Aspera on Cloud: Enable Multicloud Data Transfer, Sharing & More!

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IBM Aspera

IBM **Aspera**

IBM Aspera’s mission

Creating next-generation transport technologies
that move the world’s digital assets at maximum speed,
regardless of file size, transfer distance and network conditions

Challenges of multicloud data transfer

FTP & HTTP Timeouts

TCP-based transfers slow with distance and packet loss

Automating Transfers

Manually scripting automated file processing is too complex

Need Faster, More Secure Delivery

Shipping hard disks increases risk of data getting lost in transit

Lack End-to-End Visibility

Activity tracking & reporting across hybrid infrastructures is difficult

Accessing Data in a Hybrid Cloud

Data spread across storage locations can be difficult to access

Securing Your Transfer Environment

Enabling information exchange risks the exposure of your business' IP

Increasingly this calls for

Fastest possible transfers with predictable delivery times

- Regardless of distance
- Support for large files, large numbers of small files, and streams

Support for hybrid cloud infrastructures

- Any storage location
- Any leading cloud platform

Enterprise-grade Security

- Encryption, privacy, and integrity of data
- Authentication and access control

Control and Automation

- Over transfer activity, times, and resource usage
- Seamless integration and automation via APIs

Fully managed service

- Software, infrastructure and security management are handled
- Allows an organization to focus on its business

Key Aspera capabilities

Performance at any distance

– Transfer up to 100s of times faster using built-in FASP® protocol

– Any size or volume

– Predictable and reliable

– Adaptive bandwidth control

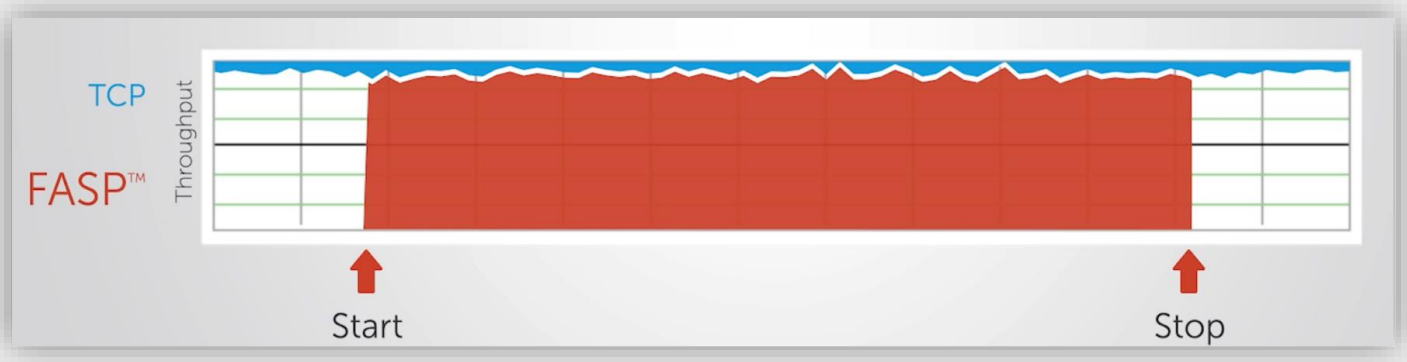
– Achieve multi-Gbps speeds

High-speed data transfer across hybrid, multicloud infrastructures

MOVING A 10GB FILE

	Network Bandwidth	Across US	US - Europe	US - Asia
FTP	100 Mbps	10-20 Hours	15-20 Hours	Impractical
	1 Gbps			
	10 Gbps			
Aspera FASP®	100 Mbps	14 Min	14 Min	14 Min
	1 Gbps	1.4 Min	1.4 Min	1.4 Min
	10 Gbps	8.4 Sec	8.4 Sec	8.4 Sec

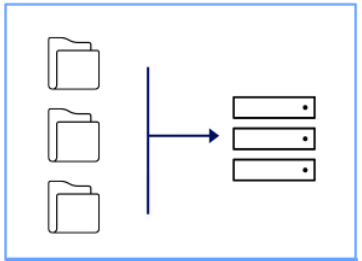
FASP®: maximum speed with no network saturation



Extraordinary bandwidth control that doesn't saturate the network

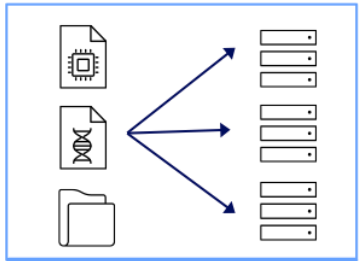
- Automatic detection & full utilization of available bandwidth with "fair" policy protection of other network traffic
- Allows "bursts" in TCP traffic and reclaims unused bandwidth as it as it becomes available

Multicloud transfer use cases



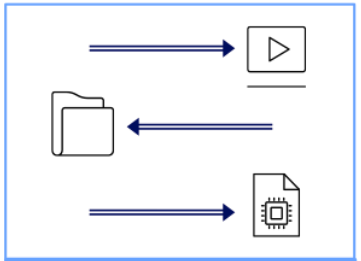
Upload & Ingest Large Data Sets

Migrate/upload massive volumes of data to cloud to cut costs and scale faster, e.g. Migrate to Cloud



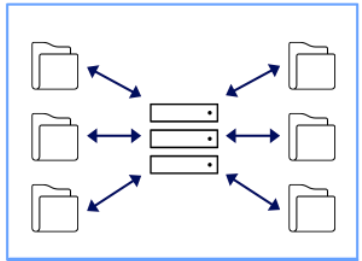
Distribute Data Globally

Rapidly distribute & stream globally to many target sites to accelerate workflows & deliverables, e.g. Retail Distribution



