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SoftLayer Object Storage Overview

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Agenda

- What is Object Storage?
  - Demand Drivers
  - Comparison of Block, File, and Object
  - What it is … and is not
- What are common use cases?
  - Social / Mobile App Storage
  - Analytics Data Store
  - Offsite Backup / Archive
  - NAS Filer Consolidation
- What are some enabling technologies?
  - Storage Gateways
  - Aspera
- What does SoftLayer offer for Object Storage?
  - Locations
  - Features
  - Pricing

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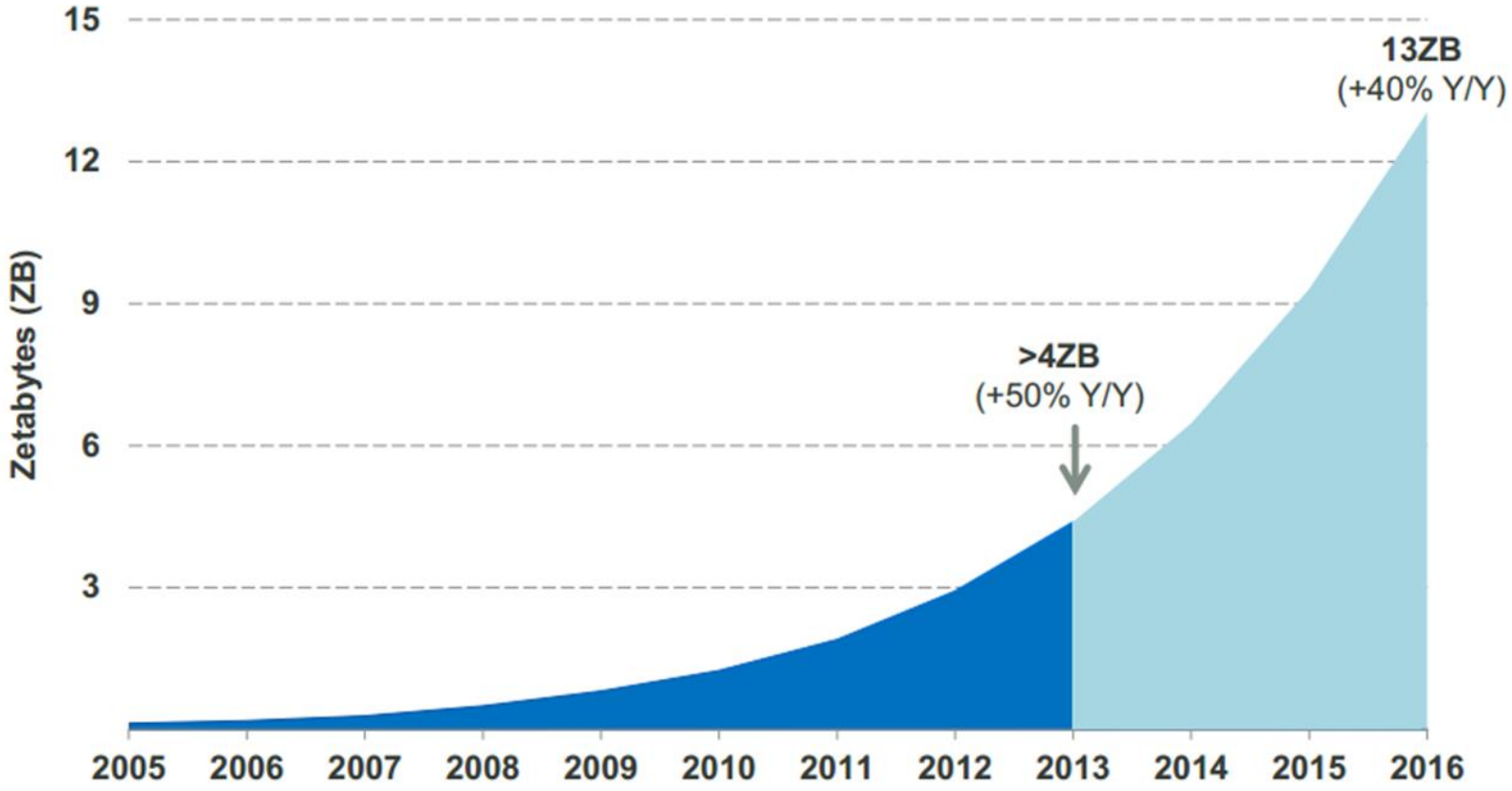
Why? Unstructured data growth is exploding!

