

## Cloud Storage Services Comparison

Storage Service	Storage Type	Methods	Advantages	Disadvantages
Amazon Simple Storage Service (S3)	Unstructured	<ul style="list-style-type: none"> <li>Create Bucket</li> <li>List Buckets</li> <li>Put Object</li> <li>Post Object</li> </ul>	<ul style="list-style-type: none"> <li>The naming of an object is unique with respect to a bucket or the account where the object is created.</li> <li>Moving or renaming an object is supported via copying.</li> <li>Objects can have multiple versions and redo and undo operation is permitted on the objects.</li> <li>Provides Bucket Grant policies and specialized signed URI for the consumers.</li> </ul>	<ul style="list-style-type: none"> <li>Objects are written once, meaning that once written, they cannot be updated in place.</li> <li>Does not have locking for multiple writes, which results in lack of synchronization.</li> <li>It also does not encrypt data stored in objects.</li> <li>Access is sequential in nature</li> </ul>
Windows Azure Blob Storage	Unstructured	<ul style="list-style-type: none"> <li>List Container</li> <li>Create Container</li> <li>Put Blob</li> <li>Put Page</li> <li>Get Block List</li> </ul>	<ul style="list-style-type: none"> <li>Within each account one or more containers can be created to store data.</li> <li>The communication to the storage system can be secured using HTTPS instead of HTTP.</li> <li>Page blob supports random-access read and write</li> </ul>	<ul style="list-style-type: none"> <li>The access of a block blob is sequential and immutable.</li> </ul>
Google BlobStore	Unstructured	<ul style="list-style-type: none"> <li>Create Blob</li> <li>Delete Blob</li> <li>Fetch Data</li> <li>Fetch Blob Key</li> </ul>	<ul style="list-style-type: none"> <li>Under a single account, a blob is unique</li> <li>The metadata of a blob, accessible using the blob key, is stored in Google DataStore from where different properties of the blob can be retrieved.</li> <li>It supports a flat namespace.</li> </ul>	<ul style="list-style-type: none"> <li>Each blob stored in the blob storage is immutable.</li> <li>The maximum size of a blob can be only 2 GB</li> </ul>
Amazon SimpleDB	Structured	<ul style="list-style-type: none"> <li>Batch Put Attributes</li> <li>Delete Domain</li> <li>Domain Metadata</li> <li>List Domains</li> <li>Select</li> </ul>	<ul style="list-style-type: none"> <li>Simplify the much harder task of creating and managing a database cluster</li> <li>Fault-tolerant in the face of multiple failures</li> <li>Replication across data centers and delivers high levels of availability</li> </ul>	<ul style="list-style-type: none"> <li>Migrating from an RDBMS to SimpleDB will not automatically solve database performance problems</li> <li>Not as speedy as a standalone database running on fast performing hardware</li> </ul>
Windows Azure Table	Structured	<ul style="list-style-type: none"> <li>Create Table</li> <li>Insert Entity</li> <li>Merge Entity</li> <li>Get Storage URI</li> <li>Delete Table</li> <li>Execute</li> </ul>	<ul style="list-style-type: none"> <li>Easy to integrate with applications</li> <li>Table storage is fast and cost-effective for many types of applications</li> <li>Table storage is excellent for flexible datasets</li> </ul>	<ul style="list-style-type: none"> <li>Throughput is only 20k operations per second</li> <li>No upper bound on read/write latency.</li> </ul>