



vFileTM Distributed File and Object Storage Virtualization

An Ideal Complement to Your
SANsymphonyTM Block Storage Virtualization

-----● The Authority on Software-Defined Storage

C'est moi

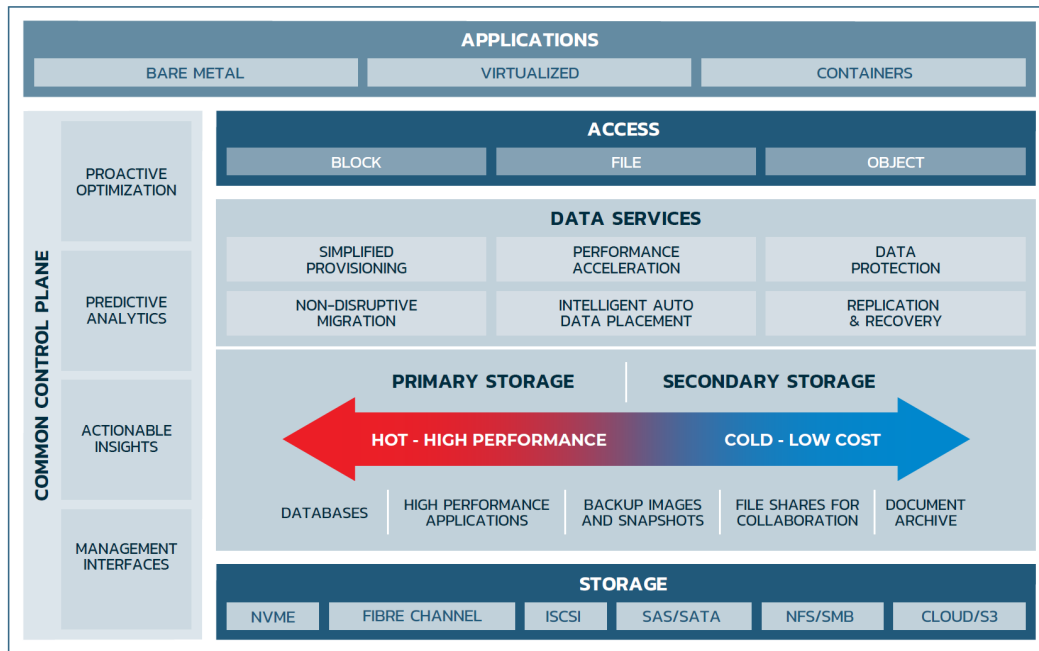




vFilo

“A major step towards fulfilling the vision.”

Dave Zabrowski, CEO



Une solution pour toutes les données



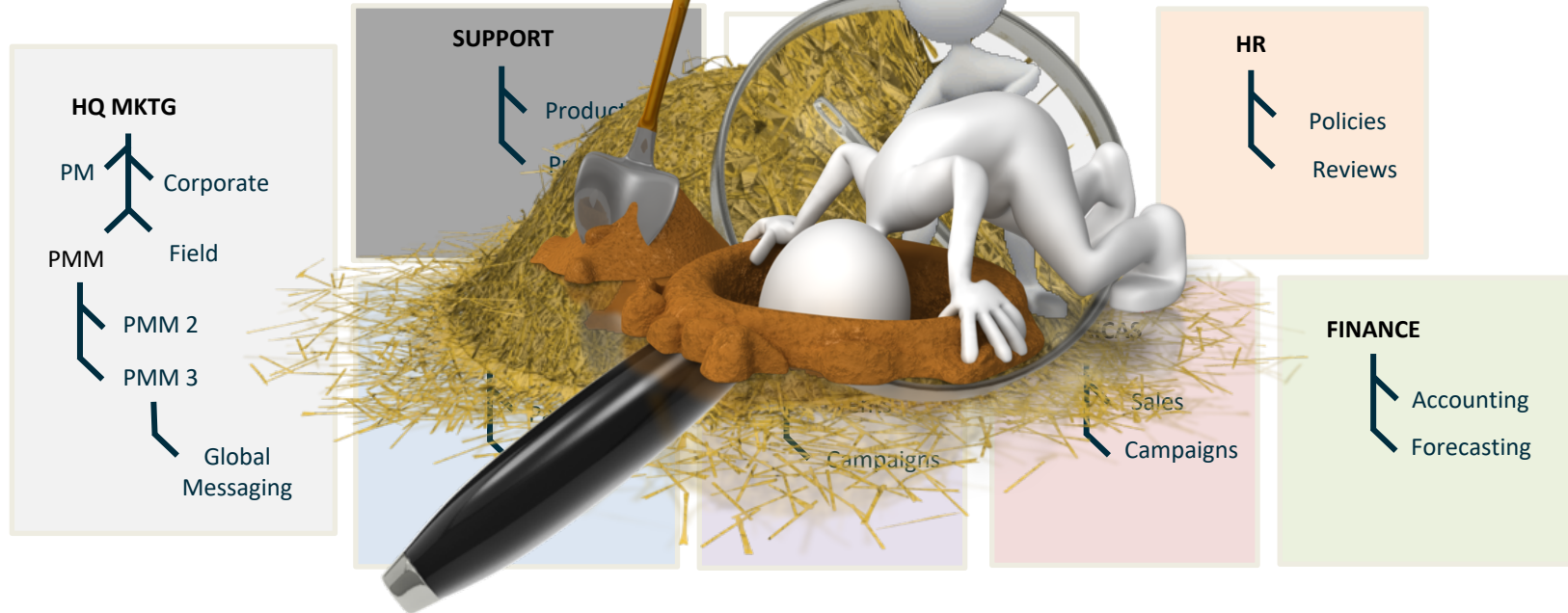
*H1 CY202



What Problems Are We Solving?