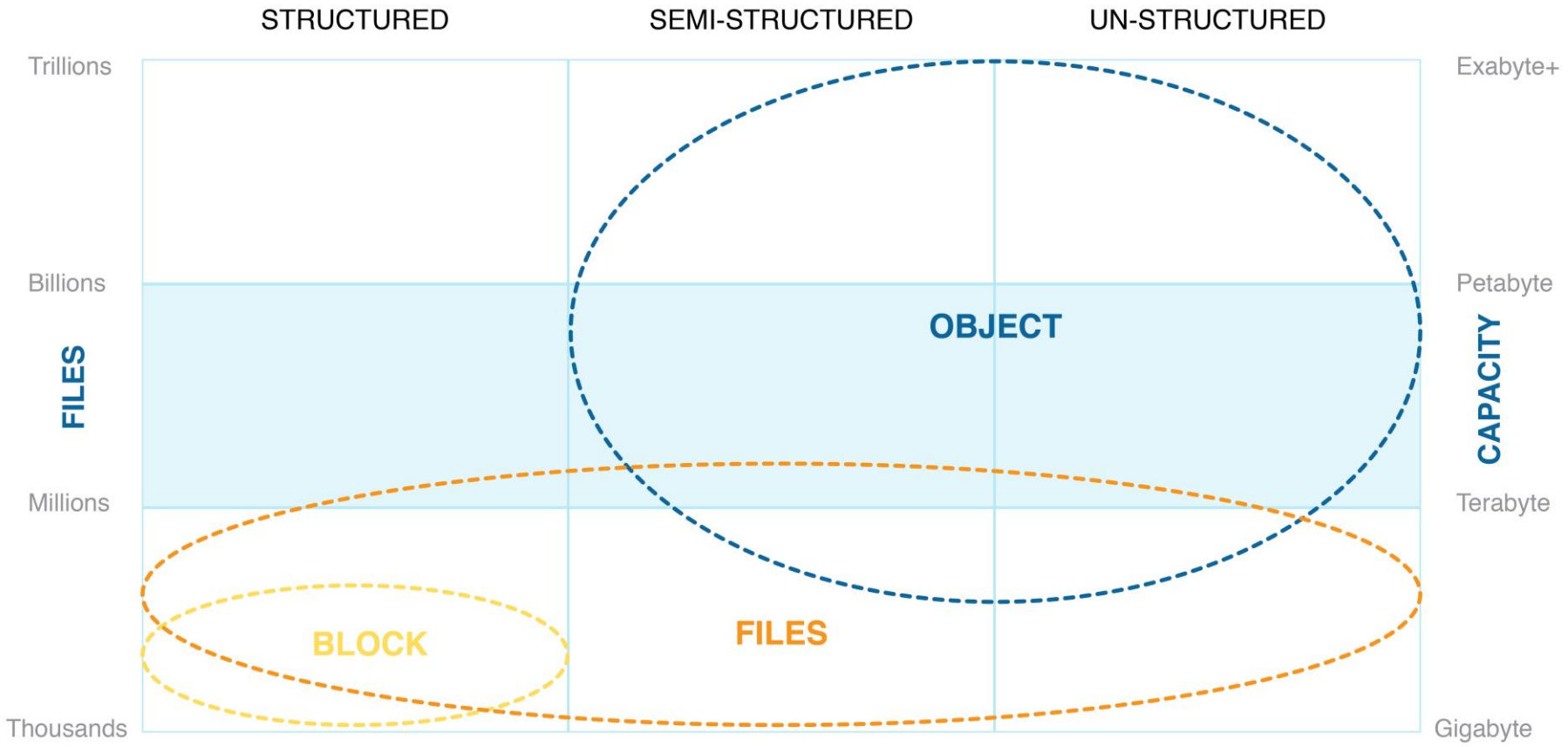


@KPCB Note: 1 petabyte = 1MM gigabytes, 1 zetabyte = 1MM petabytes.
Source: IDC Digital Universe, data as of 5/14.

65

Source: Internet Trends 2014 – Code Conference

