

## How to Increase Disk IOPS Limits

<https://campus.barracuda.com/doc/92766572/>

In certain cases, you might need to increase IOPS (Input/output operations per second) limit of a disk of a CloudGen Firewall hosted in Microsoft Azure. To increase the IOPS limit, the disk type must be set to **Premium SSD**. Then, you can increase the disk size, which increases the IOPS limit.

Resizing the OS disk or, if applicable, the data disks will not increase the available storage of the virtual machine of the firewall; it will only increase the IOPS limit.

### Before You Begin

- To keep the public IP address of your firewall, make sure it is a static IP address.
- Turn off the virtual machine of your firewall.

### Step 1. Change the Disk Type of the Virtual Machine from Standard HDD to Premium SSD

If your firewall is already equipped with a Premium SSD, you can skip this step. Continue with Step 2.

#### Step 1.1 Change the Size of the Virtual Machine to Meet the Requirements of a Premium SSD

1. Log into the Microsoft Azure portal: <https://portal.azure.com>
2. Search for the resource group containing your firewall.
3. In the resource group, click on the virtual machine of the firewall.

Filter by name... Type == all Location == all Add filter

Showing 1 to 6 of 6 records. Show hidden types No grouping

Name ↑↓	Type ↑↓	Location ↑↓
<input type="checkbox"/> CampusCGFW	Virtual machine	West Europe
<input type="checkbox"/> CampusCGFW-nic0-public	Network interface	West Europe
<input type="checkbox"/> CampusCGFW-pip	Public IP address	West Europe
<input type="checkbox"/> CampusCGFW_OsDisk_1_b0633da1d25d4...	Disk	West Europe
<input type="checkbox"/> newVirtualNetwork	Virtual network	West Europe
<input type="checkbox"/> newVirtualNetwork-ProtectedSubnet-via...	Route table	West Europe

- In the left menu, click **Size**.
- Select a **VM Size** that supports premium disks but uses the same number of CPUs as before. For example, an **F1** would become an **F1s**, and a **D2\_v2** would become **DS2\_v2**. For more information on sizes compatible with Premium SSD, see <https://docs.microsoft.com/en-us/azure/virtual-machines/windows/disks-types#premium-ssd>.

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**BarracudaCGFW | Size**

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Showing 5 of 290 VM sizes. Subscription: NetSec-dev Region: West Europe Current size: Standard\_F1

VM Size ↑↓	Offering ↑↓	Family	vCPUs ↑↓	RAM (GiB) ↑↓	Data disks ↑↓	N
F1	Standard	Compute optimiz...	1	2	4	4
F16	Standard	Compute optimiz...	16	32	64	6
F16s	Standard	Compute optimiz...	16	32	64	5
F16s_v2	Standard	Compute optimiz...	16	32	32	2
<b>F1s</b>	Standard	Compute optimiz...	1	2	4	3

Prices presented are estimates in your local currency that include only Azure infrastructure costs and any discounts for the subscription and location. The prices don't include any applicable software costs. Final charges will appear in your local currency in cost analysis and billing views. If you purchased Azure services through a reseller, contact your reseller for full pricing details.

