

Cloud Storage or Object Storage ?

An active Birds of a Feather session. Content of these published slides has been augmented by participants input.

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What is « Cloud Storage » ?

What is « Cloud Storage » ?

And what is NOT Cloud Storage ?

« Cloud Storage » companies...

3Par	Dell Equallogic	Iron Mountain Digital	Scality RING
Acronis	Dell Ocarina Egnyte	Isilon	Seagate
Active Circle Amazon	EMC Atmos	K7 Cyclozzo Maxiscale	Softlayer
S3 Amplidata	EMC Celler	Mezeo	Sonian
Asigra	EMC Centera	MogileFS	StorSimple
Asterdata	EMC Mozi	Nasuni	Symantec
Atlantis Computing	EMC Symetrix - DMX	Navistite	Synergy4
Autonomy	Eucalyptus	NetApp	The Planet
BIME	EvoStor	NetApp	Twinstrata
Blue Arc Carbonite	GlusterFS GoGrid	Bycast	Veeam
Caringo	Hadoop Harmonic	Nimbula	Vertica
Cassandra	Harmonic - Omneon	Nirvanix	Virsto
Cirtas Systems	HDS - Archivas	Objectivity	VoltDB
Cleversafe cloud.com	HDS Parascale	Oracle (Sun) ZFS	Whamcloud
CloudDrive Cloudera	HP IBRIX	Panasas	Xeround
Cloudscaling Clustrix	HP LeftHand	Panzura	Xiotech
CODA	HP Scalable NAS	Permabit	Zantaz
Cofio	(Polyserve)	Rackspace -	Zetta
CommVault	IBM - GPFS	Openstack Rackspakce	Zmanda
Compellent DataCore	IBM Storwise	- Cloud Files	Zuora
DDN WOS	IBM XIV	Riak / Basho	
Dell Content Storage	IOMart	Scality BizDB	

Can you sort them out ?

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Services :

StaaS (Storage as a Service)

Backup Service

Technologies :

SAN

NAS

Clustered NAS

CAS (Content Adressable Storage)

Dispersed Storage

Object Storage / Key Value Store

File System

No SQL Database

Cloud Stack

Cloud gateway (NFS/CIFS to REST)

Management software

My definition of “Cloud Storage”?

- ❑ Storage provided as a Service, on a shared infrastructure
- ❑ Billed on a monthly basis, based on usage, without commitments or limits
- ❑ Accessible through API/REST interface

It is not :

- ❑ A technology
- ❑ “storage outsourcing”
- ❑ SaaS

« Cloud Storage Technologies »

- ❑ Technologies which can be used to build the underlying storage of a Cloud Storage Service
- ❑ Requirements :
 1. Scalibility (no inherent limit to the size of deployment, Cost/TB must decrease with scale, no single point of failure, build as you need)
 2. Support thousands of storage « nodes », adding nodes need to increase performance, and complexity in $\text{Log}(N)$, or at work kN
 3. Autonomic (less than 2mn to set up a new node)
 4. HTTP / API native interface
 5. 100% data guarantee (No data loss despite multiple disk/server/datacenter failures)
 6. Availability (support for 99,9%, 99.99%, 99.999% depending on the underlying business goal), Predictable performance
 7. Secure

**So, what are « Cloud Storage »
technologies ?**

« Cloud Storage Technologies »

- ❑ Is 3Par a Cloud Storage technology ?
- ❑ Is Cleversafe a Cloud Storage technology ?
- ❑ Is Mezeo a Cloud Storage technology ?
- ❑ Is Hadoop a Cloud Storage technology ?
- ❑ Is Maxiscale a Cloud Storage technology ?
- ❑ Is Scality a Cloud Storage technology ?
- ❑ Is DDN WOS a Cloud Storage technology ?
- ❑ Is Twinstrata a Cloud Storage technology ?
- ❑ Is Virsto a Cloud Storage technology ?

**« Object Storage » is the best fit for
« Cloud Storage » requirements.**

How many are « Cloud Storage » ?

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