Share & Exchange Files & Folders

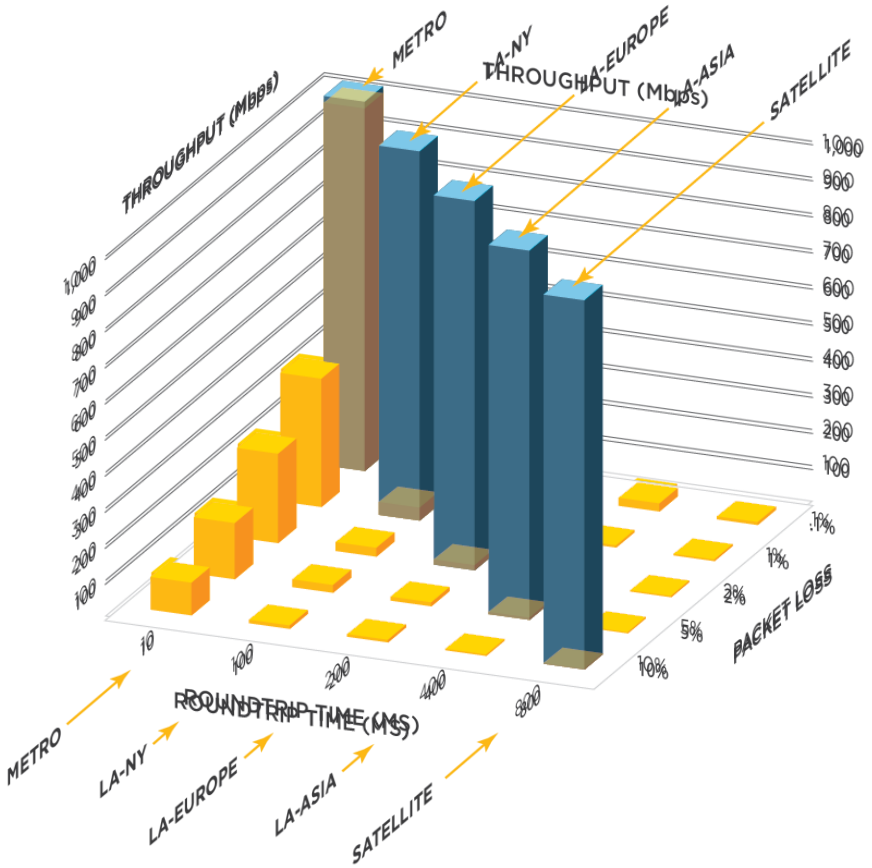
Allow teams to quickly collaborate with huge files and data sets to boost productivity, e.g. Content repositories



Replicate & Sync Datasets

Replicate data repositories. Decrease RTO/RPO to ensure business continuity and prevent data loss e.g. Devops Sync