Separate Filers → FRUSTRATING!

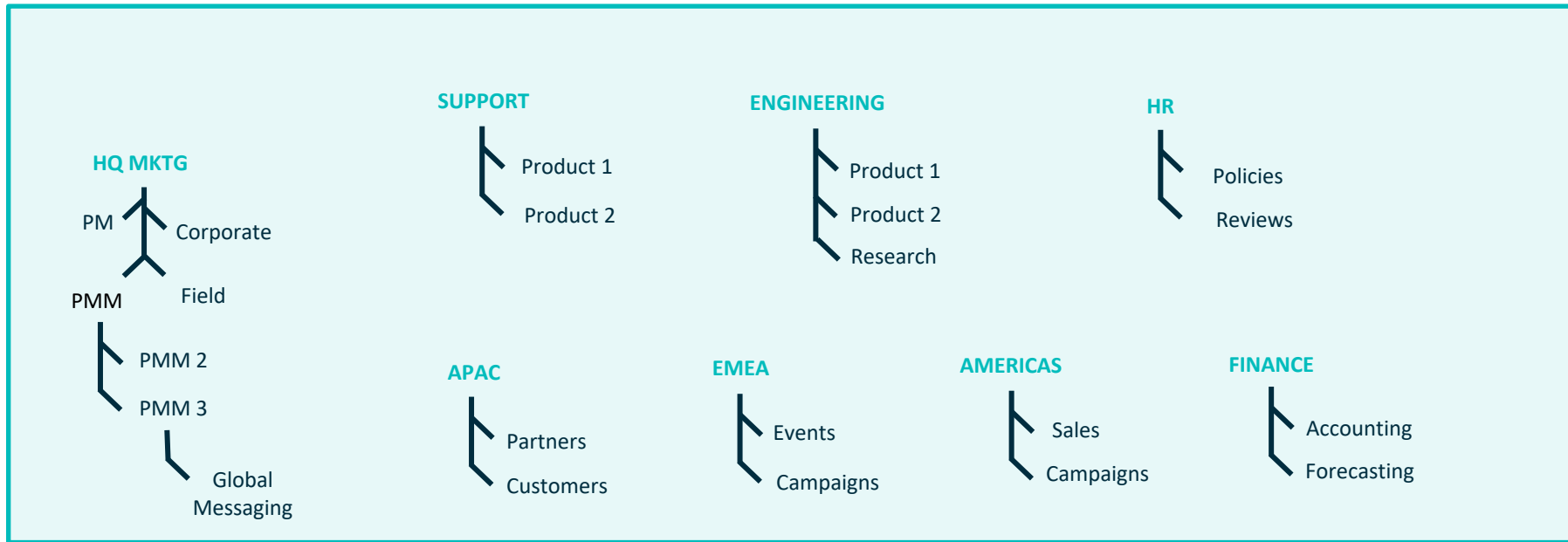
Challenge: \$1000 to first person that finds the 2 files I'm looking for in less than 1 hour



