

# Secure Block Storage (SBS) FAQ



## What is Secure Block Storage (SBS)?

Atlantic.Net's Secure Block Storage allows you to easily attach additional storage to your Atlantic.Net Cloud Servers. You can use SBS for your file, database, application, and backup storage needs.



## How can I add an SBS to a Cloud Server?

You can attach a SBS to your Cloud Server through the Atlantic.Net Cloud Control Panel (<https://cloud.atlantic.net>) or by contacting our sales department.



## How redundant is SBS?

Designed for 99.999% availability, SBS is automatically replicated multiple times across a redundant and highly available cluster of storage servers to protect your data from component failure.



## Can a SBS be attached to more than one Cloud Server at the same time?

No, SBS can only be attached to one server at a time. However, SBS can be used as the backing storage for a shared file system, like NFS, that multiple servers/clients can connect to.



## Is there a limit on how many SBS volumes I can connect to my Cloud Server?

You can connect up to eight volumes per Cloud Server



## Can I move my SBS between servers in the same location?

Yes, you can move your SBS between your servers in the same location.

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## Can I move my SBS between servers in different locations?

Not currently, but it is on our roadmap.



## Will I be able to take on-demand snapshots of my SBS and restore my volume from them?

No. However, we plan to offer this feature soon.



## If I pay for backups for my Cloud Server, does that include backups of my attached SBS?

No. However, we plan to offer this feature soon.



## Can I add an SBS on the Add Server page when creating a new Cloud Server?

No. However, we plan to offer this feature soon.



## You mentioned that you can scale Volumes with no downtime, but I noticed the asterisks there. Can you please explain?

Currently, all of our Cloud Server operating systems, except Windows Server 2016, support live scaling of Block Storage Volumes. This means that for all other Cloud Server operating systems, you can resize your Volume while it is connected to your running server. For Windows Server 2016, you will either have to reboot your Cloud Server or detach and reattach the Volume to get your Cloud Server to recognize the additional space after resizing a volume. This is a limitation of Windows Server 2016.



## Is the storage that backs SBS hard disk (HDD) or solid state disk-based (SSD)?

Both! Data stored on volumes are first written to NVMe SSDs and then transferred to HDDs. This allows

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customers to take advantage of the large storage capacities that HDDs provide while benefiting from the amazing speed that comes with NVMe SSDs. NVMe, if you are not familiar, stands for non-volatile memory express and is the successor to the SATA drive interface. It allows SSDs to transfer data directly over the server's PCIe bus instead of going over the much slower SATA interface.



## What are the specs of SBS?

- ✓ Volume Size: 50 GB - 16 TB per Volume
- ✓ Max volumes per server: 8
- ✓ Max IOPS per volume: 500
- ✓ Max throughput per volume: 500 MB/s
- ✓ Max throughput per server: 1,750 MB/s
- ✓ Burst up to 250 MB/s per TB

Note: 1 TB = 1,000 GB



## Is SBS encrypted?

Yes, every SBS is automatically encrypted at rest using LUKS encryption and is connected to your Cloud Server over an isolated storage network to ensure a secure environment for customer data.



## Are volume or term discounts available for SBS?

Yes, please contact sales for details.



## What is the minimum increment when scaling the capacity of SBS?

The minimum scaling increment is 50 GB.

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## How does SBS compare to a SAN?

A SAN is typically defined as dedicated storage area network that provides direct access to block-level storage devices with a finite amount of capacity and performance. SBS offers block storage as well, with clear advantages over a SAN in that SBS provides easily scalable capacity, performance, and redundancy coupled with no management costs.



## How does SBS compare to a NAS?

A NAS is typically defined as network attached storage that provides a shared file system, such as NFS, that multiple servers can connect to at the same time. In contrast, SBS is a block level device that can only be directly attached to one server at a time but provides more flexibility. For example, SBS can be used to provide additional storage capacity for a Cloud Server or can be used as the backing storage for a shared file system, like NFS, that multiple clients can connect to.



## Do you plan to offer SBS at additional locations?

Yes, we plan to offer SBS at our other Cloud locations. Currently, SBS is available in our USA-EAST-1 (Orlando, FL) location. Details regarding the launch of SBS at additional locations will be released in the coming months.



