



# Security Gateway Manual

*Microsoft Azure*

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The pfSense® Plus Firewall/VPN/Router for Microsoft Azure is a stateful firewall, VPN, and security appliance. It is suitable for use as a VPN endpoint both for site-to-site VPN tunnels and as a remote access VPN server for mobile devices. Native firewall functionality is available as are many additional features such as bandwidth shaping, intrusion detection, proxying, and more via packages.

[pfSense Plus for Azure](#) is available in the Azure Marketplace.

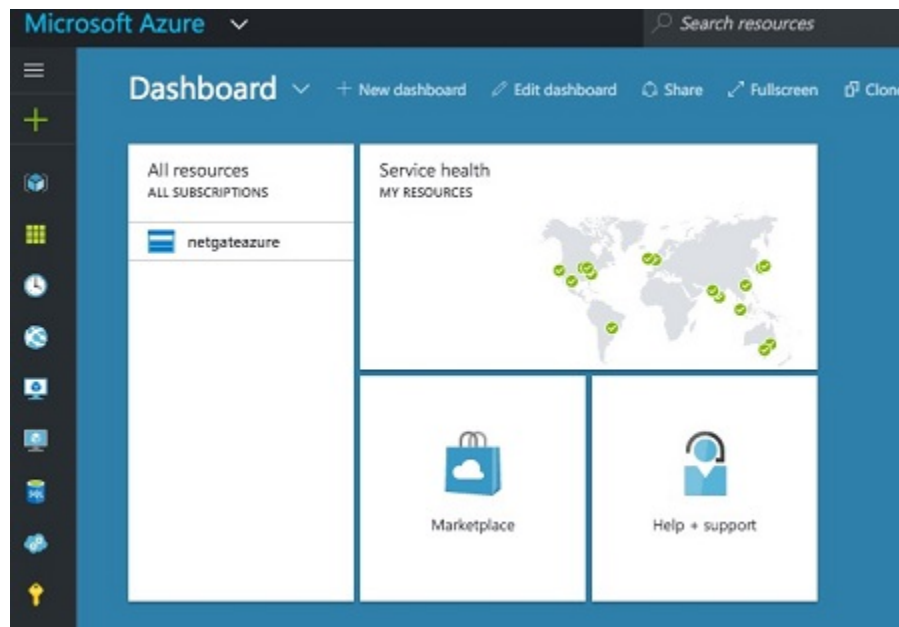
## GETTING STARTED

## 1.1 Launching an Instance with a Single Network Interface

An instance of [Netgate® pfSense® Plus software for Azure](#) that is created with a single network interface card (NIC) can be used as a VPN endpoint to allow access into an [Azure Virtual Network \(VNet\)](#). The single NIC pfSense® Plus virtual machine (VM) only creates a WAN interface, but still provides a public and private IP address within Azure.

In the Azure Management Portal, launch a new instance of the Netgate pfSense® Plus Firewall/VPN/Router appliance.

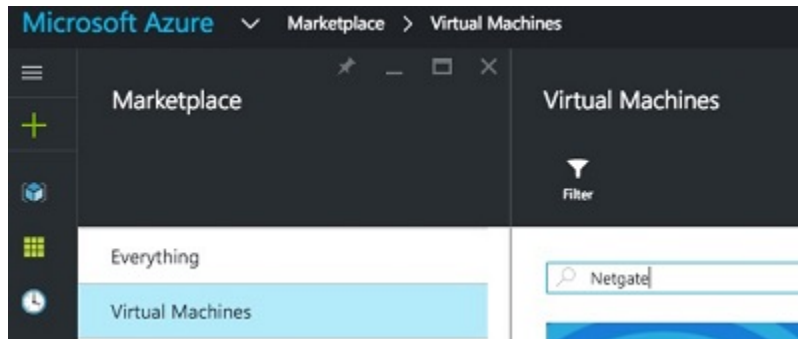
1. From the Azure portal Dashboard, click on **Marketplace**



2. Search for and select the **Netgate Appliance for Azure**
3. Set the **name** of the instance as well as **username**, **password**, **resource group**, and **region**.

The username entered will be created as a valid pfSense® Plus account upon boot and will be able to log into the GUI. Additionally, the admin user will also have its password set to the value that's entered.

**Warning:** The username typically used to administer pfSense® Plus is **admin**, but **admin** is a reserved name that is not allowed to be set by the Azure provisioning wizard. Also for cloud security, it is considered best practice to limit access for the **root** user, so **root** is locked by default.