Global Namespace with Tags -> Easy

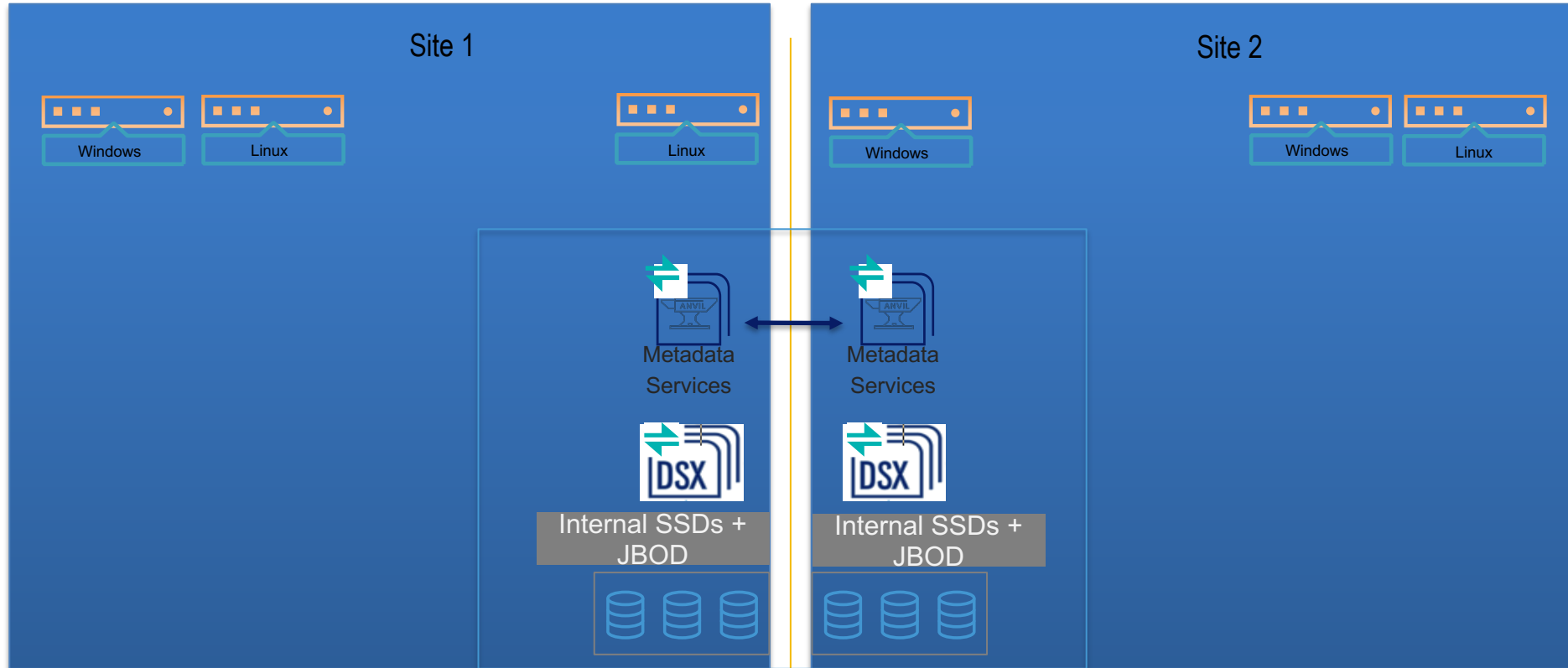
/omniShare

USER: Find latest LAB output file















DEVOPS: Archive files untouched in 6 months

Design sample



Data Services Overview

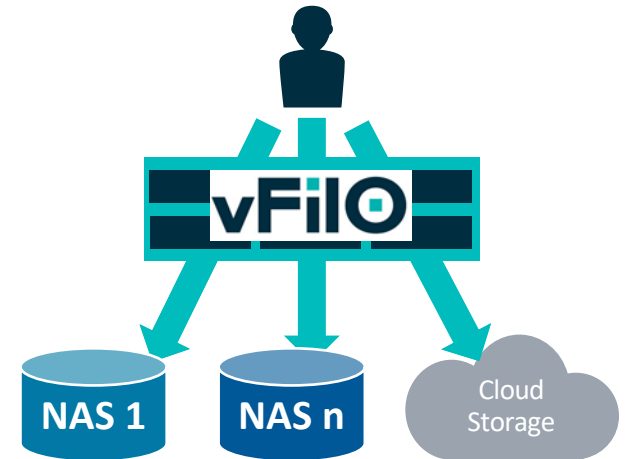
CONSUMERS				
SERVERS / PCs / LAPTOPS		VIRTUAL MACHINES		CONTAINERS
ACCESS METHODS				
NFS		SMB		S3*
OPERATION & INSIGHTS	DATA SERVICES			COMMAND & CONTROL
EXTENSIBLE METADATA	 ACTIVE ARCHIVE	 GLOBAL NAMESPACE*	ACCESS CONTROLS	
DATA MIGRATION	 AUTO-PLACEMENT	 LOAD BALANCING	CLI	
HISTORICAL / REAL-TIME CHARTS	 DATA MOBILITY	 PARALLEL NFS	CONSOLE	
HEALTH & PERFORMANCE GRAPHS	 DEDUPLICATION / COMPRESSION**	 REPLICATION & RECOVERY	FILE GRANULARITY	
ALERTS	 ENCRYPTION**	 SNAPSHOTS	PLUG-INS	
PROVISIONING	 FILER/NAS POOLING,ASSIMILATION	 UNDELETE		
STORAGE				
BLOCK		FILE	OBJECT	CLOUD

*H1 CY2020


**When combined with 3rd party object storage

Use Cases

1. Consolidate namespace (file catalog) from several filers so files can be easily found, accessed, shared, and backed up
2. Leverage object storage or cloud as lower cost resource for:
 - a) Archiving infrequently used files
 - b) Replicating critical files
3. Scale out & load balance file shares to keep up with unstructured data growth