Where does Object Storage fit?



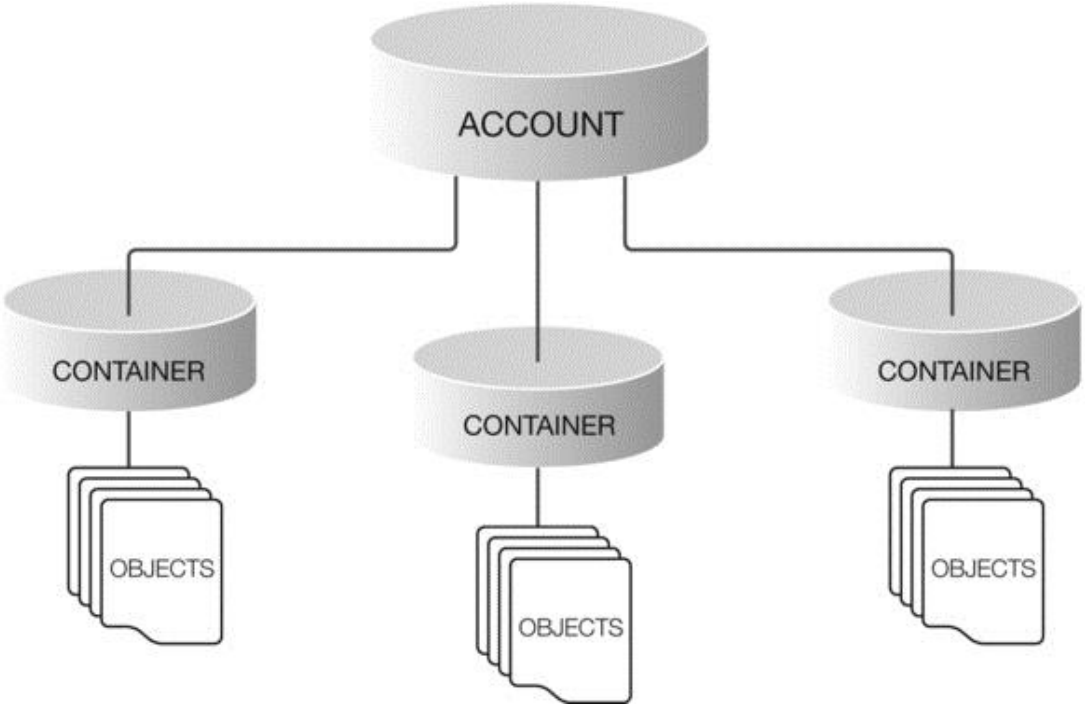
Object Storage Defined

Inexpensive, scalable, self-healing storage for massive amounts of unstructured data.