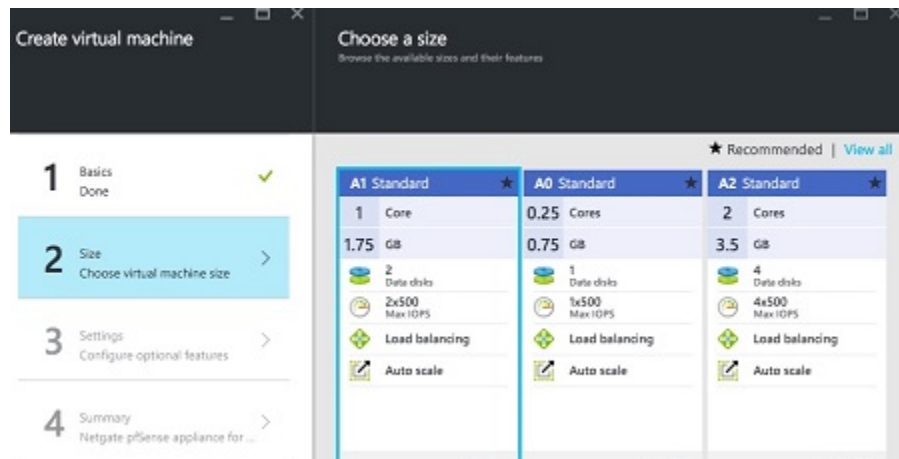


The screenshot shows the 'Create virtual machine' wizard in the Microsoft Azure portal. The left sidebar contains a list of steps: 1 Basics (Configure basic settings), 2 Size (Choose virtual machine size), 3 Settings (Configure optional features), 4 Summary (Netgate pfSense appliance for ...), and 5 Buy. The main content area is titled 'Basics' and contains the following fields:

- Image: netgate-pfsense-app ✓
- \* User name: azureadmin ✓
- \* Authentication type: Password (selected), SSH public key
- \* Password: [masked] ✓
- Subscription: Pay-As-You-Go
- \* Resource group: + New
- New resource group name: netgate-pfsense-app
- Location: South Central US

An 'OK' button is located at the bottom right of the form.

- Choose the **instance size**.



**Note:** A0 instances sizes are not supported as they lack sufficient RAM for certain key functions to work, such as upgrades.

- Choose the **disc type**, and **network settings** (virtual network, subnet, public IP address, network security group).

To manage the Netgate pfSense® Plus appliance, ensure that the security group contains rules to allow ports 22 (SSH) and 443 (HTTPS) to access the command line and GUI. To allow other traffic, add additional endpoints.

For **IPsec**, allow UDP port 500 (IKE) and UDP port 4500 (NAT-T).

For **OpenVPN**, allow UDP port 1194.

Click on **Network security group** and make additions as needed.

- Confirm the selections on the Summary page and click **OK**.
- Note the price on the purchase page and click **Purchase**.
- Once the VM launches and the Azure portal shows that it has come up, the web interface will be accessible. Use the password set during the provisioning process and the admin user. The appliance should now be accessible.

## 1.2 Launching an Instance with Multiple Network Interfaces

An instance of Netgate® pfSense® Plus software for Azure with multiple network interface cards (NICs) intended for use as a firewall or gateway cannot directly be provisioned by the Azure portal. Provisioning an instance with multiple network interfaces requires special procedures outlined in the Azure documentation to [Add network interfaces to or remove network interfaces from virtual machines](#).

Create virtual machine

1 Basics  
Done

2 Size  
Done

3 Settings  
Configure optional features

4 Summary  
Netgate pfSense appliance for ...

5 Buy

Settings

Storage

Disk type ⓘ  
Standard Premium (SSD)

\* Storage account ⓘ  
(new) defaultstoragecent4274

Network

\* Virtual network ⓘ  
(new) Default-Storage-CentralUS

\* Subnet ⓘ  
default (10.0.0.0/24)

\* Public IP address ⓘ  
(new) netgate-pfsense-app

\* Network security group ⓘ  
(new) netgate-pfsense-app

Extensions

OK

## 1.3 Support for the Azure Boot Diagnostics Extension

The Azure Boot Diagnostics extension may not function properly with the Netgate® pfSense® Plus software for Azure appliance.

Problems were reported with this functionality during certification testing of the appliance. Subsequent testing indicated that it appeared to work under some circumstances. Customers are free to attempt to enable boot diagnostics, but it is not officially supported.

As such, please do not initiate support calls or tickets if the Boot Diagnostics extension is not functioning properly with Netgate pfSense® Plus software for Azure appliance. This is a known limitation and no remedy is available from Azure customer support or Netgate.



## REFERENCES

### 2.1 Regional Market Availability

The tables below represent the current availability by regional market. The product is available in areas where Microsoft manages the collection of taxes and where availability is not currently restricted by sanctions.

