D8s_v5
GCP		n2-standard-8 / t2a-standard-8
Oracle		VM.Standard3.Flex(4 OCPU) / VM.Standard.A1.Flex (8 OCPU)
AliCloud		ecs.c6.2xlarge
16 vCPU		
AWS	FC5-10-FGVVS-990-02-DD	c6i.4xlarge / c7gn.4xlarge
Azure		Standard_D16s_v5
GCP		n2-standard-16 / t2a-standard-16
Oracle		VM.Standard3.Flex(8 OCPU)/ VM.Standard.A1.Flex (16 OCPU)
AliCloud		ecs.c6.4xlarge
32 vCPU		
AWS	FC6-10-FGVVS-990-02-DD	c6i.8xlarge / c7gn.8xlarge
Azure		Standard_D32s_v5
GCP		n2-standard-32 / t2a-standard-32
Oracle		VM.Standard3.Flex 16 OCPU / VM.Standard.A1.Flex (32 OCPU)
AliCloud		ecs.c6.8xlarge
Unlimited CPU		
AWS	FC7-10-FGVVS-990-02-DD	c6i.16xlarge / c7gn.16xlarge
GCP		n2-standard-48, n2-standard-64, n2-standard-80, t2a-standard-48
Oracle		VM.Standard3.Flex / VM.Standard.A1.Flex

* c6i.large to c6i.8xlarge support up to 12.5 Gbps.

ORDER INFORMATION - PUBLIC CLOUD

PUBLIC CLOUD - PAYG			
Architecture	Order Information	Recommended Instance	Marketplace Product
AWS Intel	PAYG	c6i.xlarge	AWS FortiGate x64
AWS ARM		c7gn.large	AWS FortiGate ARM
Azure*		Dv4 Series (Intel) Dav4 Series (AMD)	Azure FortiGate x64
GCP		n1-standard-1	GCP FortiGate x64
OCI**		VM.Standard.3.Flex (Intel) VM.Standard.E4.Flex (AMD) VM.Standard.A1.Flex (ARM)	OCI 2 OCPU x64 OCI 4 OCPU x64 OCI 8 OCPU x64 OCI 24 OCPU x64
AliCloud		ecs.c6 instance Family (Intel)	AliCloud FortiGate x64

* Azure PAYG is selected on the portal UI with the FortiOS version.

** In Oracle Cloud, note the following:
 - AMD and Intel: 1 OCPU = 2 vCPU
 - ARM: 1 OCPU = 1 vCPU
 Plan deployments accordingly.

ORDER INFORMATION - PRIVATE CLOUD

HYBRID CLOUD: VMWARE ESXI, KVM, MICROSOFT HYPER-V, AND XEN

1 vCPU		Term subscription order information
ATP Bundle		FC1-10-FGVVS-993-02-DD
UTP Bundle		FC2-10-FGVVS-990-02-DD
Enterprise Bundle		FC2-10-FGVVS-814-02-DD
2 vCPU		
ATP Bundle		FC2-10-FGVVS-993-02-DD
UTP Bundle		FC2-10-FGVVS-990-02-DD
Enterprise Bundle		FC2-10-FGVVS-814-02-DD
4 vCPU		
ATP Bundle		FC3-10-FGVVS-993-02-DD
UTP Bundle		FC3-10-FGVVS-990-02-DD
Enterprise Bundle		FC3-10-FGVVS-814-02-DD
8 vCPU		
ATP Bundle		FC4-10-FGVVS-993-02-DD
UTP Bundle		FC4-10-FGVVS-990-02-DD
Enterprise Bundle		FC4-10-FGVVS-814-02-DD
16 vCPU		
ATP Bundle		FC5-10-FGVVS-993-02-DD
UTP Bundle		FC5-10-FGVVS-990-02-DD
Enterprise Bundle		FC5-10-FGVVS-814-02-DD
32 vCPU		
ATP Bundle		FC6-10-FGVVS-993-02-DD
UTP Bundle		FC6-10-FGVVS-990-02-DD
Enterprise Bundle		FC6-10-FGVVS-814-02-DD
Unlimited CPU		
ATP Bundle		FC7-10-FGVVS-993-02-DD
UTP Bundle		FC7-10-FGVVS-990-02-DD
Enterprise Bundle		FC7-10-FGVVS-814-02-DD
Virtual Domain (VDOM) Upgrade Options (stackable)		
+ 5 VDOMs		FG-VDOM-5-UG
VDOM Subscription Options		
+5 VDOMs		FC1-10-FGVVS-498-02-DD
FortiCarrier Upgrade Subscription		
FortiCarrier Upgrade Subscription		FC-10-FGVVS-948-02-DD

FORTIGATE CNF AS A SERVICE

FortiGate Cloud-Native Firewall (CNF) is a SaaS-delivered NGFW service that simplifies cloud network security while implicitly providing availability and scalability. FortiGate-CNF reduces the network security operations workload by eliminating the need to configure, provision, and maintain any firewall software infrastructure while allowing security teams to focus on security policy management. FortiGate-CNF offers customers the flexibility to procure on demand or use annual contracts. Currently FortiGate CNF can protect cloud networks in Azure and AWS.