What Object Storage is…and is not

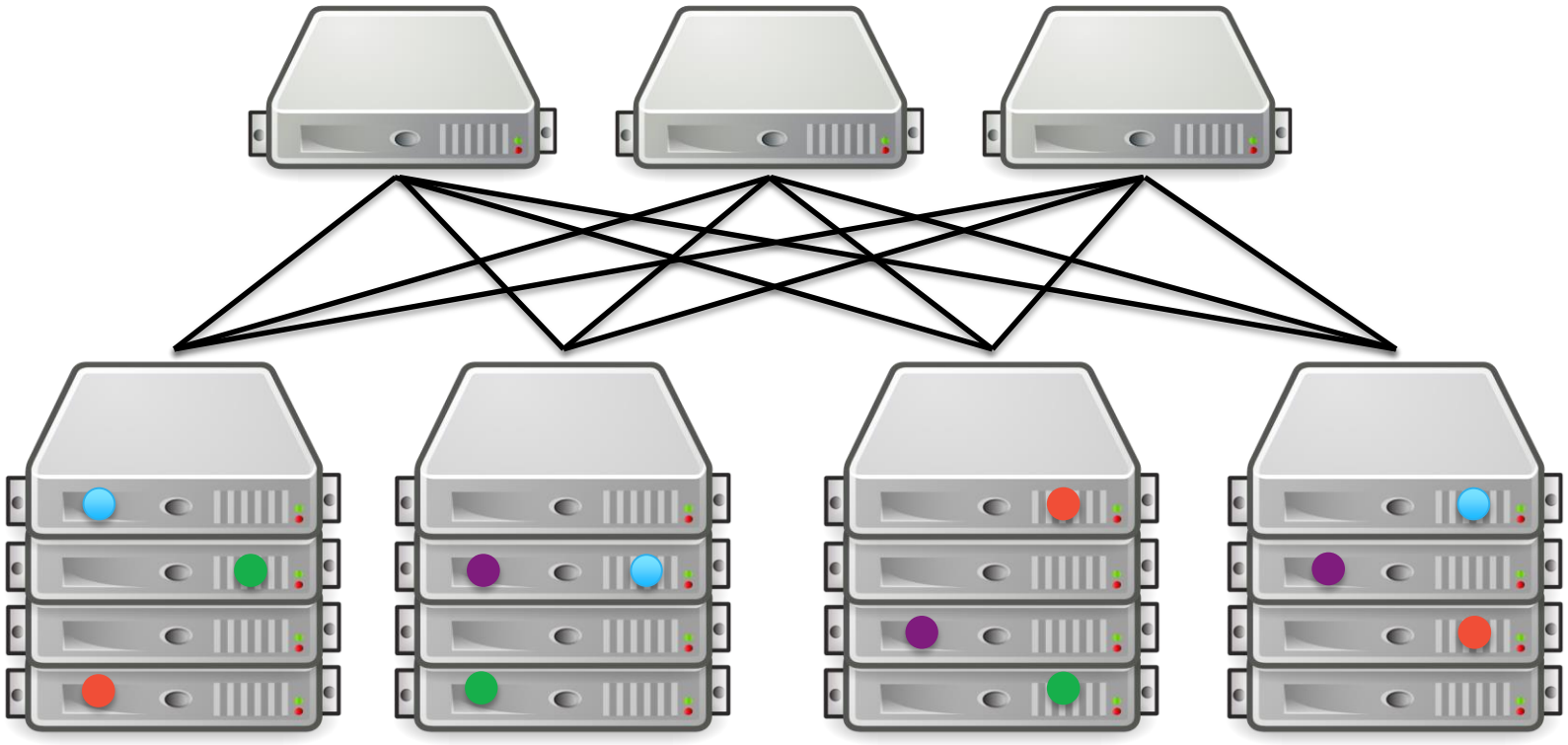
Is	Is NOT
Eventually Consistent	Strongly Consistent
Optimized for storing entire file	For inline file edits or hypervisor storage
API-based	Directly accessible by traditional iSCSI / NFS
For semi-structured / unstructured	For structured data
Massively scalable	POSIX-compliant file system
Highly durable	

Logical Model



Object is { Data + Metadata + GUID }

Physical Architecture



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Use Case: Social / Mobile App Storage

Challenge	Solution
Social / mobile apps produce large amounts of user-generated content that needs to be durably stored, readily accessible, and scale “virally” 	Social / mobile applications directly code to REST-based Object Storage APIs **Why Object Storage?** Object Storage offers extremely high durability, exposes each object via URL for easy access, and scales immediately without need for volume management.

