

Azure NetApp Files for Skytap on Azure

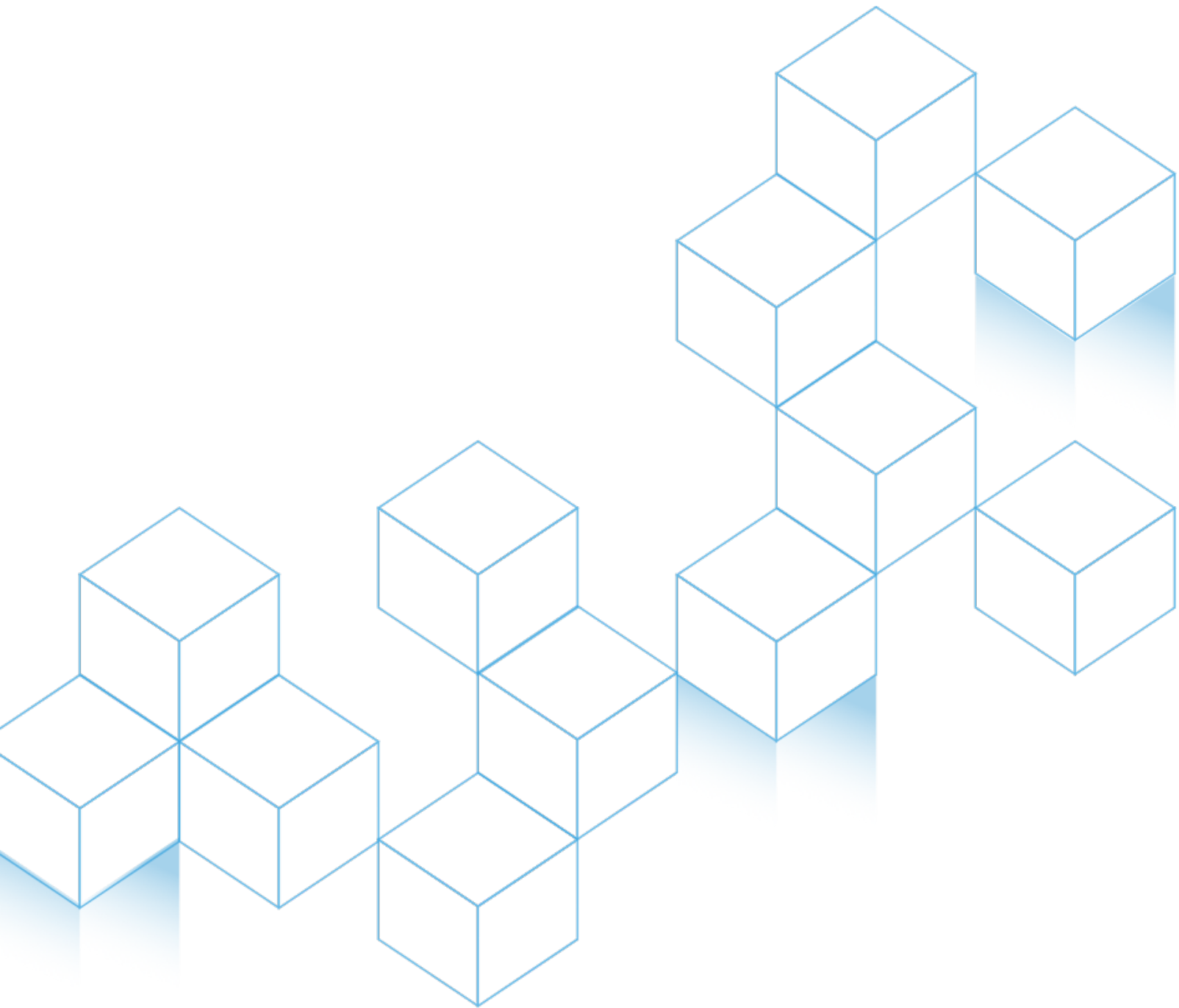


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Azure NetApp Files for Skytap

Skytap customers are looking for a cost-effective Azure native shared files solution to share files across Azure and their Skytap environments which is secured and able to support both NFS and SMB protocols. Azure NetApp Files (ANF) solves most of these challenges and can therefore be a go-to solution for customers who are looking to have a shared files solution on Skytap.