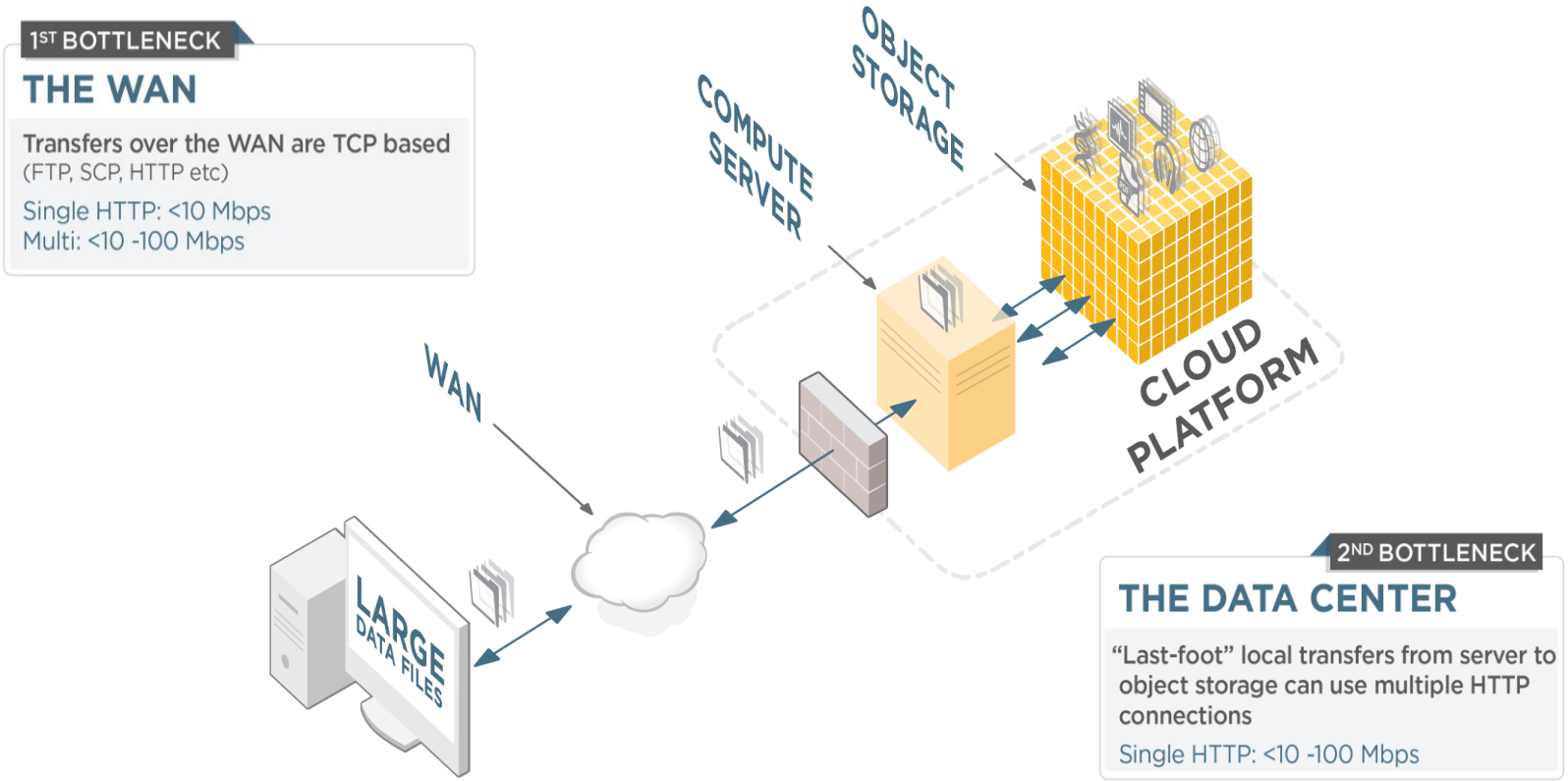
FASP® – high-performance data transport



Note: The relative bandwidth utilization for FASP transfers over a 1 Gbps network are immune to latency (distance) with very little effect from packet loss.

- Maximum transfer speed
- Congestion avoidance and policy control
- Uncompromising security and reliability
- Scalable management, monitoring and control

WAN transfer challenge is compounded in the cloud



Cloud transfer options

HTTP MULTI-PART UPLOAD

OPTION ONE

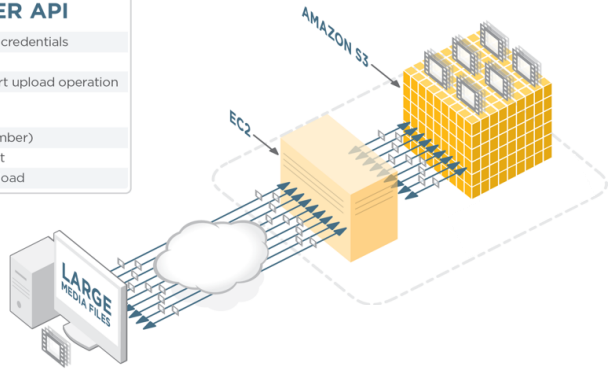
HTTP MULTI-PART UPLOADER API

1. Initiate multipart upload by providing your AWS credentials
2. Provide required bucket name and key name
3. Save the upload ID for each subsequent multipart upload operation
4. Upload parts providing part upload information (upload ID, bucket name, part number)
5. Save the responses (ETag value and the part number)
6. Repeat tasks 4 and 5 for each part of your object
7. Execute a final call to complete the multipart upload

OPTION TWO

TYPICAL TOOLS

CLOUDBERRY EXPLORER | CYBERDUCK | S3FOX ORGANIZER

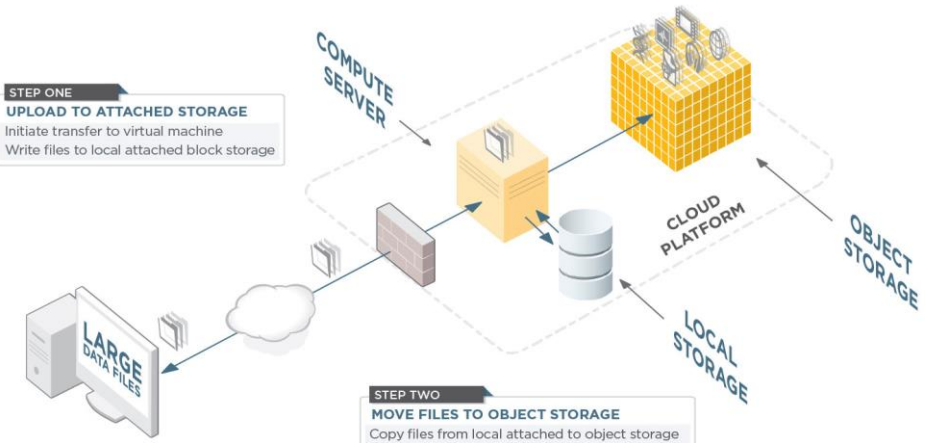


TWO-STEP UPLOAD

STEP ONE

UPLOAD TO ATTACHED STORAGE

Initiate transfer to virtual machine
Write files to local attached block storage



STEP TWO

MOVE FILES TO OBJECT STORAGE

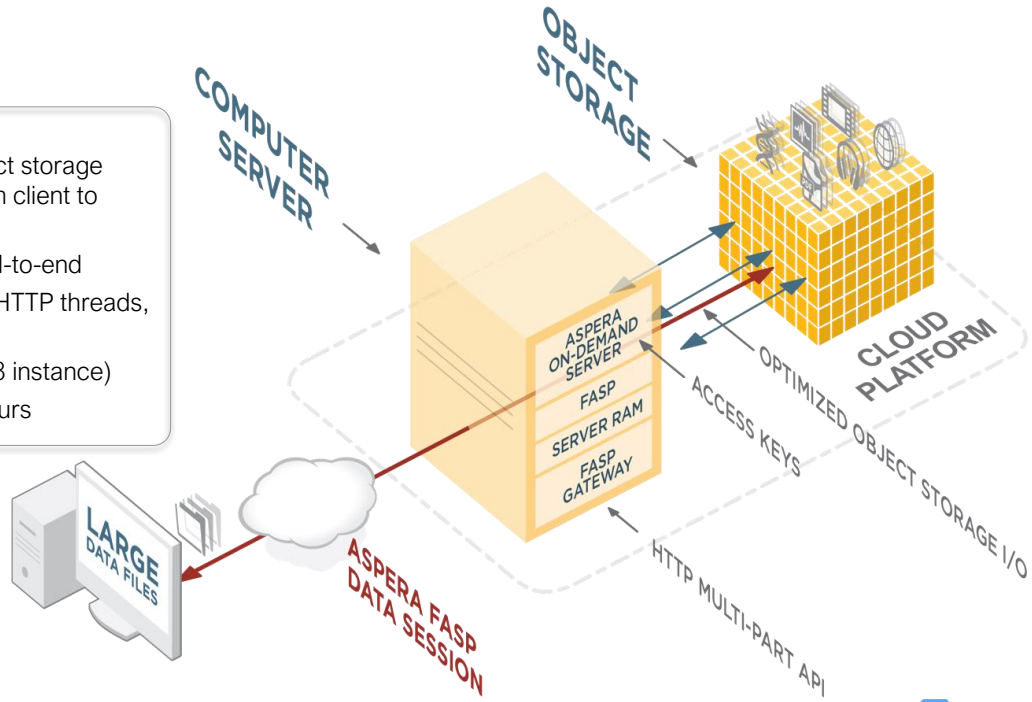
Copy files from local attached to object storage
Delete files from attached storage

