Limitless Creativity in the Cloud (2018 Update)

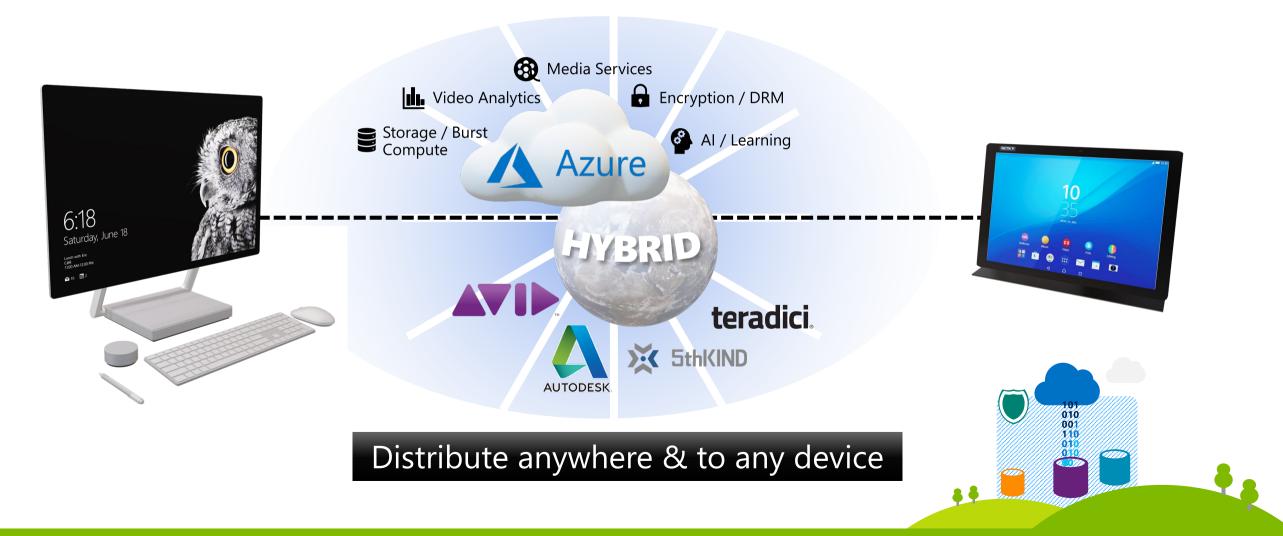
Joel Sloss, Sr. Program Manager, Microsof

Dec. 5, 2018

End-to-End Pipeline in the Cloud

Pre- and post-production workflows

Whichever tools artists want to use



Workflows: Device-to-Cloud-to-Screen

Ingest and asset management

• Getting camera files, generating proxies, uploading VFX assets, ...

Visualization

• Workstation, desktop virtualization, modeling, scheduling / orchestration, rendering (/hybrid)

Editorial and metadata / analytics

• Building your content (/hybrid)

Storage, protection, and archive

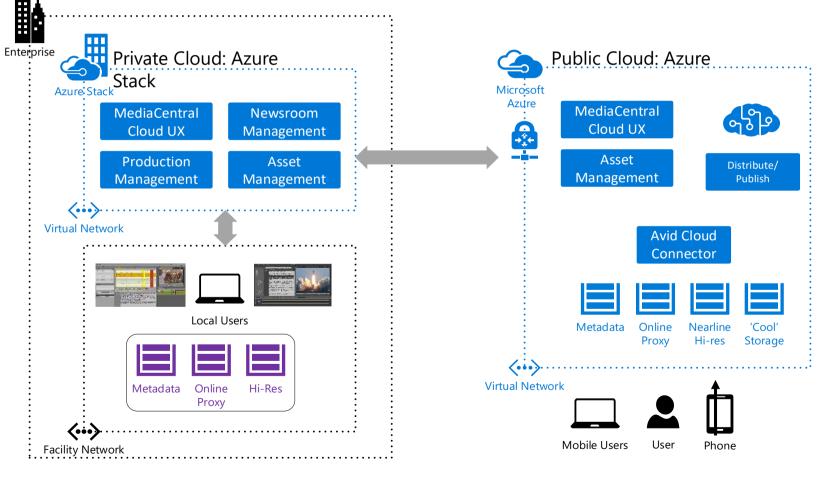
• Keep what matters, track everything, keep it safe

