



# FortiSwitch 108D-POE

## QuickStart Guide



# Table of Contents

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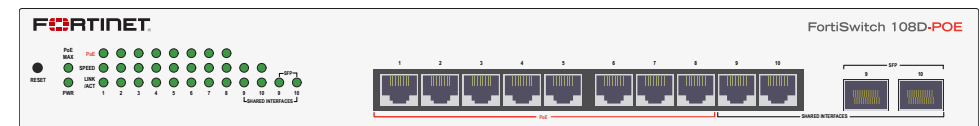
Package Contents	1
Installation	2
SFP Transceivers	4
Connect to the FortiSwitch Unit	6
Technical Specifications	8
LED Specifications	9
Cautions and Warnings	10
Regulatory Notices	13
Documentation and Links	14
Register Your Product	15
Product License Agreement	16

# Package Contents

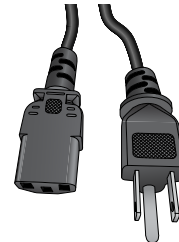
Fortinet's consolidated security solutions provide an integrated set of core security and network services in a single, easy-to-manage, high-performance appliance that is capable of supporting a wide range of deployment scenarios.

Your box contains the following:

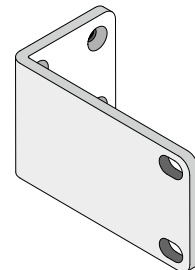
- FortiSwitch 108D-POE
- QuickStart Guide
- Power Cable
- Ethernet Cable
- 2 Rack-Mount Brackets
- 4 Rack-Mount Screws
- 8 Bracket Screws
- 4 Rubber Feet



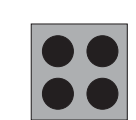
Power Cable



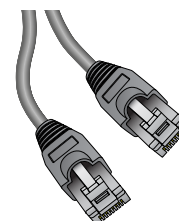
2 Rack-Mount Brackets



4 Rubber Feet



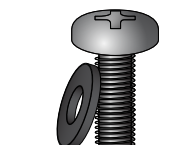
Ethernet Cable



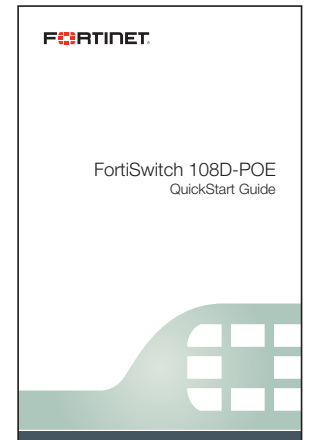
8 Bracket Screws



4 Rack-Mount Screws



QuickStart Guide



# Installation

The FortiSwitch unit can be placed on any flat surface, or mounted in any standard 19 inch rack unit with the provided rack-mount brackets and screws.

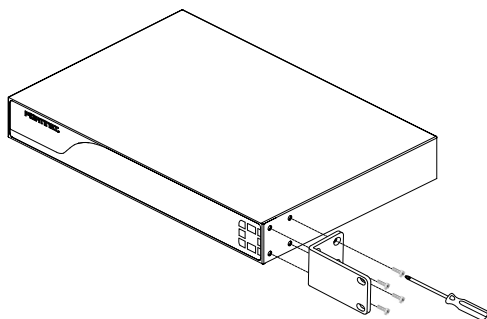
**Caution:** Electrostatic discharge (ESD) can damage your Fortinet equipment.

**Caution:** Do not place heavy objects on the unit.

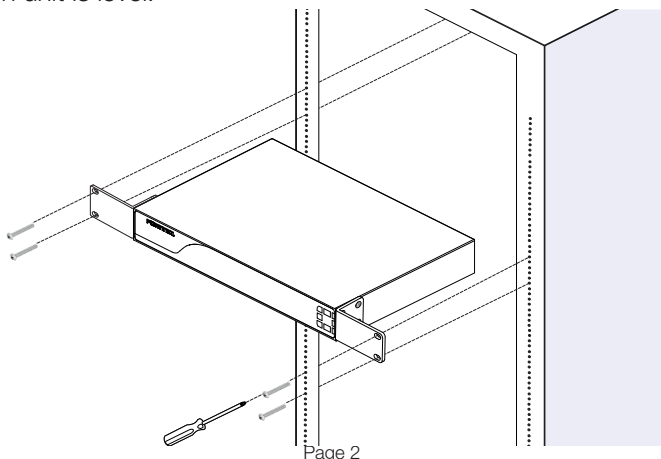
## To install the FortiSwitch unit into a rack:

**Caution:** To avoid personal injury or damage to the unit, it is recommended that two or more people install the unit into the rack.