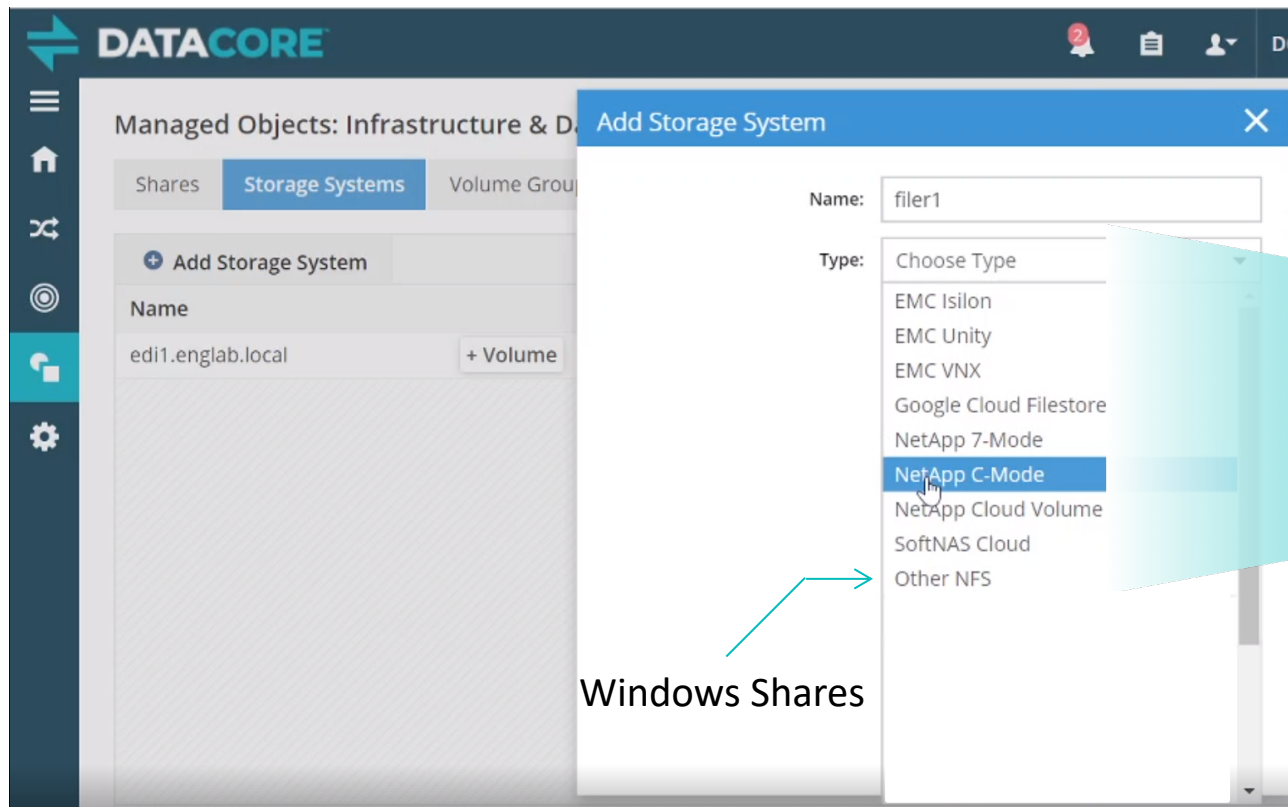
DataCore vFilO Solution

- 
- Assimilate existing filers under a virtual scale-out NAS in minutes
 - Leave data untouched (no throw away, no migration)
 - Retain file attributes (permissions, time stamps, owners, etc.)
 - Create one global, scalable / searchable catalog
 - Users don't have to know which filer the data sits on
 - Enable access from mixed protocols (NFS v3 v4.2, SMB v2 v3, S3*)
 - Load balance new requests across all available storage systems
 - Leverage elastic cloud storage as extension to on-prem capacity
 - Dynamically relocate data to most appropriate device based on business intent & granular policies (performance, availability, cost, age, etc.,)

*H1 CY2020

Common approach for file- and object-based data

Assimilate Existing File Shares



Assign Object/Cloud Storage

Managed Objects: Infrastructure & Data

Shares | **Storage Systems** | Volume Groups | Volumes

+ Add Storage System

Name	Volumes	Volume Status	Type
vfilodxs.workgroup	1	1 0 0 0	DataCore
vfilodxs2.workgroup	1	1 0 0 0	DataCore
south5NFS	2	0 1 0 1	Other
centos_nfs	2	0 0 0 0	Other
azurestorages3	1	1 0 0 0	Other

Add Storage System

Name: Object/Cloud

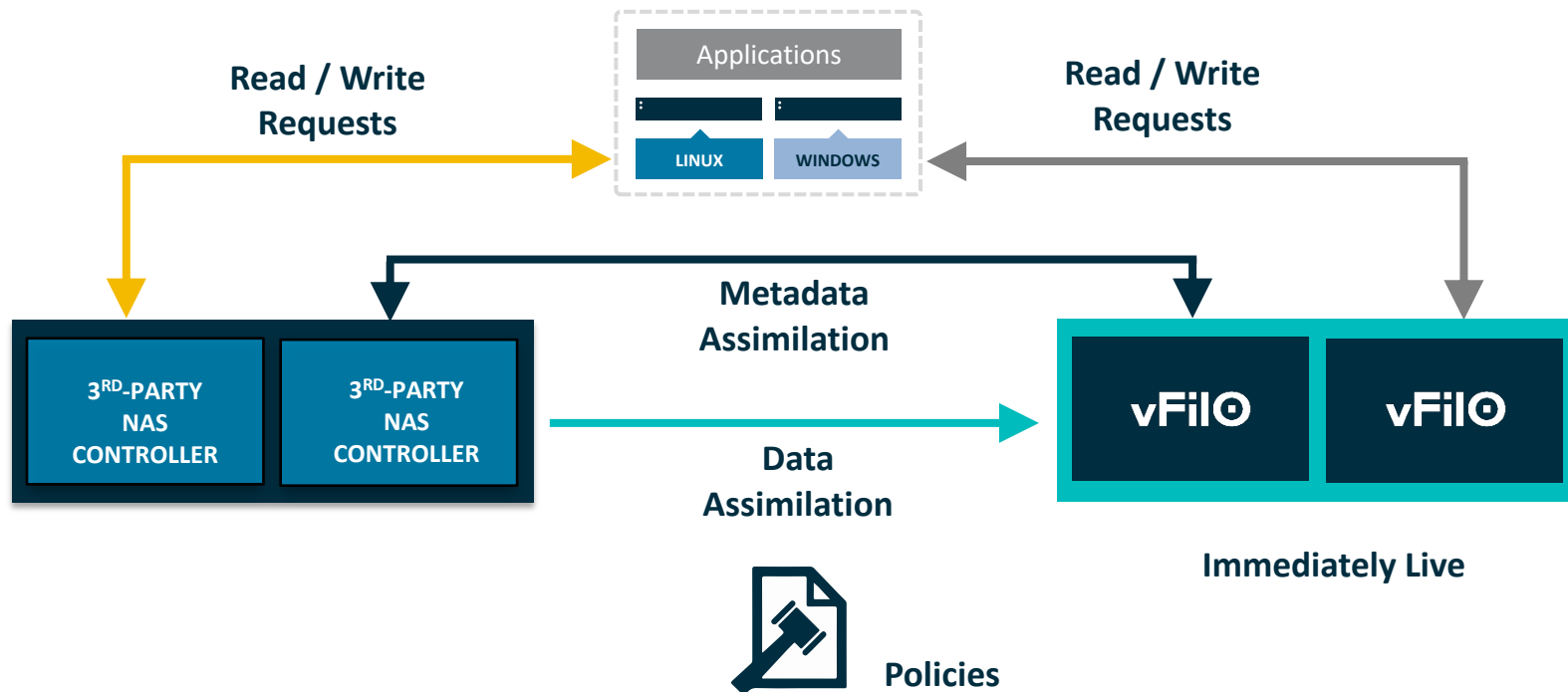
Type: Choose Type

- AWS S3
- Azure
- Cloudian HyperStore
- Dell/EMC ECS
- Generic S3
- Google Cloud Storage
- Google Cloud Storage (S3 Interop)
- HGST ActiveScale
- Hitachi Content Platform
- IBM Cloud Object Storage
- NetApp StorageGrid Webscale
- Scalify RING