Use Case: Analytics Data Store

Challenge	Solution
Analytic data sets are rapidly expanding and moving them around has become impractical.   	Store data sets in object storage and directly access them for processing. **Why Object Storage?** Durably and inexpensively store large amounts of data with read/write capacity that scales linearly as capacity expands.

Use Case: Offsite Backup / Archive

Challenge	Solution
Need to inexpensively and durably store / archive data off-site for business continuity or disaster recovery purposes. ctera™ NetApp commvault	Leverage “Storage Gateway” for iSCSI / NFS interface on object store or use backup solution with direct integration. **Why Object Storage?** Object Storage offers high durability at low price point. Public service provider alleviates need for a second data center.

Use Case: NAS Filer Consolidation

Challenge	Solution
Many small storage “islands” across remote / branch offices that are expensive, difficult to manage, and difficult to backup. NASUNI panzura Cloud Storage Made Seamless Maginatics	Object Storage-enabled software solution offering centralized management and local caching to improve access times. **Why Object Storage?** Object Storage eliminates islands by enabling centralized data management at high durability and a low price point.

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Storage Gateways: Legacy Connectivity

GATEWAYS….

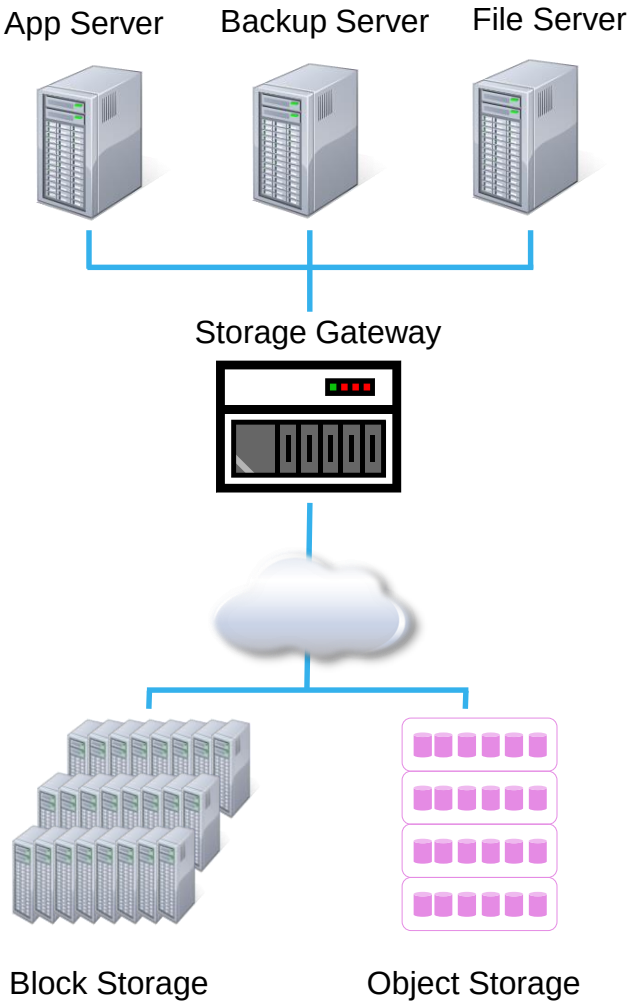
- Adopt new-era storage platforms typically characterized by HTTP-based access to legacy systems
- Come in multiple form factors – physical appliance, virtual appliance, operating system driver
- Expose traditional block / file protocols – e.g. iSCSI, NFS / CIFS, VTL (Virtual Tape Library)