1. Ensure that the FortiSwitch unit is placed on a stable surface prior to rack-mount installation.
2. Attach the provided rack-mount brackets to the sides of the unit using the provided screws.



3. Position the FortiSwitch unit in the rack. Ensure there is enough room around the unit to allow for sufficient air flow.
4. Line up the rack-mount bracket holes to the holes on the rack and ensure that the FortiSwitch unit is level.

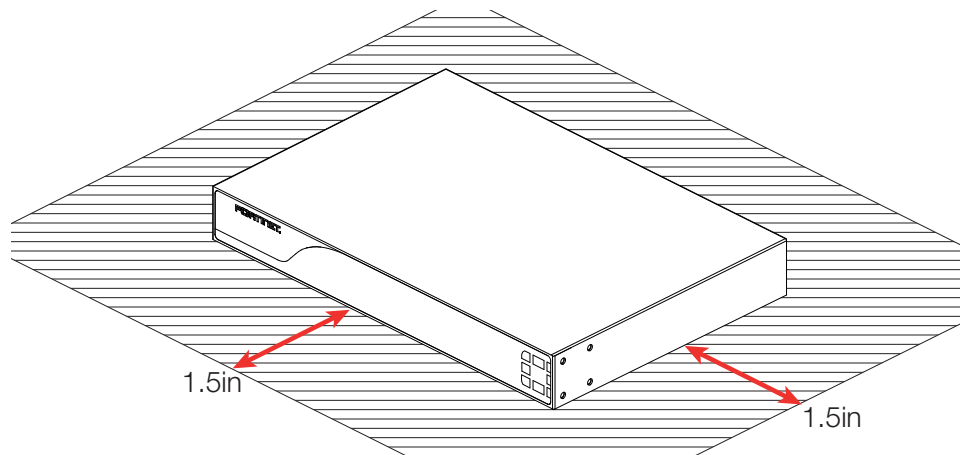


5. Finger tighten four rack-mount screws to attach the unit to the rack.
6. Verify that the spacing around the FortiSwitch unit conforms to requirements and that the unit is level, then tighten the rack-mount screws with an appropriate screwdriver.
7. Using the provided power cables, plug the cables into the rear of the unit and then into an electrical outlet.

**Note:** If the unit has a redundant power supply, each power cable should be connected to a different power source. In this way, if one power source fails, the other may still be operational and the unit will not lose power.

## To install the unit on a flat surface:

1. Ensure that the surface onto which the FortiSwitch unit to be installed is clean, level, and stable and that there is at least 1.5 inches (3.81cm) of clearance on all sides to allow for adequate airflow.
2. Attach the provided rubber feet to the bottom of the FortiSwitch unit.
3. Place the unit in the designated location.
4. Verify that the spacing around the FortiSwitch unit conforms to requirements and that the unit is level.

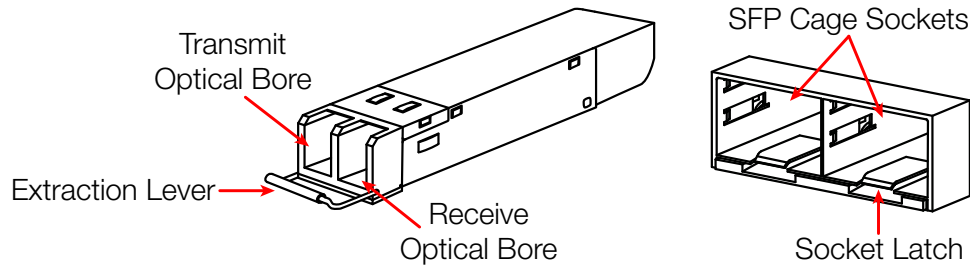


5. Using the provided power cables, plug the cables into the rear of the unit and then into an electrical outlet.

**Note:** If the unit has a redundant power supply, each power cable should be connected to a different power source. In this way, if one power source fails, the other may still be operational and the unit will not lose power.