Both methods for writing to cloud object storage create bottlenecks and unnecessary delays

Aspera Direct-to-Cloud technology

THE SOLUTION

- Full client-side r/w of object storage
- Synchronous transfer from client to object storage
- FASP transfer speeds end-to-end
- Real-time optimization of HTTP threads, chunk
- Up to 2Gbps (with new S3 instance)
- Transfers 20TB per 24 hours



IBM Cloud

aws

Microsoft Azure

Akamai

Google Cloud Platform

AWS GovCloud (US)

NetApp

ceph

IBM Cloud Object Storage

HDFS

Limelight NETWORKS

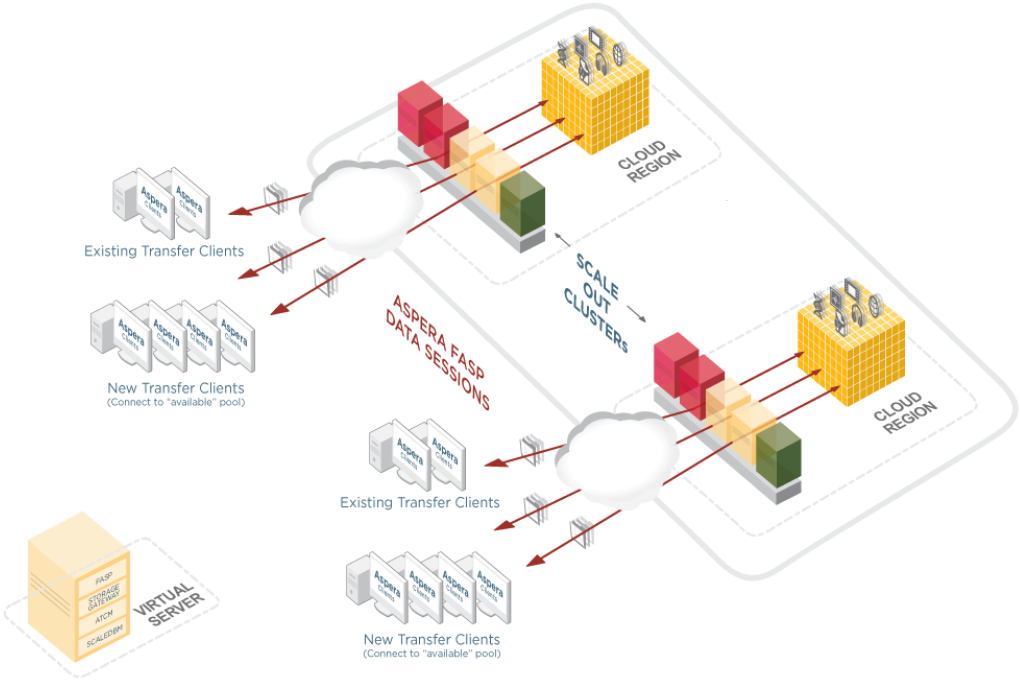
Aspera autoscale

– Integration with underlying cloud object storage APIs

– Data available immediately after transfer

– Ability to pause and resume cloud transfers

– Transfer capacity automatically scales

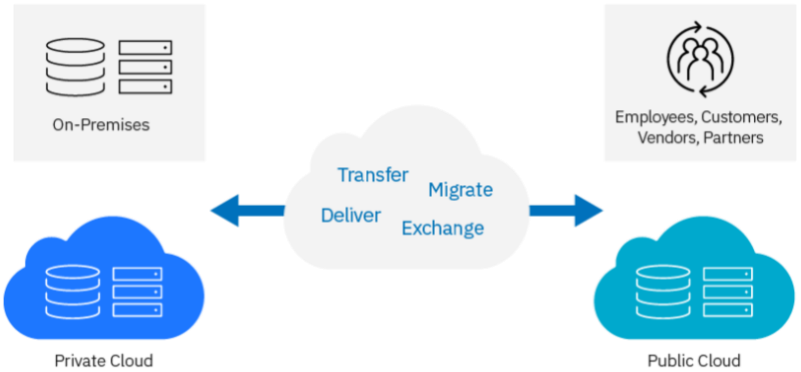


Introducing Aspera on Cloud

A hosted service that enables organizations to securely and reliably move large files and data sets across on-premises and multi-cloud environments at unrivaled speed

Why Aspera On Cloud?