USE CASES

Backup
store primary backups
Archive
tape replacement
Storage Expansion
reduce on-premise footprint
Disaster Recovery
off-site mirror
File Sync & Share
easily accessible storage
Data / Workload Migration
temp landing spot

COMMON FUNCTIONS

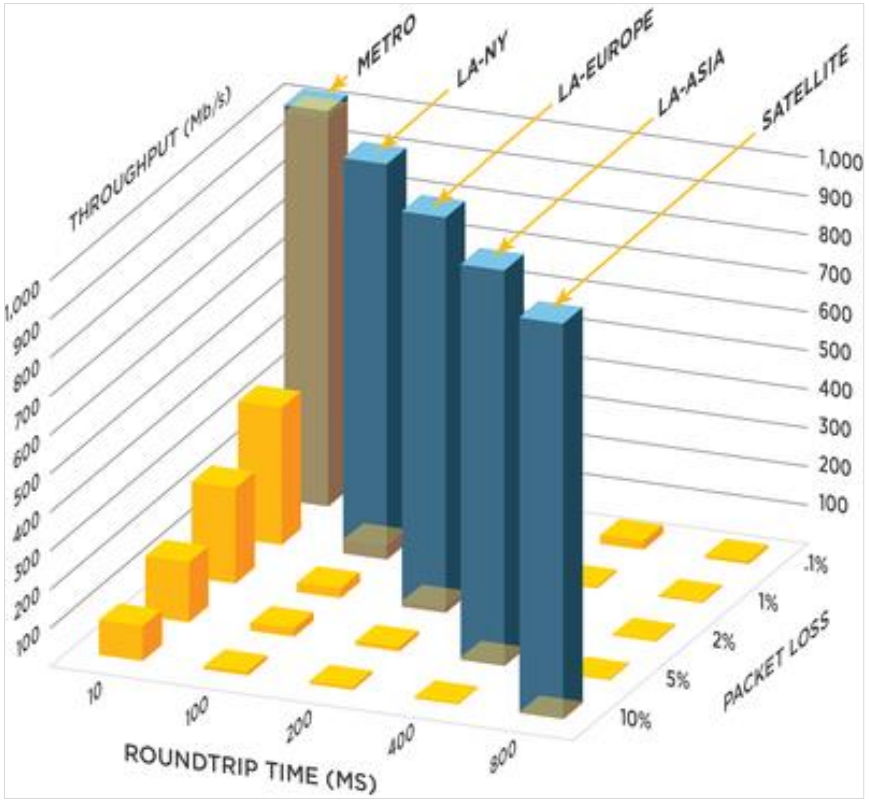
Access
iSCSI, NFS / CIFS, VTL
Caching
configurable, expandable size
Encryption
transfer and at-rest
Dedup / Compression
optimize consumption & transfer
Global Namespace
same view across devices



Aspera: High-Speed File Transfer

Aspera On Demand

"Direct to object storage" capability, which tightly integrates FASP transfers with the native object storage APIs, enables users to securely move their data directly into cloud-based object storage at line-speed from any Aspera Client over wide area networks.



Aspera's software moves the world's data at maximum speed, regardless of file size, transfer distance or network conditions.