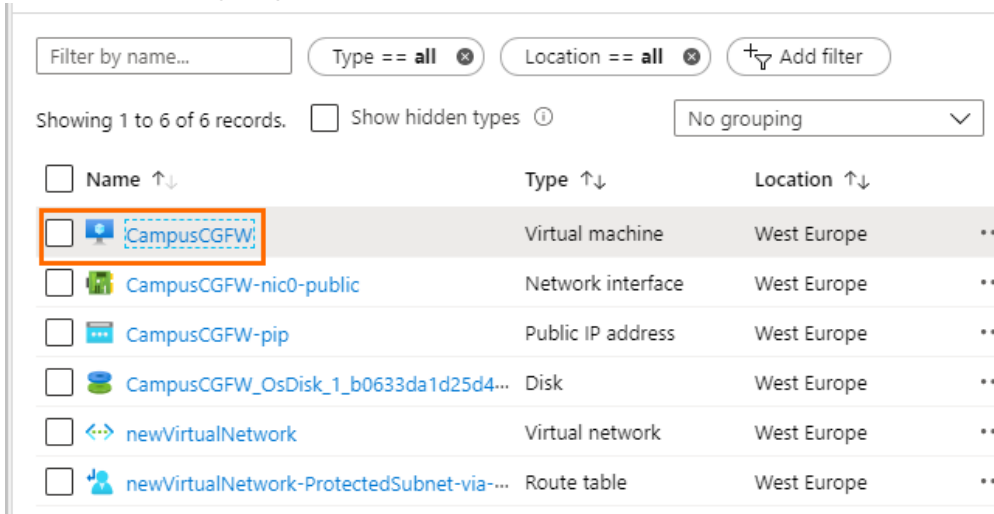
**Resize**

- Click **Resize**.

**Step 1.2 Change the Disk Type of the Virtual Machine from Standard HDD to Premium SSD**

This step must be repeated for all disks attached to the virtual machine of the firewall.

1. Log into the Microsoft Azure portal: <https://portal.azure.com>
2. Search for the resource group containing your firewall.
3. In the resource group, click on the virtual machine of the firewall.

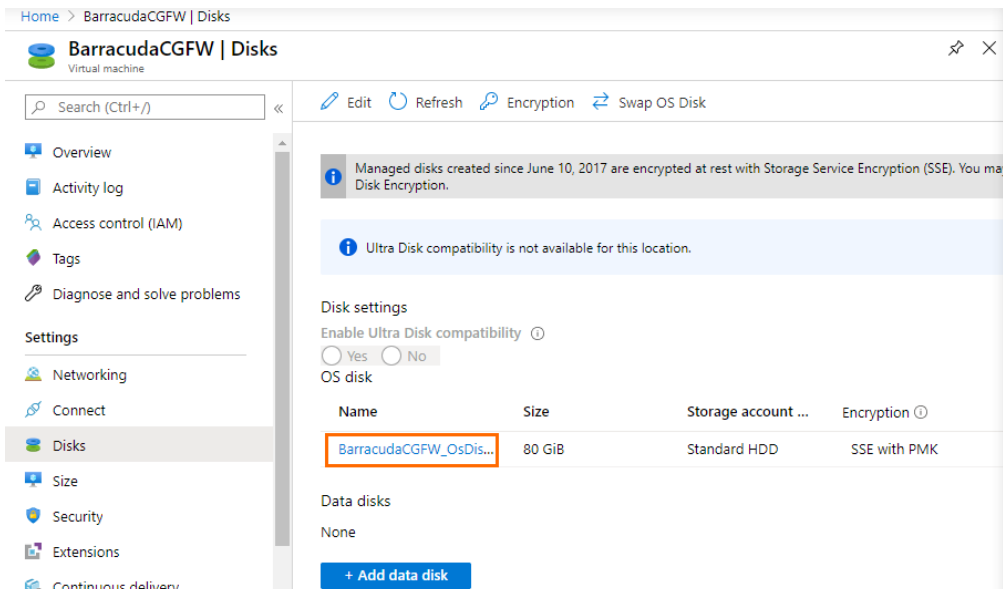


Filter by name... Type == all Location == all Add filter

Showing 1 to 6 of 6 records. Show hidden types No grouping

Name	Type	Location
<b>CampusCGFW</b>	Virtual machine	West Europe
CampusCGFW-nic0-public	Network interface	West Europe
CampusCGFW-pip	Public IP address	West Europe
CampusCGFW_OsDisk_1_b0633da1d25d4...	Disk	West Europe
newVirtualNetwork	Virtual network	West Europe
newVirtualNetwork-ProtectedSubnet-via...	Route table	West Europe

4. In the left menu, click **Disks**.
5. Click on the disk of the virtual machine of the firewall.



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BarracudaCGFW | Disks

Managed disks created since June 10, 2017 are encrypted at rest with Storage Service Encryption (SSE). You may Disk Encryption.

Ultra Disk compatibility is not available for this location.