The fastest way to transfer, exchange, and monitor the delivery of your data from any location to anywhere with anyone



Seamlessly access data stored across multiple clouds and on-premises data centers

Move any size and volume of files any distance at maximum speed

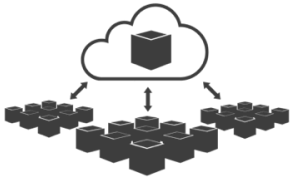
Securely collaborate with internal and external users while tightly controlling access to your data

Top business benefits

Lower TCO

Deploy faster

Replace on-premises legacy systems



Quickly scale up or down

Enable business continuity

Key features & capabilities

Intuitive file sharing & content delivery across a hybrid-cloud environment

– Drag and drop transfers

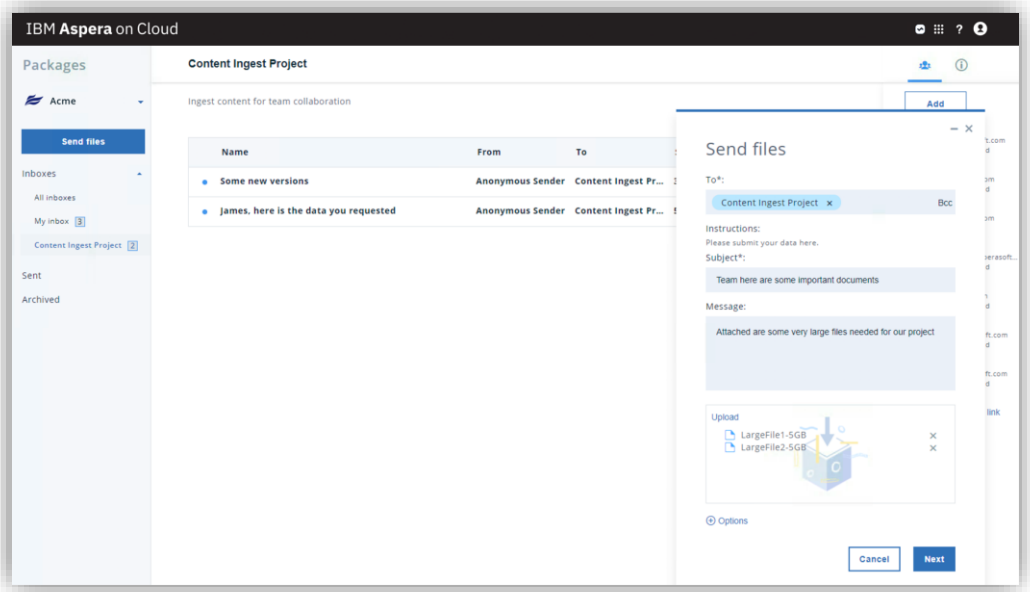
– Secure workspace collaboration areas

– Inboxes and content submission portals

– Digital package distribution

– Content preview

– Filter & sort



Key features & capabilities

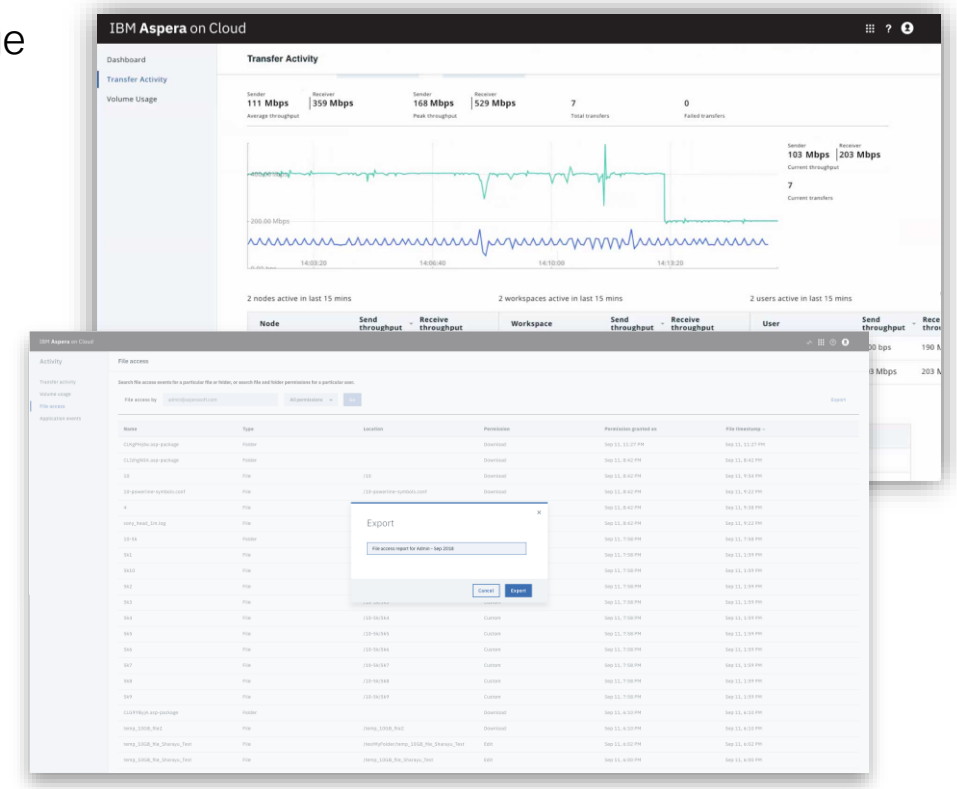
Real-time activity monitoring and reporting

– Manage transfer activities, storage usage, & digital packages

– Monitor user and application activity logs

– Generate and export custom usage reports

– New reports: File Access and Application Events



Key features & capabilities

Central administration of hybrid environments

– Connect to any market- leading public cloud & on-premises storage

– Remotely manage transfer nodes & network policies

– Flexible access policies across workgroups and applications

– Embed your brand into every communication and web asset

Platforms

- ☑ IBM Cloud
- ☑ aws
- ☑ Microsoft Azure
- ☑ Google Cloud Platform
- ☑ On-Premises Data Centers