If the desired regional market is not listed, refer to the [Microsoft Regions availability](#) and [Microsoft Managed Countries list](#) or submit a support ticket directly to Microsoft Azure.

Table 1: Microsoft Azure Available Regions

| Market        | pfSense Plus Software |
|---------------|-----------------------|
| Armenia       | Available             |
| Australia     | Varies <sup>1</sup>   |
| Austria       | Available             |
| Barbados      | Available             |
| Bulgaria      | Available             |
| Belgium       | Available             |
| Cambodia      | Available             |
| Canada        | Available             |
| Chile         | Available             |
| Colombia      | Available             |
| Croatia       | Available             |
| Cyprus        | Available             |
| Czechia       | Available             |
| Denmark       | Available             |
| Estonia       | Available             |
| Finland       | Available             |
| France        | Available             |
| Germany       | Available             |
| Greece        | Available             |
| Hungary       | Available             |
| Iceland       | Available             |
| India         | Available             |
| Indonesia     | Available             |
| Ireland       | Available             |
| Italy         | Available             |
| Kenya         | Available             |
| Latvia        | Available             |
| Liechtenstein | Available             |
| Lithuania     | Available             |

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| Market               | pfSense Plus Software |
|----------------------|-----------------------|
| Luxembourg           | Available             |
| Malaysia             | Available             |
| Malta                | Available             |
| Mexico               | Varies <sup>2</sup>   |
| Monaco               | Available             |
| Netherlands          | Available             |
| New Zealand          | Available             |
| Nigeria              | Available             |
| Norway               | Available             |
| Poland               | Available             |
| Portugal             | Available             |
| Puerto Rico          | Available             |
| Romania              | Available             |
| Saudi Arabia         | Available             |
| Serbia               | Available             |
| Singapore            | Available             |
| Slovakia             | Available             |
| Slovenia             | Available             |
| South Africa         | Available             |
| South Korea          | Available             |
| Spain                | Available             |
| Sweden               | Available             |
| Switzerland          | Available             |
| Taiwan               | Available             |
| Thailand             | Available             |
| Turkey               | Available             |
| United Arab Emirates | Available             |
| United Kingdom       | Available             |
| United States        | Available             |
| Vietnam              | Available             |

## 2.2 Frequently Asked Questions

### 2.2.1 Is it better to set a password or use an SSH key during Azure user provisioning?

The best practice is to set a password. This will grant access to the GUI, whereas an SSH key will only allow access to the SSH command prompt. Most configuration items in Netgate® pfSense® Plus software are typically controlled via the GUI.

The **admin** account password can be reset over SSH if the SSH key option was used instead. After connecting to SSH, select the option to reset the admin password at the menu displayed by the device over SSH. That option resets the GUI password to **pfSense**.

<sup>1</sup> Australia is a Microsoft Managed Country for sales through all customer purchase scenarios except the Enterprise Agreement customer purchase scenario which is publisher managed.

<sup>2</sup> Mexico is a Microsoft Managed Country for sales through all customer purchase scenarios except the Enterprise Agreement customer purchase scenario which is reseller managed.

**Warning:** Immediately login change the admin password to a more secure value after successfully logging into the GUI.

## 2.3 Does the appliance support a live update of the software?

This may be possible, but it is currently untested and unsupported. Since a real system console is not available, a definitive recovery process for failures during upgrades would be difficult to define.

The currently recommended process for upgrades is to backup the pfSense® Plus software configuration from the existing instance and restore it on a new instance when an upgrade is available.

## 2.4 Support Resources

### 2.4.1 Commercial Support

In order to keep prices low, the software is not bundled with a support subscription. For users who need commercial support, Netgate® Global Support can be purchased at <https://www.netgate.com/support>.

### 2.4.2 Community Support

Community support is available through the [Netgate Forum](#).

## 2.5 Additional Resources

### 2.5.1 Netgate Training

Netgate training offers training courses for increasing your knowledge of pfSense® Plus products and services. Whether you need to maintain or improve the security skills of your staff or offer highly specialized support and improve your customer satisfaction; Netgate training has got you covered.

<https://www.netgate.com/training>

### 2.5.2 Resource Library

To learn more about how to use Netgate appliances and for other helpful resources, make sure to browse the Netgate Resource Library.

<https://www.netgate.com/resources>

### 2.5.3 Professional Services

Support does not cover more complex tasks such as CARP configuration for redundancy on multiple firewalls or circuits, network design, and conversion from other firewalls to pfSense® Plus software. These items are offered as professional services and can be purchased and scheduled accordingly.

<https://www.netgate.com/our-services/professional-services.html>

### 2.5.4 Community Options

Customers who elected not to get a [paid support plan](#), can find help from the active and knowledgeable pfSense software community on the Netgate forum.

<https://forum.netgate.com/>