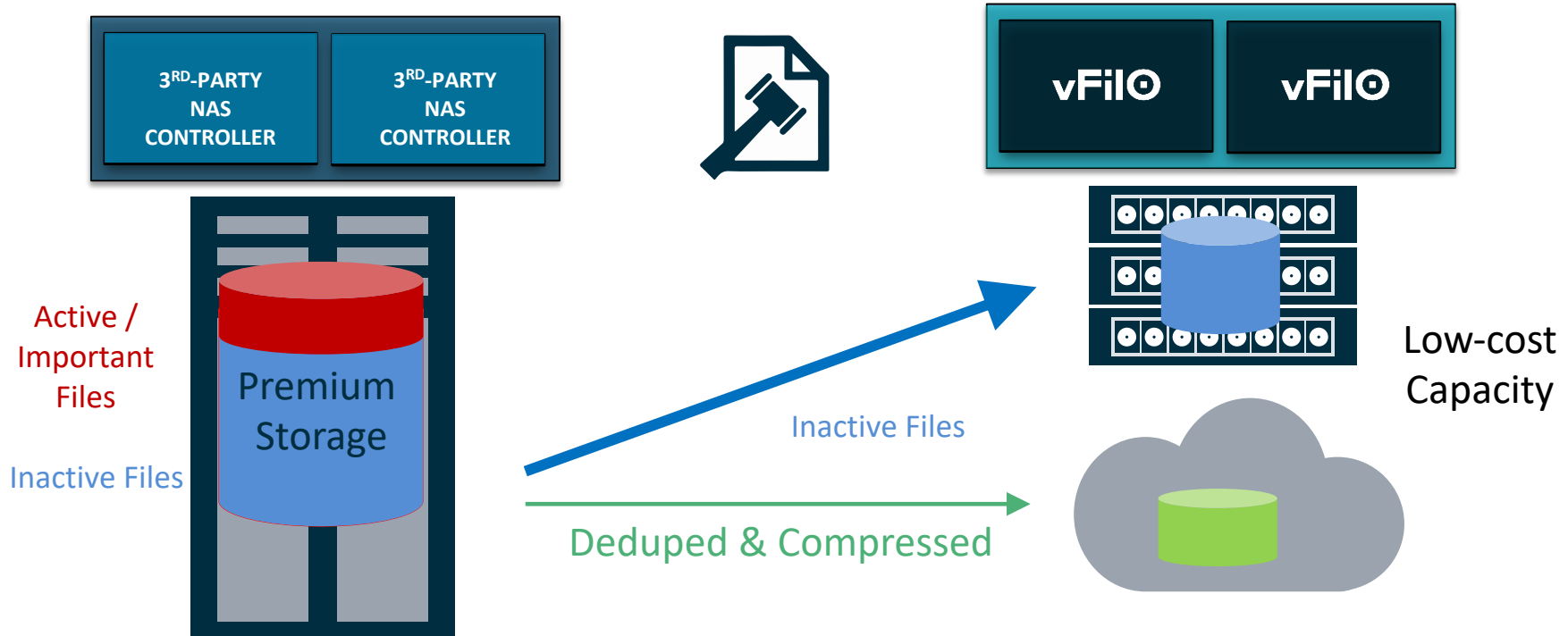
Add Storage System

Destinations for inactive data

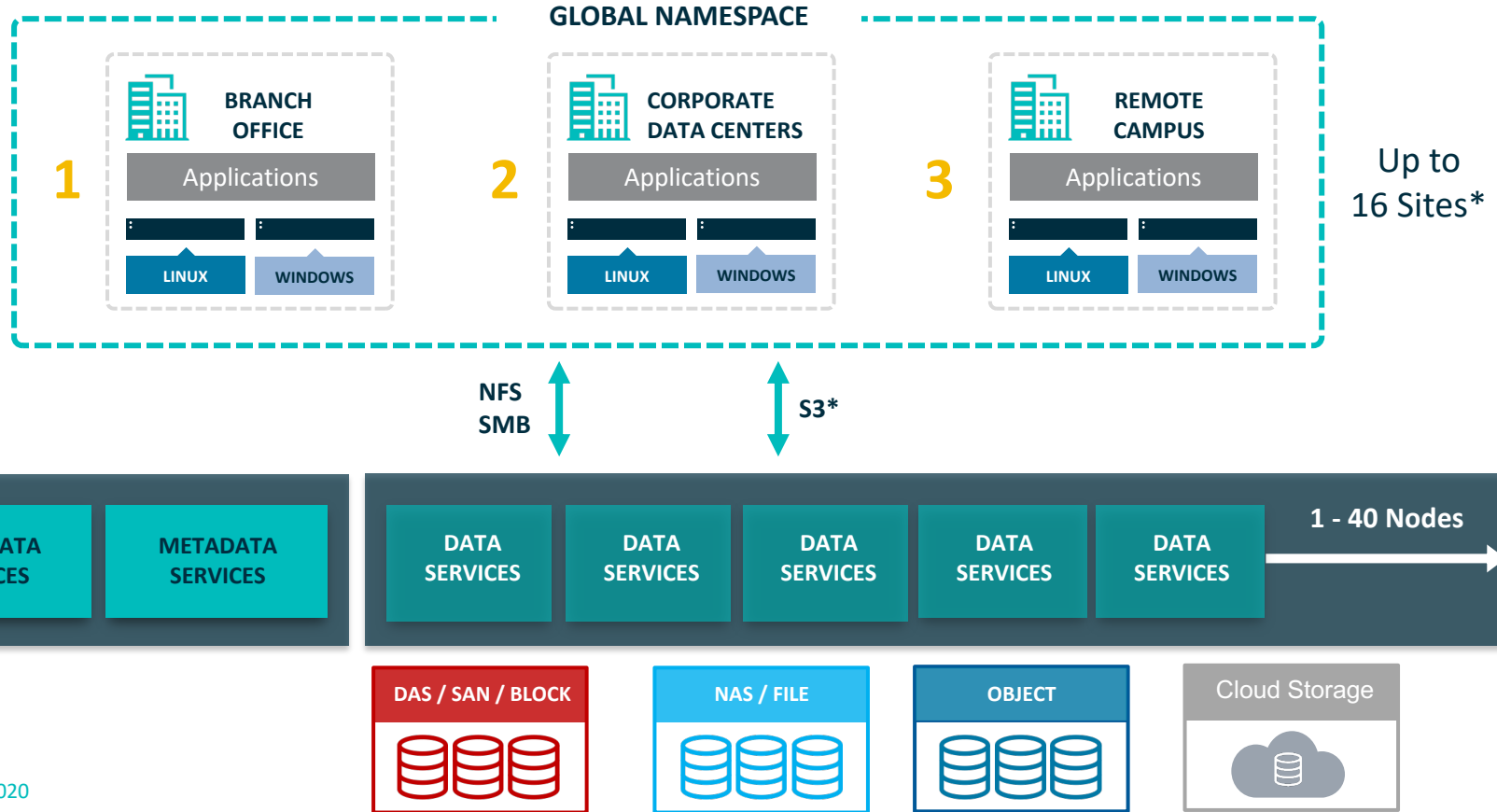
Live “Migrations”