Locations

- N. America (10) – CA, OR, TX, IA, VA, DC, Toronto
- S. America (1) – Sao Paulo
- Europe (8) - Ireland, Frankfurt, Milan, Netherlands, London
- APAC (9) – Chennai, Singapore, Hong Kong, Seoul, Tokyo, Sydney, Melbourne
- More regions coming

Key features & capabilities

Enterprise-grade security

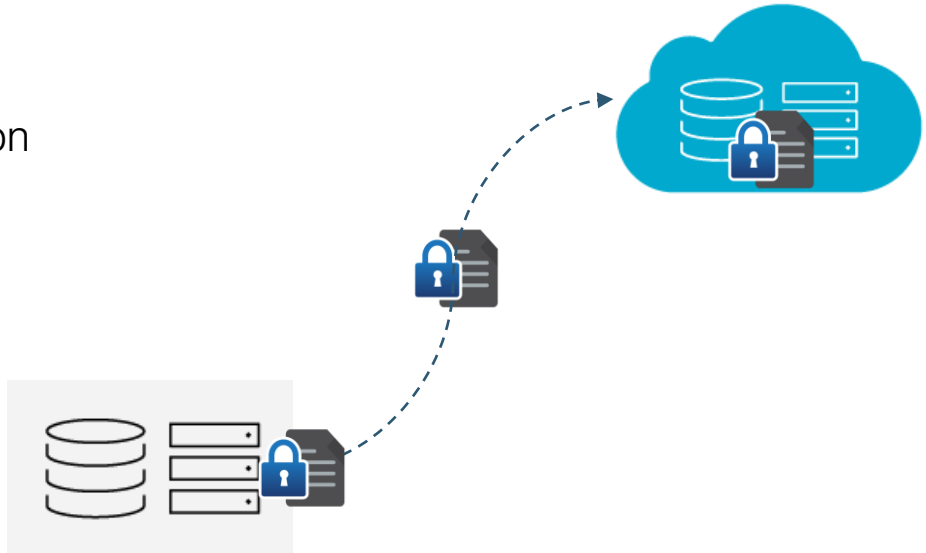
– Powerful access control model

– Secure user / endpoint authentication

– Encryption in transit and at rest

– Data integrity verification

– FIPS 140-2 compliant



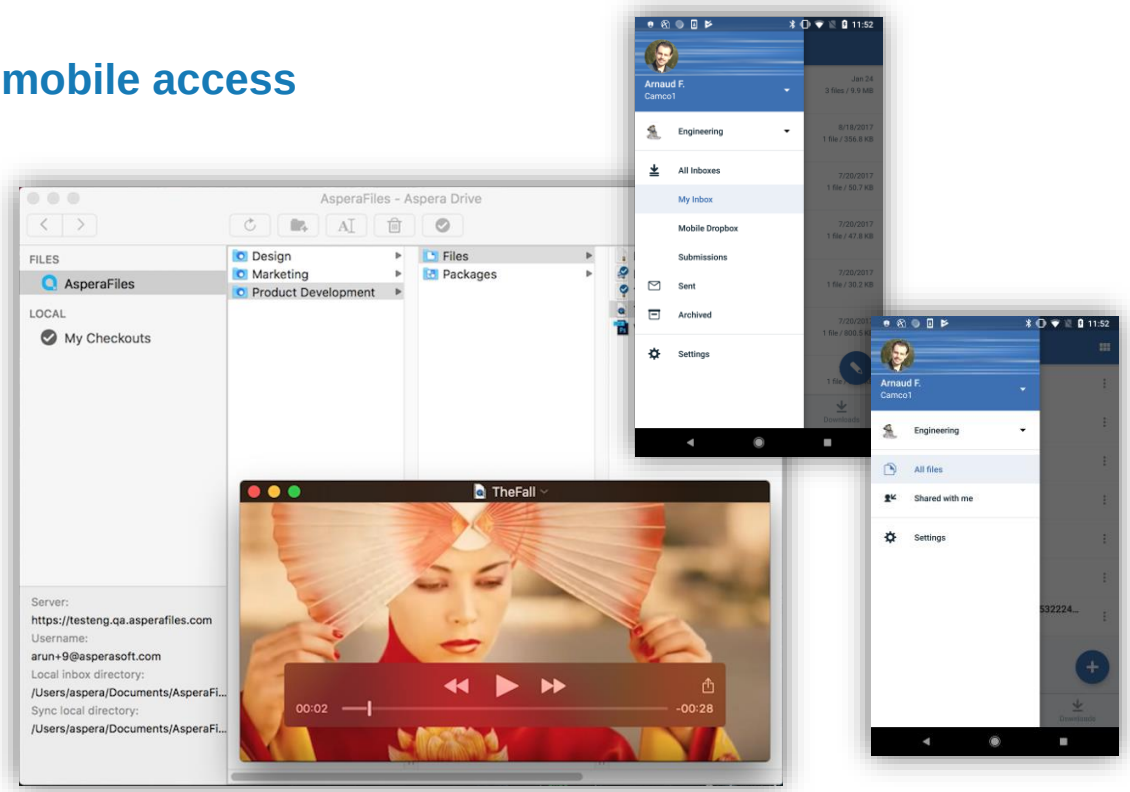
Key features & capabilities

Desktop, browser, and mobile access

– Aspera Drive

– Aspera Connect

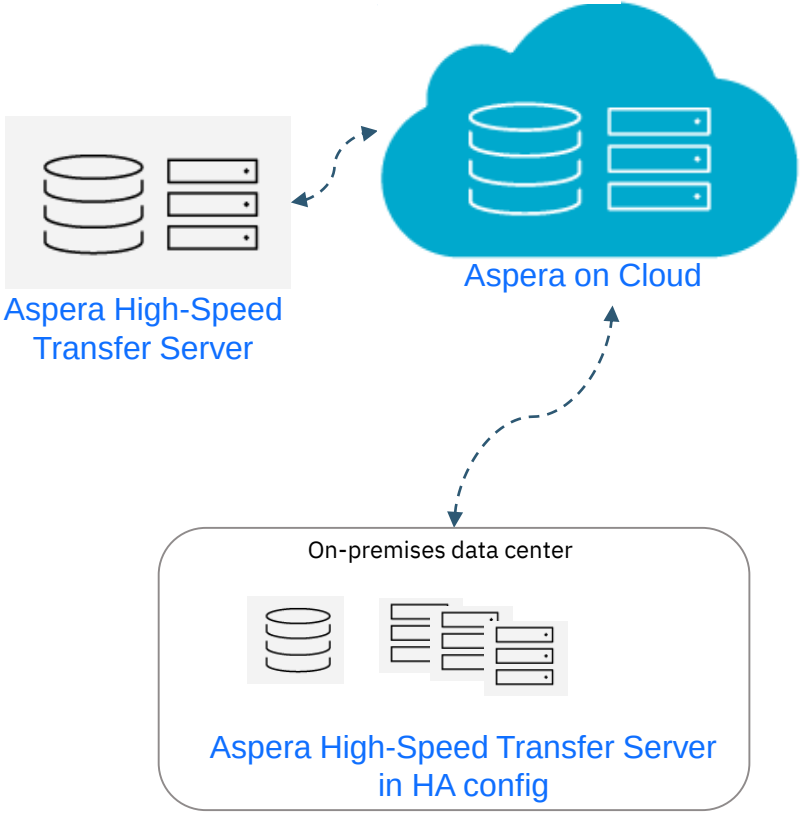
– Aspera on Cloud Mobile App



Deployment option: tether on-premises transfer nodes

Extend SaaS features to customer-managed IBM Aspera nodes

- Connect with any environment running an Aspera High-Speed Transfer server (including high availability configurations)