**Caution:** Do not place heavy objects on the unit.

# SFP Transceivers



**Caution:** SFP transceivers are static sensitive devices. Use an ESD wrist strap or similar grounding device when handling transceivers.

**Caution:** Do not install or remove SFP transceivers while fiber-optic cables are still attached. This can cause damage to the cables, cable connectors, and the optical interfaces. It may also prevent the transceiver from latching correctly into the socket connector.

**Note:** Installing and removing SFP transceivers can shorten their useful life. Do not install or remove transceivers more than is necessary.

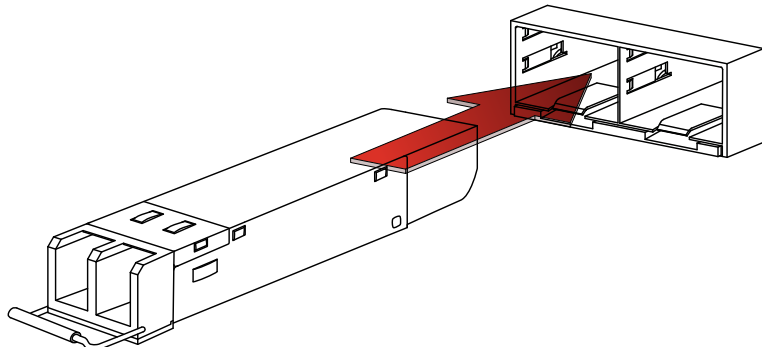
## To install the SFP transceivers:

1. Ensure that you are properly grounded.
2. Remove the caps from SFP cage sockets on the front panel of the unit.
3. Position the SFP transceiver in front of the cage socket opening and ensure that the transceiver is correctly oriented.

When the transceiver is correctly oriented, the extraction lever will be level with the socket latch.

**Note:** SFP cage socket orientation may vary. Ensure that the SFP transceiver module is correctly oriented each time that you are inserting a transceiver.

4. Hold the sides of the SFP transceiver and slide it into the cage socket until it clicks into place.



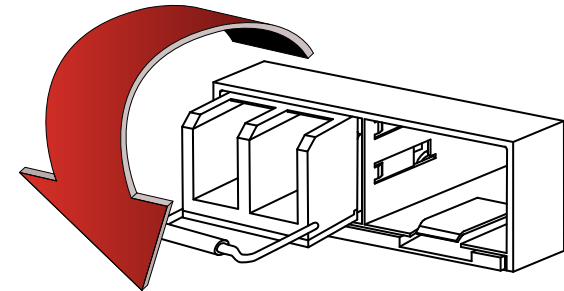
**Caution:** Do not force the SFP transceivers into the cage slots. If the transceiver does not easily slide in and click into place, it may not be aligned correctly or may be upside down. If this happens, remove the SFP transceiver, realign it or rotate it and slide it in again.

5. Press the transceiver firmly into the cage socket with your thumb.
6. Verify that the transceiver is latched correctly by grasping the sides of the transceiver and trying to pull it out without lowering the extraction lever.  
If the transceiver cannot be removed, it is installed and latched correctly.  
If the transceiver can be removed, reinsert it and press harder with your thumb.  
If necessary, repeat this process until the transceiver is securely latched into the cage socket.