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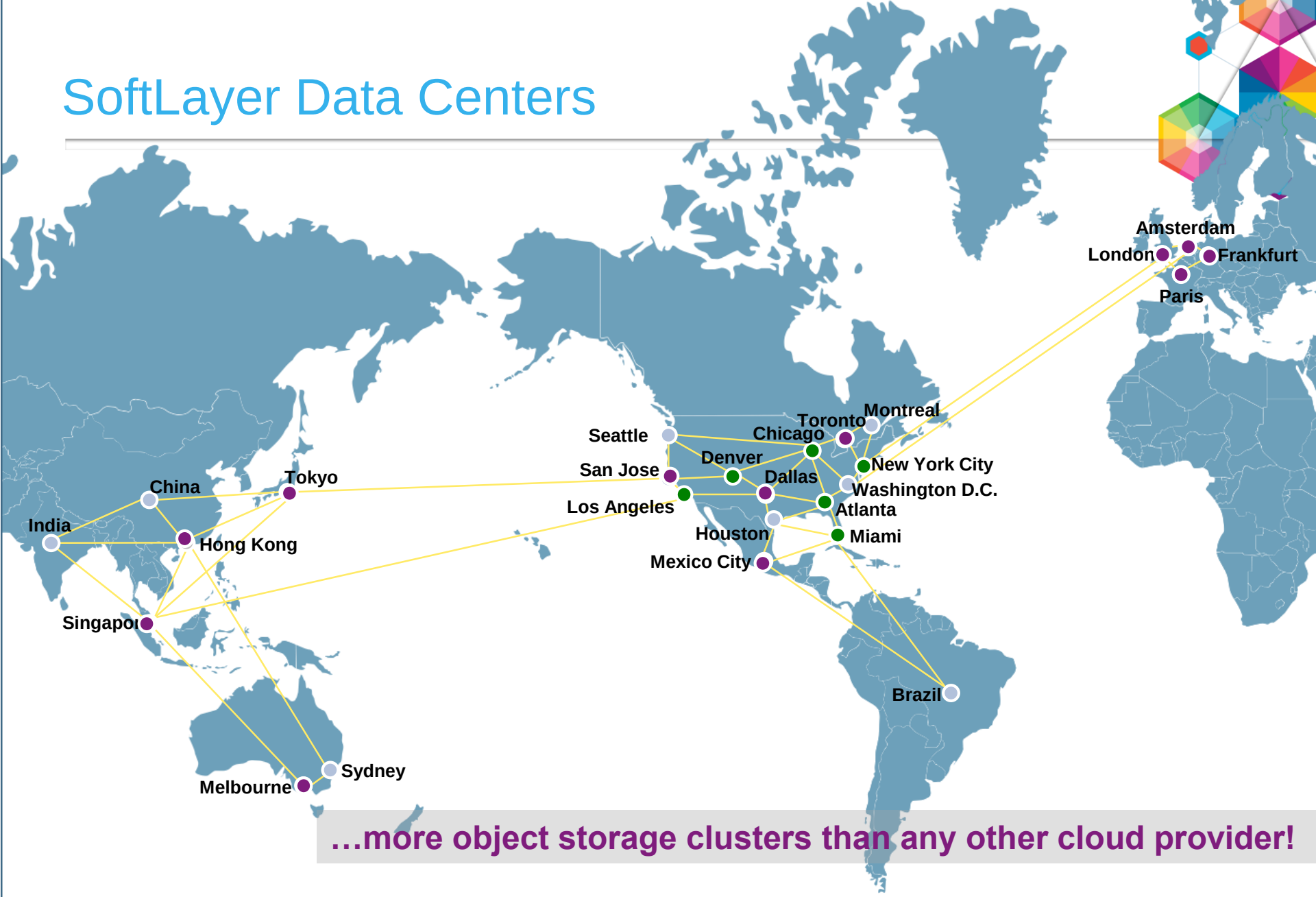
SoftLayer Object Storage Features

- Built on open standards – OpenStack Swift
- CDN Integration
- API, Web Portal, and Mobile Application control
- Metadata indexing and search
- Built-in SFTP access
- Free inbound transfer, private network access, and API operations

SoftLayer Data Centers



…more object storage clusters than any other cloud provider!

SoftLayer Object Storage Pricing

Pay-as-You-Go Pricing

Control costs with pay-as-you-go pricing for storage and outbound bandwidth, and no additional charges for bandwidth within and between SoftLayer data centers, inbound traffic, or requests.

Starting at $0.04 per GB	
GB of Storage	400GB
GB of Outgoing Storage	100GB
Estimated Monthly Total	**$20.00**

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