\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*POINT 1\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

| **Storage service** | **Target sub-resource** | **Zone name** |
| --- | --- | --- |
| Blob service | blob | privatelink.blob.core.windows.net |
| Data Lake Storage Gen2 | dfs | privatelink.dfs.core.windows.net |
| File service | file | privatelink.file.core.windows.net |
| Queue service | queue | privatelink.queue.core.windows.net |
| Table service | table | privatelink.table.core.windows.net |
| Static Websites | web | privatelink.web.core.windows.net |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*POINT 2\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

<https://stackoverflow.com/questions/60277545/what-is-the-difference-between-abfss-and-wasbs-in-azure-storage>

ABFS stands for **Azure Blob File System** and Microsoft recommends it for big data workloads as it is optimized for it as mentioned [here](https://learn.microsoft.com/en-us/azure/storage/blobs/data-lake-storage-introduction#key-features-of-data-lake-storage-gen2).

WASBS stands for **Windows Azure Storage Blob** and Microsoft recommends it as is provides TLS encrypted access as mentioned [here](https://learn.microsoft.com/en-us/azure/hdinsight/hdinsight-hadoop-use-blob-storage#access-files-from-within-cluster).

**1) Blob Storage with HTTP**

Azure introduced blob storage which is an object storage with flat structure. No concept of folders or hierarchy. Although the use of slash(/) in file name gives the illusion of hierarchy.

**blob** endpoint (**blob.core.windows.net**) with HTTP protocol can be used to read and write blobs

https://storageaccount.blob.core.windows.net/container/path/to/blob

**2) Blob Storage with WASBS**

If Hadoop applications wanted to interact with azure blob storage, then HDFS compatibility was provided using the WASBS driver. This driver performed the complex task of mapping file system semantics (as required by the Hadoop Filesystem interface) to that of the object store style interface exposed by Azure Blob Storage.

wasbs://containername@accountname.blob.core.windows.net

With WASB driver, tools like HDInsight using the driver can connect to blob storage on the same **blob** endpoint (**blob.core.windows.net**).

**3) ADLS with ABFSS**

(ignore ADLS gen 1 which is a seperate service and not used anymore)

Then came ADLS Gen2 which supports hierarchical storage with features like ACL on the files and folders. Storage account with hierarchical namespace feature enabled is converted from blob storage to ADLS Gen2. To talk to ADLS gen2, **DFS** endpoint (**dfs.core.windows.net**) is used.

abfss://filesystemname@accountname.dfs.core.windows.net

Again there is a need for ABFS driver to be used by Hadoop applications to connect to ADLS. However because of the new DFS endpoints, the driver is now very efficient and there is no requirement for a complex mapping in the driver. Solutions like Horton works, HDInsight, azure Databricks can connect to ADLS far more efficiently using the ABFSS driver.

Also, you will notice some of the tools like powerBI supports both WASBS and ABFSS.

**What to use?**

If ADLS is used,

* In case of Hadoop / Data processing tools like Databricks, HD Insight will have to use ABFSS on DFS endpoint.
* ADLS HTTP [rest endpoint](https://learn.microsoft.com/en-us/rest/api/storageservices/data-lake-storage-gen2) docs. To make HTTP calls if needed. Eg: A python app trying to list the paths.. etc..

If Blob storage is used,

* In case of Hadoop / Data processing tools, WASBS on blob endpoint can be used. (ABFS Driver should be cross compatible as well. So even this driver should work)
* Other use cases can simple use HTTP endpoints without needing any special drivers. Eg: A python app reading and writing files to blob storage using http endpoint.
* ADLS - Azure Data Lake Storage
* WASB - Windows Azure Storage Blob (provides unencrypted access)
* WASBS - Windows Azure Storage Blob Secure (TLS encrypted access)
* ABFS - Azure blob file system
* ABFSS - Azure blob file system secure
* DFS - Distributed file system

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*POINT 3 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*COMPRENDRE TOUS LE MÉCANISME BY BACHAR \*\*\*\*\*\*\*\*\*\*\*\*\*

[(1) 5 . Mount Azure Data Lake Storage in Databricks - YouTube](https://www.youtube.com/watch?v=8Sn4SJ7y_5Y&ab_channel=CloudAndDataUniverse)

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