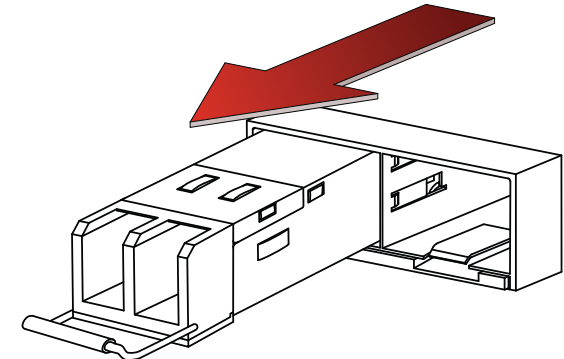
## To remove the SFP transceivers:

1. Ensure that you are properly grounded.
2. If applicable, disconnect the fiber-optic cable from the transceiver connector and install a clean dust plug in the transceiver's optical bores.
3. Pull the extraction lever out and down to eject the transceiver.

If you are unable to use your finger to open the lever, use a small flat-head screwdriver or other similar tool to open the lever.



4. Hold the sides of the transceiver and carefully pull it away from the cage socket.



5. Replace the cap on the SFP cage socket and place the removed SFP transceiver into an antistatic bag.

**Note:** Follow proper fiber-optic handling procedures when installing and removing SFP transceivers to ensure the devices remain clean and are not damaged.

# Connect to the FortiSwitch Unit

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The FortiSwitch unit requires some basic configuration to add it to your network. These basic steps include assigning IP addresses, subnet mask, and the default gateway.

The FortiSwitch unit can be configured using the Web-based Manager or the CLI.

This section will step you through both methods of connecting to the unit. Use whichever method you are most comfortable with.

## To Connect to the Web-based Manager or CLI:

1. Connect a FortiSwitch unit port to a management computer using an Ethernet cable.
2. To access the FortiSwitch unit's Web-based Manager, configure the management computer to be on the same subnet as the internal interface of the FortiSwitch unit, then use a web browser:
  - a. Browse to the *Network and Sharing Center > Change Adapter Settings > Local Area Connection Properties > Internet Protocol Version 4 (TCP/IPv4) Properties*.
  - b. Change the IP address of the management computer to 192.168.1.2 and the subnet mask to 255.255.255.0.
  - c. Start a browser of your choice and browse to <https://192.168.1.99>.
3. To access the FortiSwitch unit's CLI, start an SSH client session using a terminal emulator application and enter IP address 192.168.1.99 on port 22.
4. Type `admin` in the *Name* field, leave the *Password* field blank, and select *Log In*.

You are now ready to configure a new network, change passwords or change IP address to match your network settings.

5. In the Web-based Manager, select *System > Management > Network Interface > IPv4 Network Configuration* and enter the required information to configure the FortiSwitch unit on your network.

You can now proceed with configuring your FortiSwitch unit.

## Power Over Ethernet

The FortiSwitch 108D-POE supports IEEE 802.3af, with a PoE budget of 75W.

You can use PoE to power devices like VoIP phones or PoE-powered wireless access points. Simply plug a Cat5 or better cable into the port and the switch will determine if it is safe to provide power along with the data.

To configure PoE, log in to the device, and select *System > POE*.

## Troubleshooting Tips

Here are some tips for correcting simple problems you may have.

### Make sure the Ethernet cables are securely plugged in.

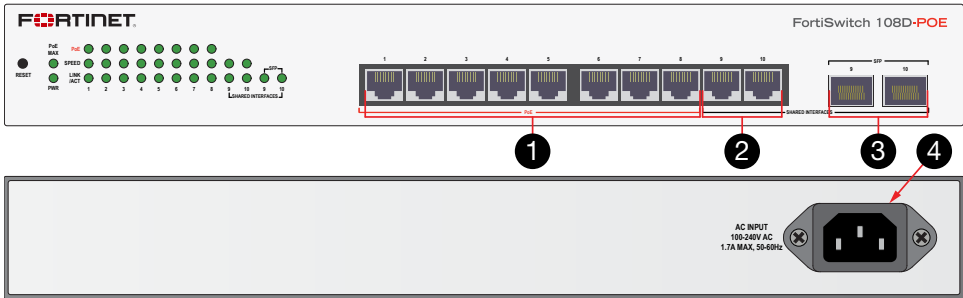
For each powered-on computer connected to the FortiSwitch with a securely plugged in Ethernet cable, the corresponding FortiSwitch LAN port status light will be lit.