Distribution and playout

• Move large assets to distributors, stream directly to consumers

The Journey to the Cloud

Virtualizing local deployments with Azure Stack and connecting to the Azure Public Cloud

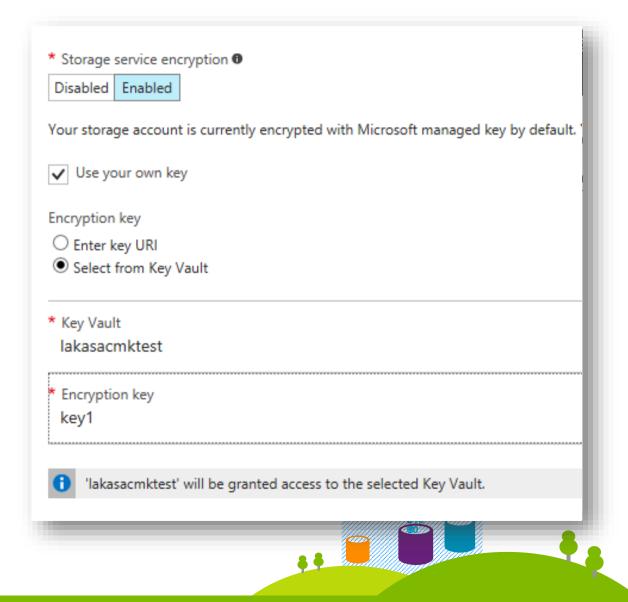


On-premise workloads & local users

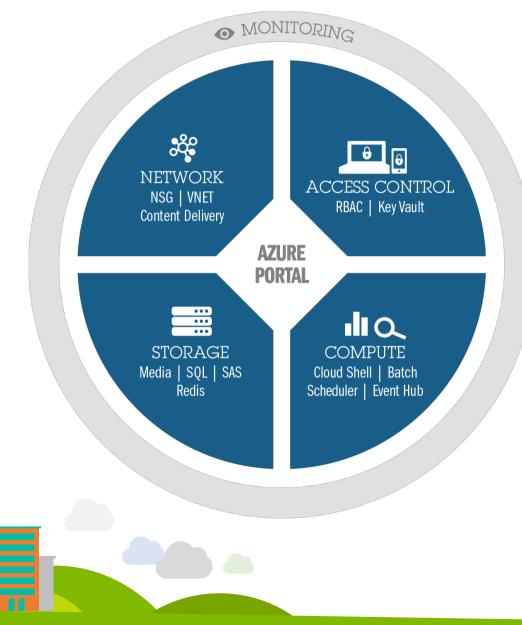
Cloud workloads & remote users

Encryption At Rest + Granular Access Control

- Prevents data disclosure from physical disk compromise
- Available for Blobs with Microsoftmanaged keys
- Encryption enabled for all accounts
- Customer-managed encryption keys