Reference Architecture

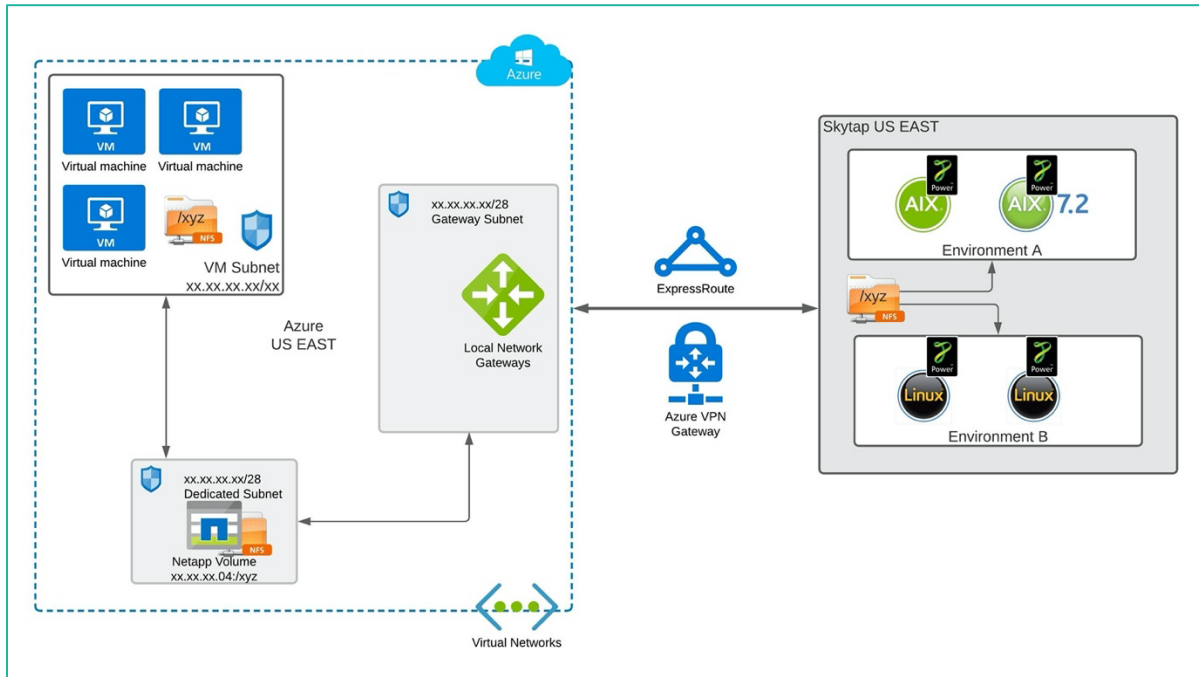


FIGURE 1: AZURE NETAPP FILES FOR SKYTAP

Azure NetApp Files (ANF)

The Azure NetApp Files (ANF) service is an enterprise-class, high-performance, metered file storage service. It supports any workload type and is highly available by default. You can select service and performance levels and set up snapshots through the service.