Disk settings

Enable Ultra Disk compatibility

OS disk

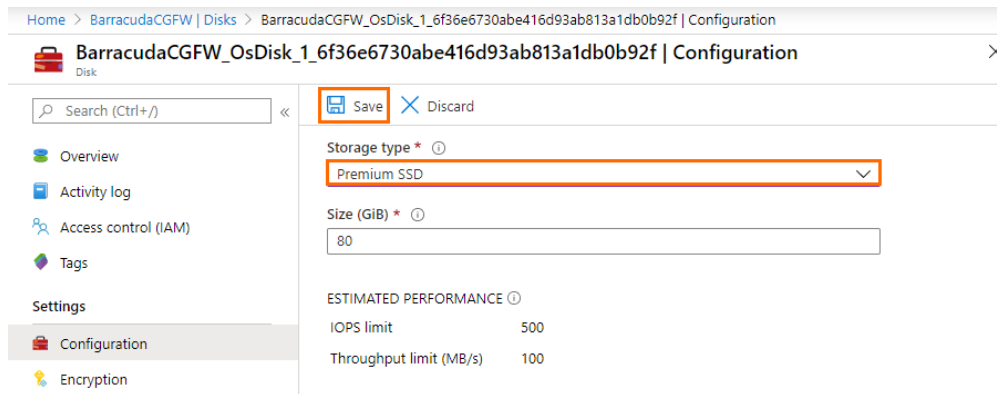
Name	Size	Storage account ...	Encryption
<b>BarracudaCGFW_OsDis...</b>	80 GiB	Standard HDD	SSE with PMK

Data disks

None

+ Add data disk

6. In the left menu, click **Configuration**.
7. Select **Premium SSD** from the **Storage type** drop-down menu.



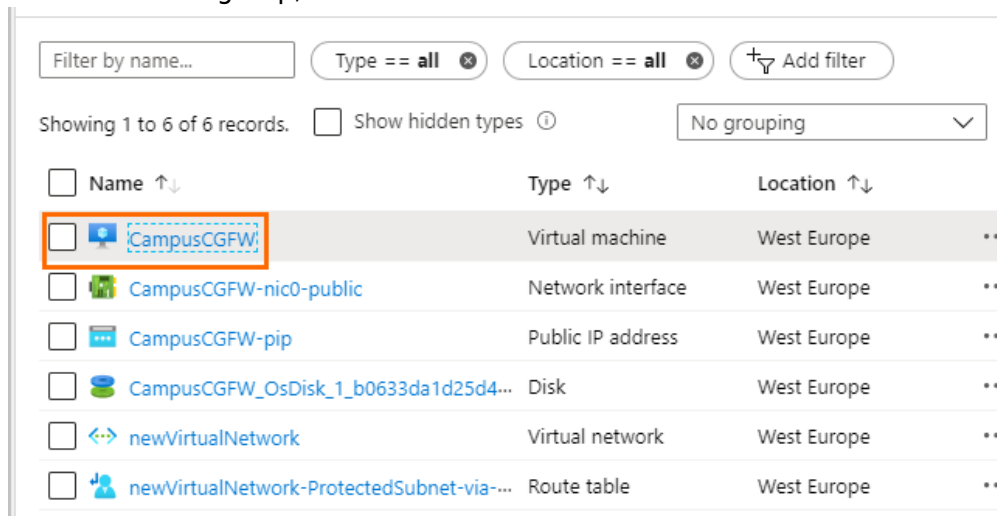
8. Click **Save**.
9. Repeat this step for all disks attached to your virtual machine.