### Make sure the network settings of the computer are correct.

In most cases, computers should be configured to obtain an IP address automatically via DHCP. For help with this, please see the *Administration Guide*.

If your network uses static IP addresses, be sure the switch and computer are configured with valid IP addresses for your network.

# Technical Specifications

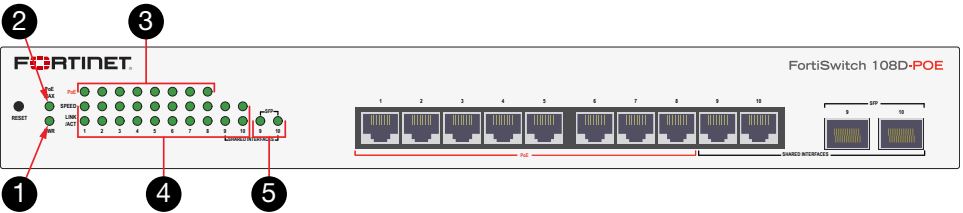


#	Interface	Type	Description
1	Ethernet Ports 1 to 8	RJ-45	Gigabit Ethernet ports with PoE, providing up to a maximum of 75W for all ports.
2	Ethernet Ports 9 & 10	RJ-45	Gigabit Ethernet ports. Shared with SFP ports 9 & 10.
3	SFP Ports 9 & 10	SFP	1Gbps/auto, small form-factor pluggable transceiver. Shared with Ethernet ports 9 & 10.
4	Power Supply		100-240V AC, 50-60Hz, 1.7A MAX

**Note:** The SFP ports are shared with the normal RJ-45 ports 9 and 10. When an optical transceiver is inserted into the SFP port and linked up, the corresponding RJ-45 port cannot be used.

**Caution:** The SFP ports should use UL listed Optical Transceiver products, rated Laser Class 1, 3.3V DC.

# LED Specifications



#	LED	State	Description
1	POWER	Green	The unit is on.
		Off	The unit is off.
2	PoE MAX	Red	Maximum power buget (75W) reached.
		Off	Maximum power budget not reached.
3	PoE	Green	PoE device connected and powered.
		Amber	Error detected.
		Off	No PoE device connected.
4	Ethernet Ports Speed	Green	Port is connected at 1Gbps.
		Amber	Port is connected at 100Mbps or 10Mbps.
		Off	Port is not in use.
	Ethernet Ports Link/Act	Green	Port is active.
		Flashing Green	Port is transmitting and receiving data.
		Off	Port is not in use.
5	SFP Ports	Green	Port is connected at 1000Mbps.
		Flashing Green	Port is transmitting and receiving data 1000Mbps.
		Amber	Port is connected at 100Mbps.
		Flashing Amber	Port is transmitting and receiving data 100Mbps.
		Off	Port is not in use.

# Cautions and Warnings

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## Environmental specifications

Ambient operating temperature: 0C to 40C

Rack Mount Instructions - The following or similar rack-mount instructions are included with the installation instructions:

Instructions de montage en rack - Les instructions de montage en rack suivantes ou similaires sont incluses avec les instructions d'installation:

Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (Tma) specified by the manufacturer.

Température ambiante élevée – S'il est installé dans un rack fermé ou à unités multiples, la température ambiante de fonctionnement de l'environnement du rack peut être supérieure à la température ambiante de la pièce. Par conséquent, il est important d'installer le matériel dans un environnement respectant la température ambiante maximale (Tma) stipulée par le fabricant.

Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

Ventilation réduite – Installation de l'équipement dans un rack doit être telle que la quantité de flux d'air nécessaire au bon fonctionnement de l'équipement n'est pas compromise.

Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

Chargement Mécanique – Montage de l'équipement dans le rack doit être telle qu'une situation dangereuse n'est pas liée à un chargement mécanique inégal.

Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

Surtenstion – Il convient de prendre l'ensemble des précautions nécessaires lors du branchement de l'équipement au circuit d'alimentation et être particulièrement attentif aux effets de la suralimentation sur le dispositif assurant une protection contre les courts-circuits et le câblage. Ainsi, il est recommandé de tenir compte du numéro d'identification de l'équipement.

Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

Fiabilité de la mise à la terre – Fiabilité de la mise à la terre de l'équipement monté en rack doit être maintenue. Une attention particulière devrait être accordée aux connexions d'alimentation autres que les connexions directes au circuit de dérivation (par exemple de l'utilisation de bandes de puissance).

*Refer to specific Product Model Data Sheet for Environmental Specifications (Operating Temperature, Storage Temperature, Humidity, and Altitude)*

*Référez à la Fiche Technique de ce produit pour les caractéristiques environnementales (Température de fonctionnement, température de stockage, humidité et l'altitude).*

## Safety

Caution: This equipment is to be used in a Network Environment 0 per IEC 62101. This product is connected only to PoE networks without routing to the outside plant.

Attention: Ce matériel doit être utilisé dans un Environnement Réseau 0 par IEC 62101. Ce produit est uniquement connecté aux réseaux PoE sans installation externe de routage.



# Regulatory Notices

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## **Federal Communication Commission (FCC) – USA**

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received; including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

**WARNING:** Any changes or modifications to this product not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## **Industry Canada Equipment Standard for Digital Equipment (ICES) – Canada**

CAN ICES-3 (A) / NMB-3 (A)

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Cet appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

## **European Conformity (CE) - EU**

This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.



## **Product Safety Electrical Appliance & Material (PSE) – Japan**

日本では電気用品安全法(PSE)の規定により、同梱している電源コードは本製品の専用電源コードとして利用し、他の製品に使用しないでください。

## **Voluntary Control Council for Interference (VCCI) – Japan**

この装置は、クラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。V C C I – A

## **Bureau of Standards Metrology and Inspection (BSMI) – Taiwan**

這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

## **China**

此为A级产品，在生活环境中，该产品可能会造成无线电干扰。这种情况下，可能需要用户对其采取切实可行的措施。

# Documentation and Links

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The following Fortinet web pages provide information and resources for your Fortinet product:

**1. Customer Service & Support:** <https://support.fortinet.com>

On this page you can create a support account with Fortinet, register and manage your products, download updates, firmware images and release notes, and create technical support tickets.

**2. Technical Documentation:** <http://docs.fortinet.com>

This page provides the most up-to-date versions of Fortinet publications for the entire family of Fortinet products.

**3. Knowledge Base:** <http://kb.fortinet.com>

This page provides Fortinet technical documentation, such as troubleshooting, how-to articles, example configurations, FAQs, technical notes, and more.

**4. Technical Discussion Forums:** <https://support.fortinet.com/forum>

This page allows you to communicate with other customers and Fortinet partners about Fortinet products, services, and configuration issues in a forum environment.

**5. Training Services:** <http://training.fortinet.com>

This page provides course descriptions, availability, schedules, and locations of training programs in your area.

**6. FortiGuard Threat Research and Response:** <http://www.fortiguard.com>

This page provides up-to-date information on vulnerabilities and threats, and includes a virus scanner, Internet Protocol (IP) signature look-up, web filtering tools, and related information.

## Comments on Technical Documentation

Please send comments or information about any errors or omissions in this or any Fortinet technical documents to [techdoc@fortinet.com](mailto:techdoc@fortinet.com).

# Register Your Product

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If you have not registered your Fortinet product, please register your product now.

## Register

Register your Fortinet product in order to receive:

- Technical Support
- New product features
- Protection from new threats

## Enregistrer

Vous devez enregistrer le produit pour recevoir:

- Support technique
- Nouvelles fonctionnalités du produit
- Protection contre de nouvelles menaces

## Registra

La registrazione ti permette di usufruire di:

- Supporto Tecnico
- Nuove funzionalita
- Protezione dalle ultime minacce

## Registrar

Debe registrar el producto para recibir:

- Apoyo técnico
- Nuevas funcionalidades del producto
- Protección contra ataques

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登録すると次のメリットがあります。

テクニカルサポート・新機能の追加・新しい脅威への防御

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**Toll free:** 1-866-648-4638

**Phone:** 1-408-486-7899

**Fax:** 1-408-235-7737

**Email:** [register@fortinet.com](mailto:register@fortinet.com)

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