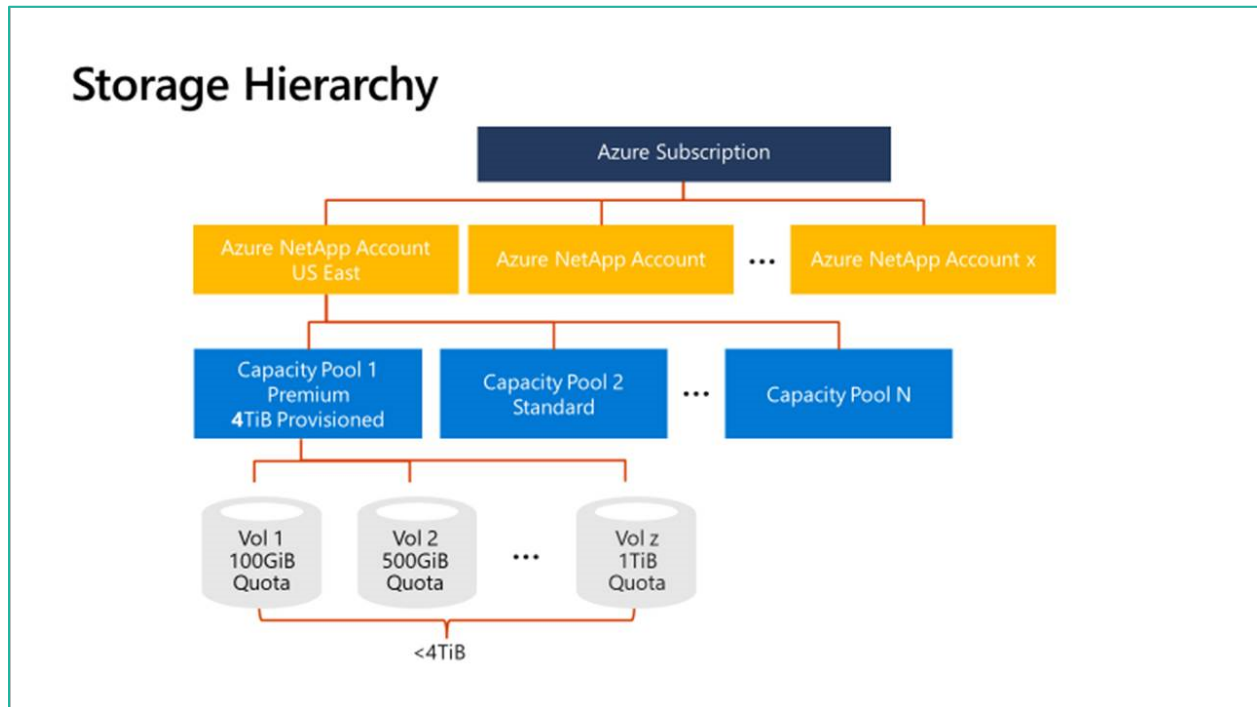


FIGURE 2: STORAGE HIERARCHY FOR ANF

Performance

Azure NetApp Files supports three storage service levels:

- Ultra: provides up to 128 MiB/s of throughput per 1 TiB of volume quota assigned.
- Premium: provides up to 64 MiB/s of throughput per 1 TiB of volume quota assigned.
- Standard: provides up to 16 MiB/s of throughput per 1 TiB of volume quota assigned.

Protocols

Azure NetApp Files supports SMB 2.1 and SMB 3.1 (which includes support for SMB 3.0).*
 Azure NetApp Files supports NFSv3 and NFSv4.1.

* Requires active directory

Region Availability

TABLE KEY: Generally Available In Preview In Preview (hover to view expected timeframe) Future availability (hover to view expected timeframe)

Products	CANADA			UNITED STATES							
	Central	Canada Central	Canada East	Central US	East US	East US 2	North Central US	South Central US	West Central US	West US	West US 2
Azure NetApp Files	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

TABLE KEY: Generally Available In Preview In Preview (hover to view expected timeframe) Future availability (hover to view expected timeframe)

Products	EUROPE			GERMANY				UNITED KINGDOM		
	Southeast Asia	North Europe	West Europe	Germany Non-Regional (Sovereign)	Germany Central (Sovereign)	Germany North (Public)	Germany Northeast (Sovereign)	Germany West Central (Public)	UK South	UK West
Azure NetApp Files	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Pricing

Here is sample pricing for 5TB capacity for each Service Level:

Azure NetApp Files 5 TiB Standard Capacity x 730 Hours, 5 TiB Premium ... Upfront: \$0.00 Monthly: \$4,272.08