Best Use of Space for Major Savings

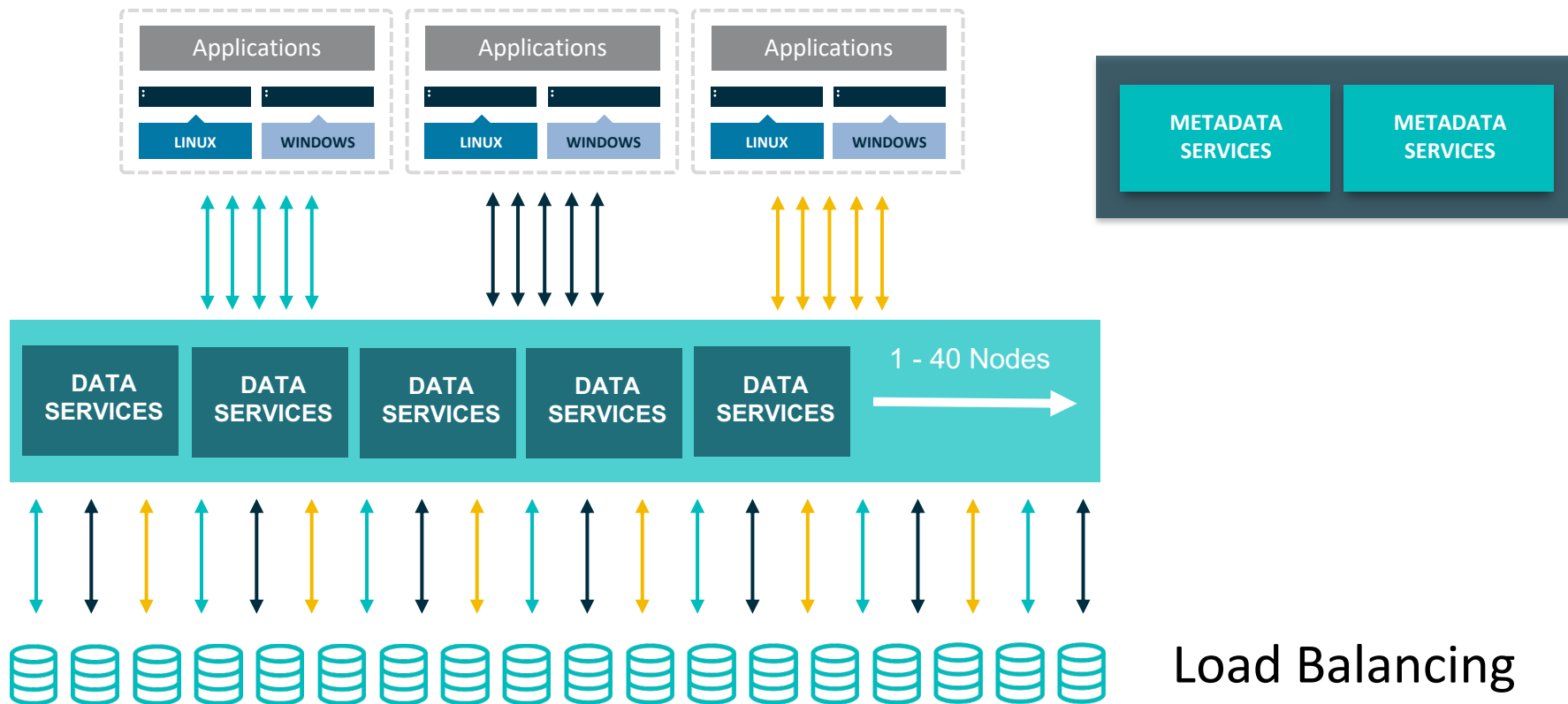


vFiO Spans Multiple Sites









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vFileO Scale-out Parallel File System




Simply State Your Objective(s)