FortiGate-CNF is available for purchase **only through the AWS Marketplace** (includes cloud marketplace channel partners) using either a consumption or annual contract listing.

- Consumption and Free Trial listing has three pricing dimensions:
 - CNF instance and support hours - the number of hours (or part of) that a single CNF instance is running also entitles support for that particular CNF instance.
 - Traffic Processing - since all traffic passing through the CNF instance is inspected by the FortiGate CNF Firewall engine, all traffic is charged for Firewall processing.
 - Security Processing - traffic that will be processed by the IPS, URL/DNS Filtering or SandBox engines will be charged accordingly on a per GB basis.
 - Customers will only be charged by the volume of traffic that was actually processed by each security function.
 - For more information, see FortiGate CNF - Cloud Native Firewall as a Service - Consumption.
- Annual Contract listing works with a credits system:
 - This Product entitles customers for 1,000,000 (one million) credits. the credits are subtracted based on the actual usage (deployed CNF instances and traffic flowing through them) of different features as following: 1 CNF Hour including support = 96 credits 1 GB of traffic processing = 1 credit 1 GB of Advanced Security processing = 1 credit
 - Once the 1,000,000 credits are all used, you will be entering overage charges as listed here as well, these charges are identical to the PAYG listing for FortiGate-CNF. you can always top up your credits by purchasing an additional 1,000,000
 - For more information, see FortiGate CNF - Cloud Native Firewall as a Service - Annual Contract.

For Forecasting purposes Fortinet Account teams should use the following SKUs in SFDC: FCNF-1MCREDIT-AWS-PAYG-12 for 1 year contracts, FCNF-1MCREDIT-AWS-PAYG-24 for 2 year contracts and FCNF-1MCREDIT-AWS-PAYG-36 for 3 year contracts. you should select AWS as the distribution partner.

For more information about the product, review the datasheet.

FORTIFLEX PROGRAM

PRODUCT OFFERING - OVERVIEW

FortiFlex (formerly Flex-VM) allows customers to easily manage license entitlements for FortiGate-VM, FortiWeb-VM, FortiManager-VM and FortiAnalyzer-VM. You can use the FortiFlex portal or its API to create VM configurations, generate licensing entitlements, and monitor resource consumption in the form of points. FortiFlex subscribers can create multiple sets of a single VM entitlement that corresponds to a licensed VM. Each entitlement contains a base VM with the number of vCPUs, FortiGuard services (bundles or a la carte) and FortiCare support services. Resource consumption is based upon predefined points that are calculated daily.

Devices with usage entitlements require a one-time token to be installed on every VM. These tokens can be injected into the FortiGate-VM via cloud-init or OVF Environment, once the VM configurations and vCPU quantities are defined in the Flex-VM portal, and the VMs are deployed on the customer-managed platform in supported clouds and hypervisors.

FortiFlex is available as a prepaid service for enterprise customers and as a postpaid service for approved MSSP partners.

FortiFlex provides a powerful REST API that you can combine with the FortiOS REST API to provide a full automated VM lifecycle management.

For more information about the FortiFlex program, see its [ordering guide](#).

ORDER INFORMATION

The following applies for both Enterprise and MSSP:

- You must register all SKU purchases within one year of the purchase date.
- The minimum consumption is to purchase 50000 consumption points.

For Enterprise, in the case of excess consumption, there is a 90-day grace period to recover from a negative balance. VM entitlements stop operation after the grace period ends.

For MSSP, in the case of underconsumption, there is a true-up to meet the minimum annual consumption amount if usage is lower. VM entitlements stop operation after the grace period ends.

FLEX-VM PROGRAMS	SKU
Prepaid - Enterprise	Program FC-10-ELAVR-221-02-DD
	Annual Points (12 months) LIC-ELAVM-10K*
	Multi-Year Points (36 or 60 months) LIC-ELAVMMY-50K-DD (DD= 36 or 60 months)
Postpaid - MSSP	Program FC-10-ELAVS-221-02-DD (DD= 12 or 36 or 60 months)
	Monthly Billing FCB-ELAVM-01

* Any unconsumed points from an annual SKU purchase depreciate per terms in the Service Description.