- Manage a single hybrid, multicloud transfer solution with data stored on-premise, in the cloud, or both
- Leverage a common user experience for key use cases, including:
  - Backup on-premises to cloud
  - Distribution to cloud
  - Ingest into a cloud-based workflow

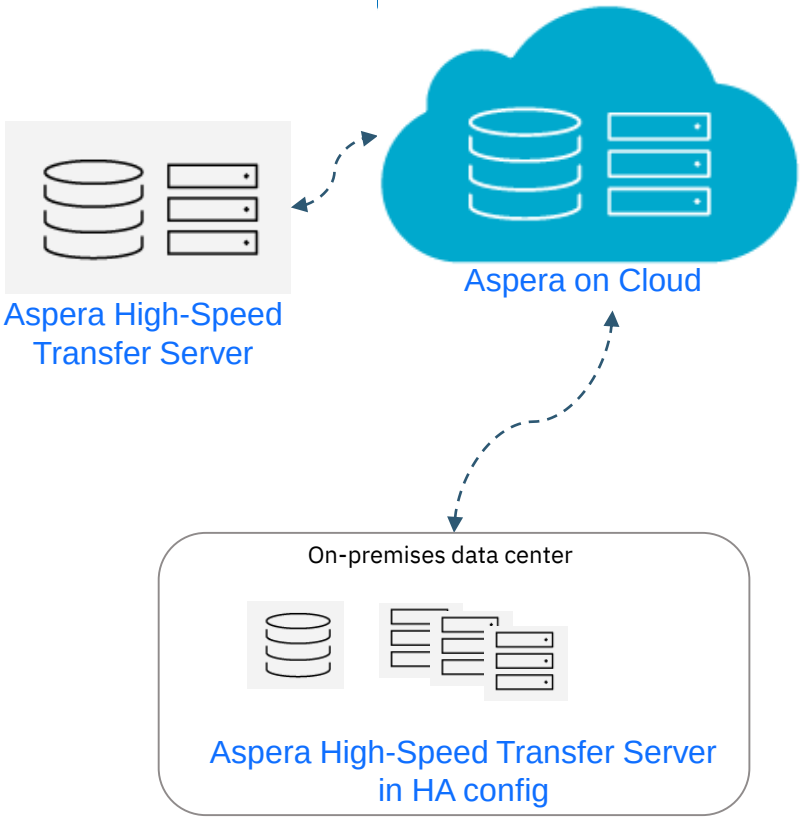


Deployment option: tether on-premises transfer nodes

Extend SaaS features to customer-managed IBM Aspera nodes

– Flexible billing and management:

- For customers who own an Aspera server perpetual license, tether requires purchase of an Aspera on Cloud standard license to access SaaS features
- For customers who do not own an Aspera server, tether requires purchase of an Aspera on Cloud standard license **and** payment by total transfer volume (includes 1TB transfer volume per year)



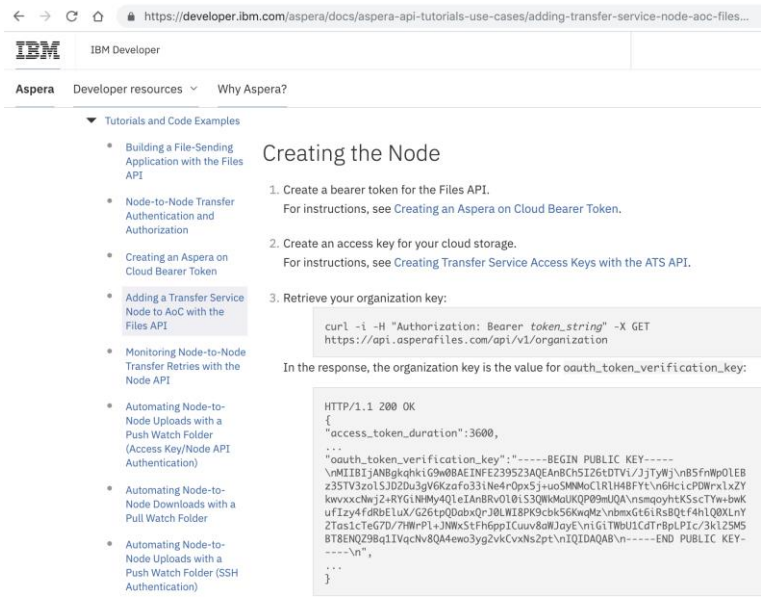
Leverage APIs to integrate Aspera on Cloud