 **DATAcore**





DCA3597170EC7CEMonday, 4 Nov, 10:49 AM EST

1 Name2 Define Rules3 Review

Editor: BasicAdvanced

IF Statement
Define file attributes


IF is

Apply to Live FilesFile Name: *mp4

Add Statement


Activity Range
Define file activity

6mo inactive



7 years inactive1,000.00 K IOPS

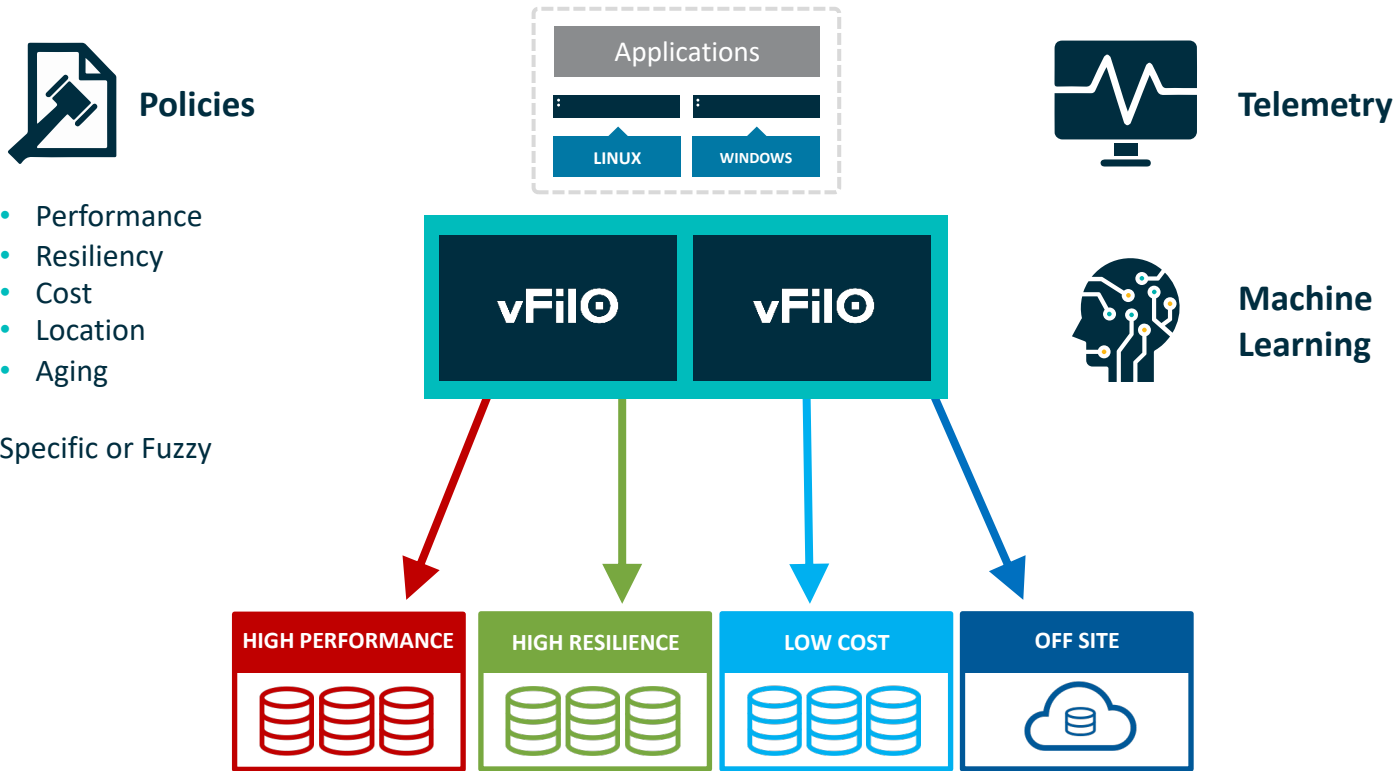
Lower Bound	Upper Bound	Tier
<input type="text" value="6 months inactive"/>	<input type="text" value="1,000.00"/> <input type="text" value="K IOPS"/>	<input type="text" value="exclude-from-object-volumes"/>
<input type="text" value="7 years inactive"/>	<input type="text" value="6 months inactive"/>	<input type="text" value="place-on-azurestorages3::azureblob1"/>