FLEX-VM DAILY POINTS PRICING

You can calculate daily points pricing for both FortiGate-VM and FortiWeb-VM using the [Flex-VM calculation tool](#) available on FNDN.

Select the product type, number of vCPUs, CPU size, and service bundle accordingly.

The screenshot shows the 'Flex-VM calculator' interface. It has four numbered steps: 1. PRODUCT TYPE (FortiGate Virtual Machine selected), 2. NUMBERS OF VMS (5), 3. CPU SIZE (VM-02), and 4. SERVICE BUNDLE (ATP). A central box displays 'DAILY POINT 18.05'.

NSE TRAINING AND CERTIFICATION

Fortinet NSE 4 FortiGate Security

Instructor-led learning of basic FortiGate features, including security profiles.

Fortinet NSE 4 FortiGate Infrastructure

Instructor-led learning of use advanced FortiGate networking and security. Topics include features commonly applied in complex or larger enterprise or MSSP networks, such as advanced routing, transparent mode, redundant infrastructure, site-to-site IPsec VPN, single sign-on (SSO), and diagnostics.

- FT-FGT-SEC – NSE4/FGT-SEC Training – 3 days
- FT-FGT-INF – NSE 4/FGT-INF Training – 2 days

Certification

NSE4 Network Security Professional:

- NSE-EX-CERT

Pre-requisites

- Knowledge of network protocols
- Basic understanding of firewall concepts
- Knowledge of OSI layers
- Knowledge of firewall concepts in an IPv4 network
- Knowledge of the fundamentals of FortiGate, as presented in the FortiGate Security course

Reference

Course description

https://training.fortinet.com/local/staticpage/view.php?page=library_fortigate-security

https://training.fortinet.com/local/staticpage/view.php?page=library_fortigate-infrastructure

CHEAT SHEET

THE SPACE

Virtualization and software-defined networks (SDN) are rapidly transforming datacenters into agile, innovative, software-defined, and cost-effective clouds: public and private.

Security is not guaranteed in these cloud environments and level of protection differs with various deployment models.

A virtual NGFW increases visibility and protection in these cloud environments regardless of variations in deployments.

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BYOL: you can use bring your own license (BYOL) for FortiGate-VM in virtualized datacenter, private cloud, and public cloud deployments.

BYOL licensing types include term subscriptions (12/36/60 months), Flex-VM subscriptions (12/36/60 months), and perpetual. You purchase BYOL licenses upfront, except for Flex-VM postpaid subscriptions for partners.

Cloud marketplace instance: customers can purchase pay-as-you-go instances of FortiGate-VM from a cloud service provider marketplace, such as AWS, Azure, GCP, AliCloud, or OCI. These instances incur hourly charges and payable monthly. Depending on the cloud provider, customers can also enroll into annual contracts with better hourly pricing.

WHERE TO FIND MORE INFORMATION

- [FUSE Fortinet Cloud Security](#)
- [Flex-VM HighSpot Hub](#)

Visit www.fortinet.com for more details

PRODUCT LINEUP

FortiGate-VM product supports various cloud types and providers:

- **Public clouds:** AWS, GCP, Azure, OCI, IBM, and AliCloud
- **Private clouds:** VMware, OpenStack/KVM, Microsoft Hyper-V, and Citrix Xen

Flex-VM adds flexibility on top of the FortiGate-VM and FortiWeb-VM offerings by providing a point-consumption-based model for enterprise and MSSP.

MAJOR HIGHLIGHTS

Fortinet has comprehensive security solutions for clouds covering the different network areas.

We have a market-leading TCO and scaling for user plane use cases thanks to our vSPU (vNP + DPDK). This is key to match exponential traffic growth.

The move to cloud and containers is increasing the attack surface as the internals of the compute nodes are now open.

In private networks, Fortinet has a single solution that can simultaneously secure the wired OT, the Wi-Fi, and 5G access.

We have tools to detect zero-day attacks and lateral movements as they occur.

MAJOR COMPETITORS

PAN: provides an enterprise ELA program, which only has a la carte. Lacks a program for MSSP. Daily points are usually 30% more expensive.

Juniper: SecGW and NGFW primarily. Sales tied to Ericsson. Worse performance than Fortinet.

Checkpoint: SecGW & NGFW primarily. Worse performance than Fortinet.