REGION: East US

Standard Storage

5 TiB × 730 Hours × \$0.000202 Per GiB/hour = \$755.00

Premium Storage

5 TiB × 730 Hours × \$0.000403 Per GiB/hour = \$1,506.25

Ultra Storage

5 TiB × 730 Hours × \$0.000538 Per GiB/hour = \$2,010.83

Upfront cost	\$0.00
Monthly cost	\$4,272.08

Azure Documentation

<https://docs.microsoft.com/en-us/azure/azure-netapp-files/>

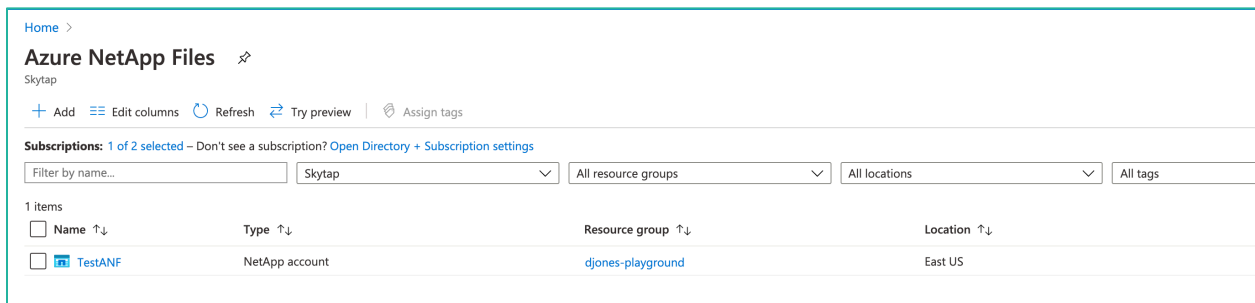
Provisioning Azure NetApp Files

Create Azure NetApp Account

Note: subscription needs to be whitelisted to use ANF.

- 1) <https://docs.microsoft.com/en-us/azure/azure-netapp-files/azure-netapp-files-quickstart-set-up-account-create-volumes?tabs=azure-portal>

Once subscription is whitelisted, you are ready to create Pools and Volumes.



The screenshot shows the Azure NetApp Files management interface. At the top, there's a breadcrumb 'Home >' and the title 'Azure NetApp Files' with a refresh icon. Below the title, it says 'Skytap'. There are several action buttons: '+ Add', 'Edit columns', 'Refresh', 'Try preview', and 'Assign tags'. A status bar indicates 'Subscriptions: 1 of 2 selected - Don't see a subscription? Open Directory + Subscription settings'. Below this are filter controls: 'Filter by name...', a dropdown menu set to 'Skytap', and three other dropdown menus for 'All resource groups', 'All locations', and 'All tags'. The main content area shows '1 items' and a table with the following data:

<input type="checkbox"/>	Name ↑↓	Type ↑↓	Resource group ↑↓	Location ↑↓
<input type="checkbox"/>	TestANF	NetApp account	djones-playground	East US

Create Pools

- 1) <https://docs.microsoft.com/en-us/azure/azure-netapp-files/azure-netapp-files-set-up-capacity-pool>.
- 2) Minimum 4 TB pool size allowed.
- 3) Customer charged for complete pool size.

The screenshot shows the Azure NetApp Files console. On the left, the 'TestANF | Capacity pools' view shows a table with one entry: Skytapanf, 4 TiB. On the right, the 'Skytapanf (TestANF/Skytapanf)' details page shows the pool's configuration and usage. The usage section features two donut charts: 'Current sum of all volume allocated sizes' at 2.4% (100 GiB allocated) and 'Current sum of all volume logical sizes' at 0.1% (502 GiB allocated).

Create Volumes

- 1) <https://docs.microsoft.com/en-us/azure/azure-netapp-files/azure-netapp-files-create-volumes>.