## How does SBS compare to AWS EBS ST1?

Atlantic.Net Cloud (ANC) SBS is a similar, but more flexible, feature-rich, and performant solution than AWS EBS ST1. AWS EBS ST1 has a minimum volume size of 500 GB, ANC SBS has a minimum size of 50 GB. ANC SBS has been benchmarked to show it is on average 2.7x faster than AWS EBS ST1 for a 2 TB volume size. Additionally, ANC SBS will soon release additional features that are not available with AWS EBS ST1 such as scheduled backups, and off-site replication.

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## How does SBS compare to Azure's Managed Disks?

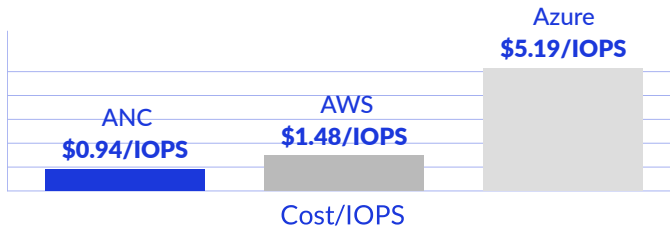
Atlantic.Net Cloud (ANC) SBS is a similar, but more flexible, feature-rich, and performant solution than Azure Managed Disks. In addition to the cost of your volume, with Azure Managed Disks you are billed for the number of IOPS you perform on your Volume, with ANC SBS you are not billed for the IOPS you use, which greatly simplifies planning and billing. ANC SBS has been benchmarked to show it is on average 11.3x faster than Azure Managed Disks for a 2 TB volume size. Additionally, ANC SBS will soon release additional features that are not available with Azure Managed Disks such as off-site replication.

### Block Storage Cost Comparison

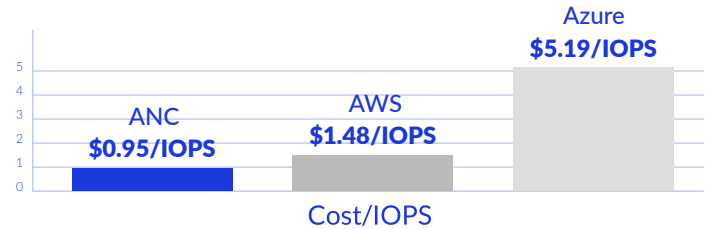
Here are the costs per IOPS based on the measured 2TB volume performance:

Atlantic.Net ANC SBS vs. Amazon AWS EBS vs. Microsoft Azure Managed Disk

**Atlantic.Net is up to 5.2x better value per IOPS**  
Cost/IOPS - Sequential Read  
Lower is better



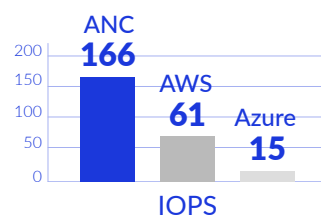
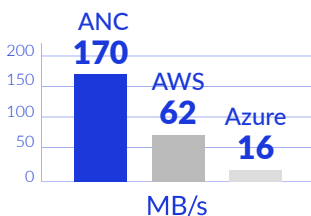
**Atlantic.Net is up to 5.46x better value per IOPS**  
Cost/IOPS - Sequential Write  
Lower is better



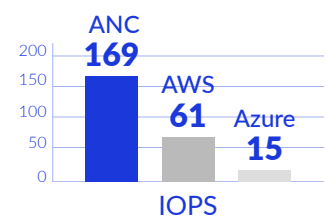
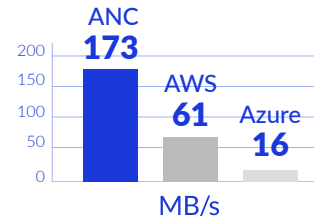
### Block Storage Performance Comparison

Atlantic.Net ANC SBS vs. Amazon AWS EBS vs. Microsoft Azure Managed Disk

**Sequential Write**  
Atlantic.Net is up to 11x Faster



**Sequential Read**  
Atlantic.Net is up to 11.3x Faster



#### Tested configurations:

Atlantic.Net: G2.4GB server, 2 TB SBS  
Amazon AWS: t2.medium server, 2 TB EBS  
Microsoft Azure: B2s server, 2 TB Managed Disk