## Step 2. Increase the Virtual Machine Disk Size

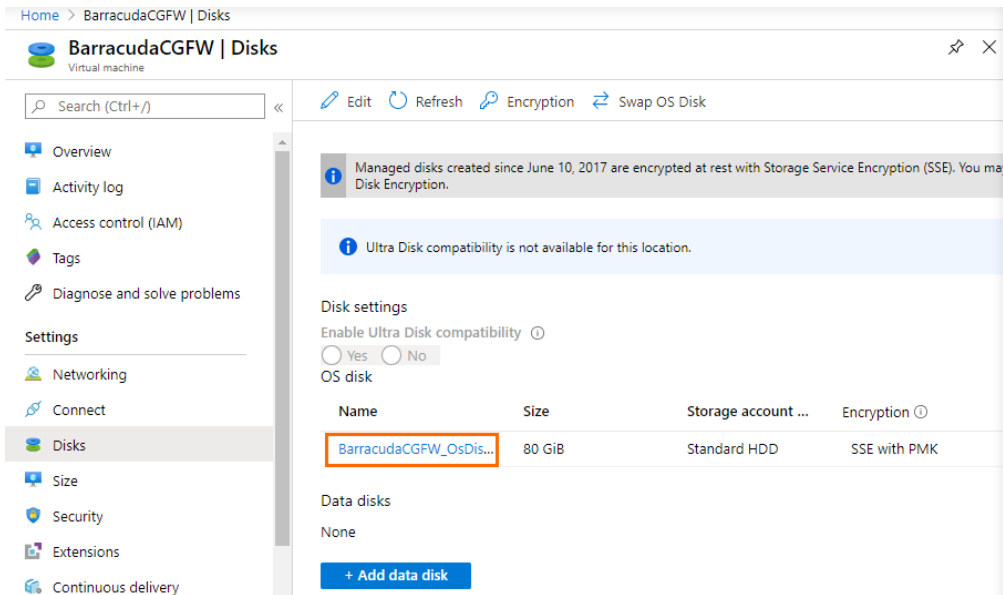
Increasing the virtual machine disk size leads to increased IOPS limits.

- If you have only one disk attached (the OS disk), resize this disk for the performance increase.
- If you have additional data disks attached to the virtual machine of the firewall, resize the data disks only. It is recommended that all data disks have the same size.

1. Log into the Microsoft Azure portal: <https://portal.azure.com>
2. Search for the resource group containing your firewall.
3. In the resource group, click on the virtual machine of the firewall.

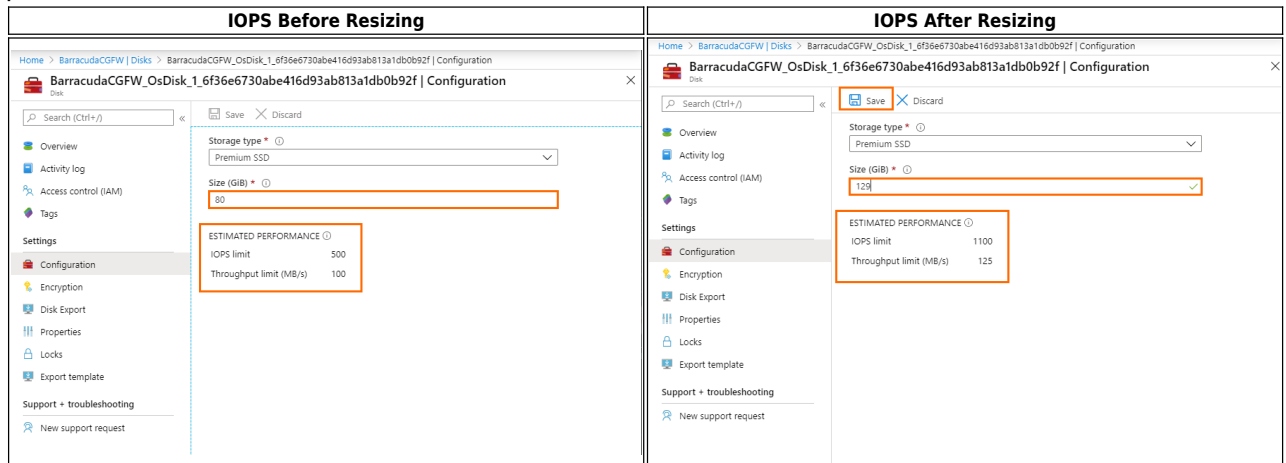


4. In the left menu, click **Disks**.
5. Click on the disk of the virtual machine of the firewall.



If you have only an OS disk attached, select this disk. If you have one or more data disks attached, resize only the data disks. Start with the first data disk and repeat Step 2 with the other data disks.

6. In the left menu, click **Configuration**.
7. Enter a new disk size, in gigabytes, next to **Size (GiB)**. Below, you can see the estimated performance. Select a new disk size to meet your requirements based on the estimated performance. It is recommended that all data disks have the same disk size.



8. Click **Save**.
9. If there are more than one data disks attached, repeat this step with the other data disks.

## Figures

1. vm.png
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