Build high-speed transfer into your cloud-native applications

– Proven Aspera technology available for application and workflow integration

– Comprehensive API with full documentation at https://developer.ibm.com/aspera/

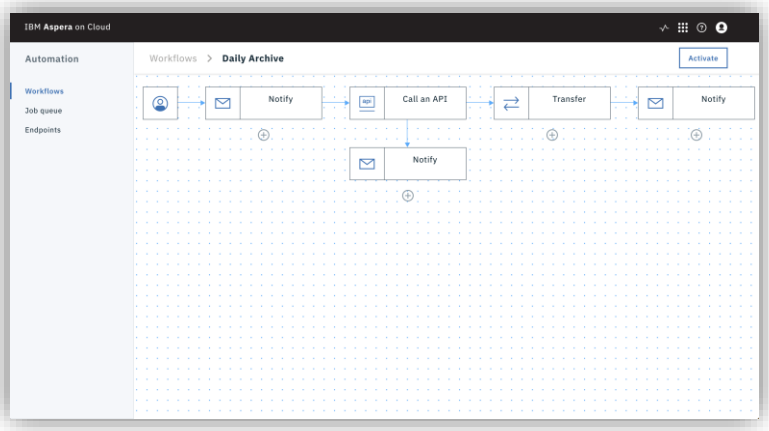
– Includes out-of-the-box Integration with major vendor cloud object storage APIs



Key features & capabilities

Now in early access – Transfer Automation

Summary: Aspera on Cloud Automation Application enables customers to automate file movement workflows for many common transfer jobs. The Automation workflows can move files between many Aspera on Cloud transfer endpoints, such as shared folders, transfer nodes, shared inbox and package deliveries. The workflows can be triggered by a variety of methods, such as API calls, operator manual intervention, file arrival events, and shared inbox file submissions.

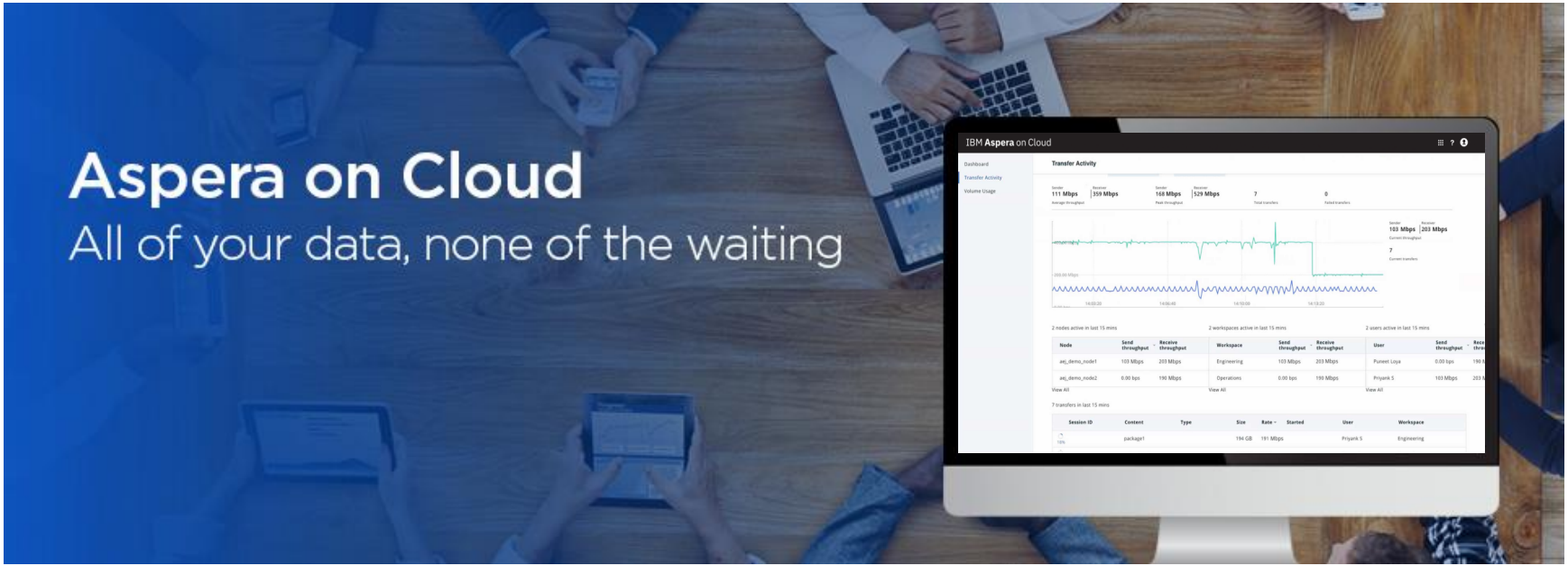


Details:

- Automate complex workflows with event-based transfers between IBM Aspera on Cloud endpoints
- Easily integrate with web services via API calls
- Communicate activity status with event-driven email notifications
- Intuitive interface empowers users to build and execute workflows with ease
- Available to all users of the Advanced and Enterprise editions

Sign up for a trial

Sign up for a free trial evaluation at http://ibmaspera.com/welcome



Learn more at http://www.ibm.com/cloud/aspera/