Define Additional Rules

Next Step

Autonomic Data Placement



File-Level Granularity

Quicker & more efficient
than @ volume level



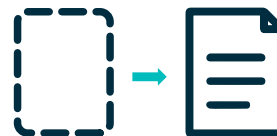
POLICIES



**SNAPSHOTS /
CLONES**



DATA MOBILITY

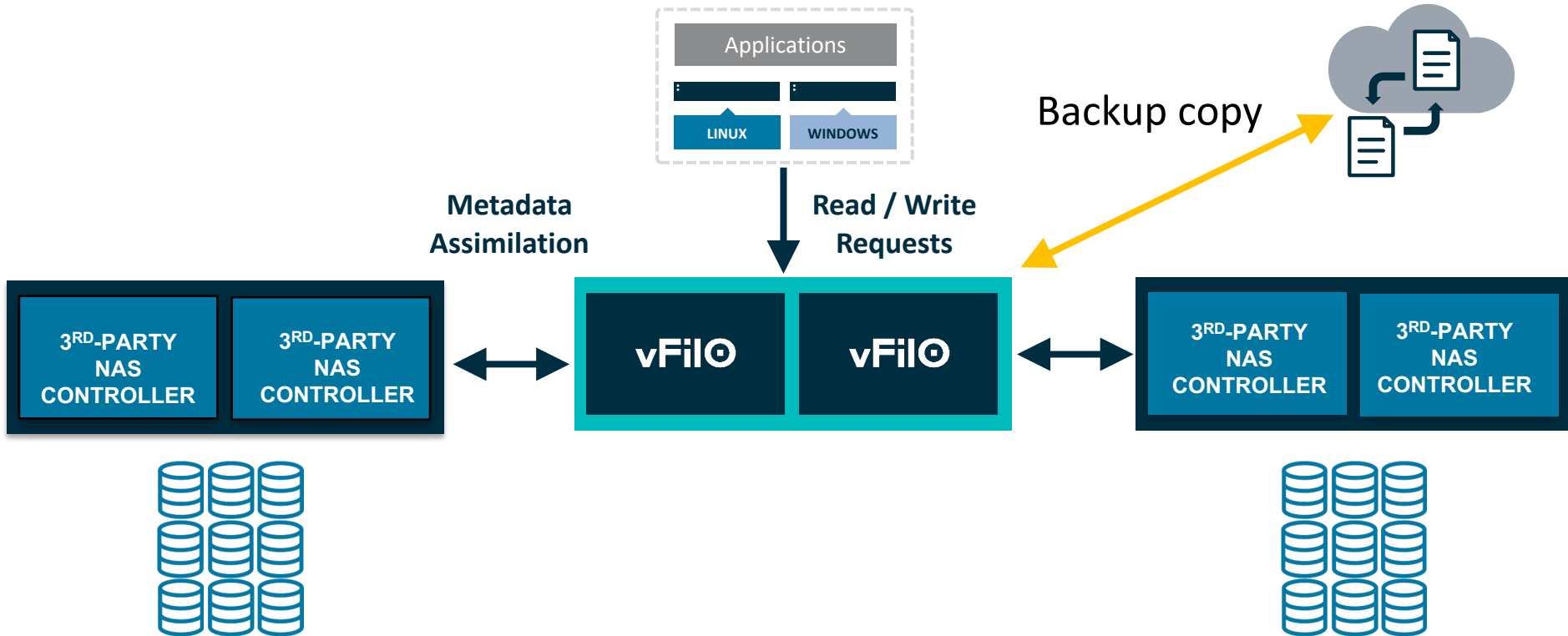


**RECOVERY /
UNDELETE**



**REPLICATION /
RECOVERY TO
THE CLOUD**

Replicate Data to the Cloud



Metadata Assimilation



- Copy **only** metadata from N-number of NAS systems
- Perform analytics using 3rd-party tools
- Gain greater insight into your data complex

Exceptional Business Value

IMPROVE VISIBILITY & CONTROL

- Measurably improve productivity and collaboration with faster, easier access to files & multimedia
- Derive new business insights gleaned from metadata
- Fulfill data governance obligations

ENHANCE OPERATIONS

- Recover time lost shuffling files around & backing them up
- Avoid disruptive data migrations
- Track / adjust where data is stored & how much it costs

REDUCE COSTS

- Save by moving inactive data & replicas to lower cost cloud storage, deduped / compressed
- Avoid buying more premium storage by uncluttering it & fully utilizing its capacity

vFile Pricing

ACTIVE DATA
[AC]

KEPT ON PRIMARY STORAGE

INACTIVE DATA
[IN]

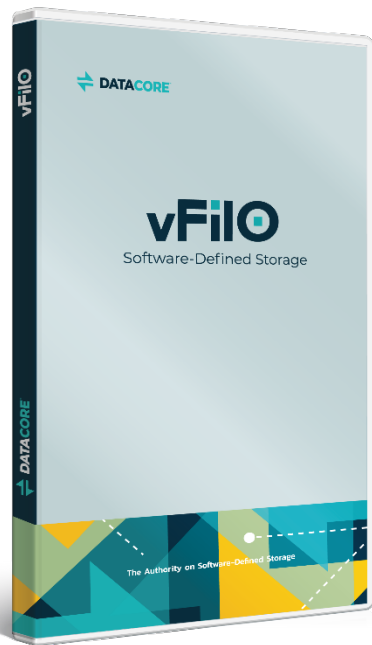
**DEDUPED & COMPRESSED IN
OBJECT / CLOUD STORAGE**

- Based on capacity consumption in Terabytes (TBs)
- 1-year and 3-year subscriptions include support
- 10 TB minimum order in 1 TB granularity
- Volume discounts
- Scale data services (DSX) nodes as needed @ no extra charge

vFilO Distinctive Advantages

- Immediate instantiation of file systems (no data move required)
- Parallel I/O *even* with legacy NFS and SMB protocols
- Selectively assimilate 3rd-party file systems without replicating all data
- Undelete function enabling zero RPO
- Policy-driven autonomic live-data tiering and mobility
- File granular snapshots, clones, replication, and recovery
- Extensible metadata for tagging, classification, and customer descriptors

vFilo Benefits & Differentiation



- **VISIBILITY & CONTROL**
- **SIMPLICITY**
- **EFFICIENCY**
- **ULTIMATE FLEXIBILITY**
 - Freedom of Choice
 - Data Mobility

Next Steps

- ❖ View 30-minute product tour / demo

<https://datacore-software.wistia.com/medias/fdwogjeaqw>

- Contact your DataCore partner to learn where best to apply vFilO

www.datacore.com





Questions?

info@datacore.com

www.datacore.com

vFilO Implementation

- Global namespace (across sites for file- and object-based data)*
 - Accessible from mixed protocols (NFS, SMB and S3*)
- Automated load-balancing across diverse filers
 - Scale-out architecture (grow and shrink)
 - High performance parallel NFS (for fast response)
- Live-data mobility (automated, policy-driven)
- Dedupe / compress / encrypt on object storage and cloud
- Enterprise-class snapshots, clones, replication
- Self-service undelete (recycle bin)
- Telemetry on usage patterns / storage behavior factored in data placement
- Extensible **metadata** kept apart from data for keyword queries / ad-hoc correlation



*H1 CY2020

PACKAGING: Linux-based, self-contained image runs on a VM or on bare-metal