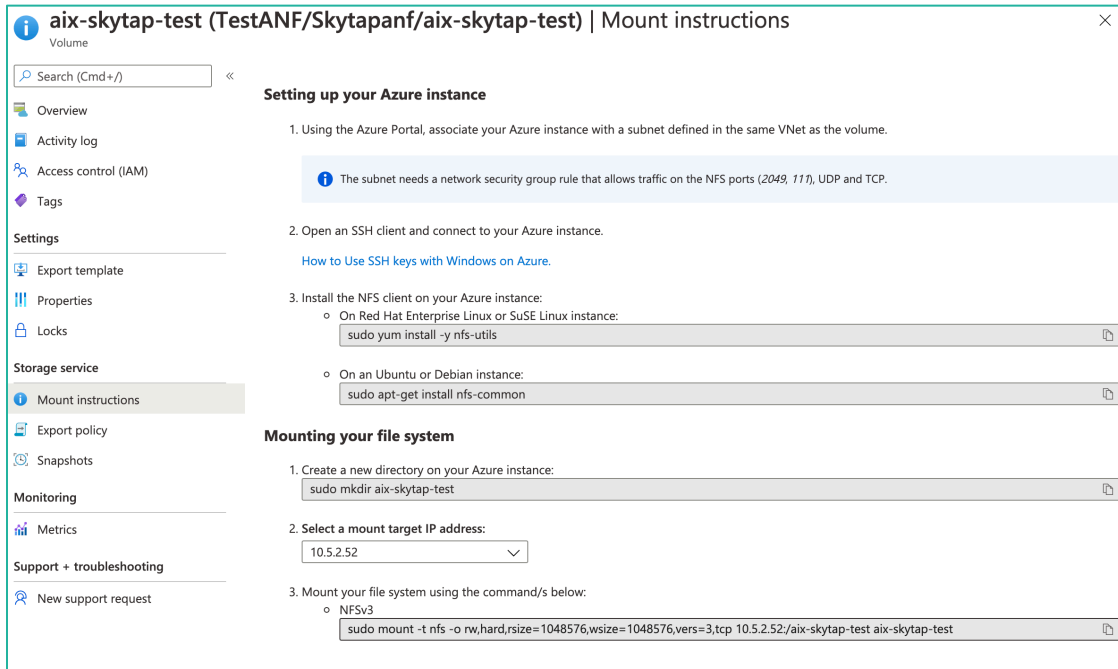
The screenshot shows the Azure NetApp Files console with the 'TestANF | Volumes' view. A table lists the volumes created:

Name	Quota	Protocol type	Mount path	Service level	Capacity pool
aix-skytap-test	100 GiB	NFSv3	10.5.2.52/aix-skytap-test	Standard	Skytapanf

Mount NFS Volumes on Client

Linux on Azure

Note: Mount Instructions for every volume can be found within Azure portal.



AIX on Skytap

- 1) Check if AIX LPAR can reach NetApp volume IP - (check if VPN/ExR is configured and ready to use).

`# showmount -e <IP>`

```
# showmount -e 10.5.2.52
export list for 10.5.2.52:
/ (everyone)
/aix-skytap-test (everyone)
#
```

- 2) Create required directory and mount the filesystem.

`#mkdir -p <mount point>`

```
# mkdir -p /anf
#
```



```
# mount <remote IP>:<volumename> /<mount point>
```

```
# mount 10.5.2.52:/aix-skytap-test /anf
```

```
# df -g <mount point>
```

```
Filesystem      GB blocks   Free %Used   Iused %Iused Mounted on
10.5.2.52:/aix-skytap-test 102405.00 102399.98    1%    101    1% /anf
```

3) List Files in NFS share.

```
# cd <mount Point>
```

```
# cd /anf
```

```
# ls -l
```

```
# ls -l
total 10527128
drwxrwxrwx  2 root      system      4096 Sep 14 18:12 .snapshot
-rw-r--r--  1 root      system    1073741824 Sep 14 19:04 file.txt
-rw-r--r--  1 root      system    1073741824 Sep 14 19:43 file1.txt
-rw-r--r--  1 root      system    1073741824 Sep 14 20:10 file2.txt
-rw-r--r--  1 root      system    1073741824 Sep 14 19:40 fileazure.txt
-rw-r--r--  1 root      system    1073741824 Sep 14 19:56 fileazure1.txt
#
```