Detailed Azure Workflow Configurations



Workflows with detailed guidance

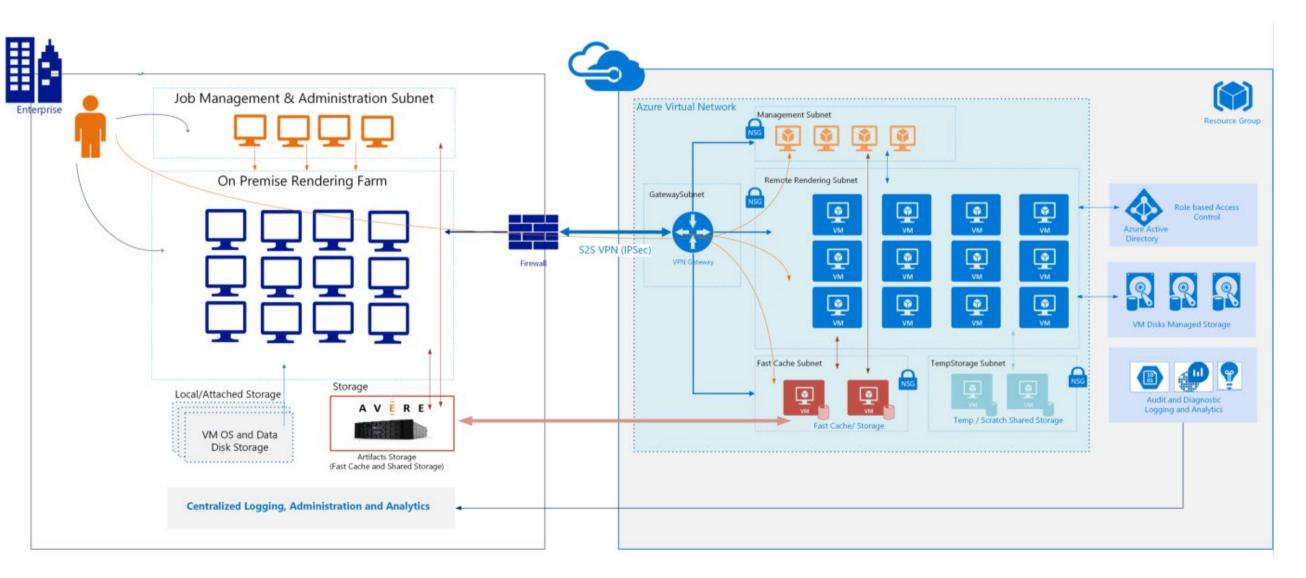
- Hybrid Render
- File Transfer
- MAM/DAM File Transfer
 - Storage
 - IAM and Networking

Example Services Assessed

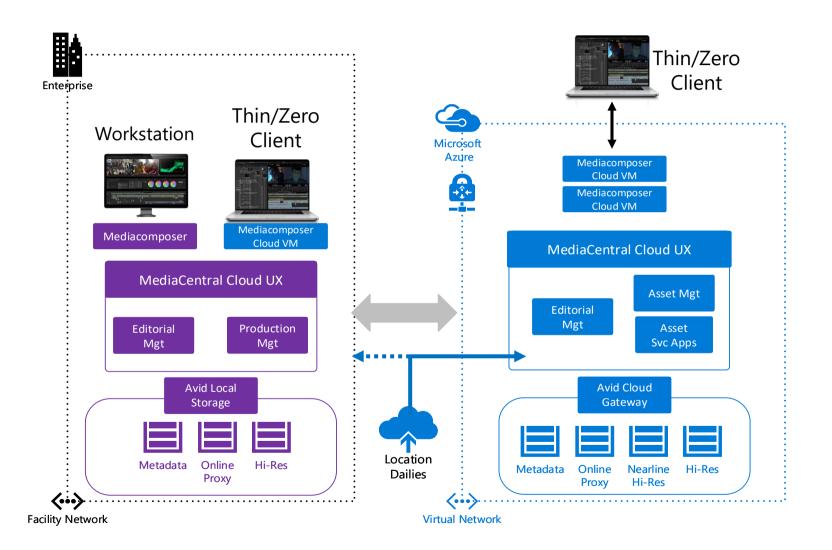
- Portal
- Networking
- RBAC
- Key Vault
- Command Line
- SQL Database
- CDN

- Batch
- Compute
- Storage
- Redis Cache
- Event Hub
- Scheduler
- Media

Hybrid (Burst) Rendering Deployment



Post Editorial - Cloud Production



What You Get

- Scale resources to match workload on-premise or to accommodate remote workers
- Potential for efficient direct delivery of location dailies proxies reducing delay and costs
- Flexiblility for balancing on-premise vs cloud storage costs and footprint
- Offload ancillary post workflows using thin/zero client technology, greater options for user flexibility

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|---|--|------------------------------------|---|
| Low-latency file accessEdge-Core architectureScalable performance and HAScale-out clustering (3 to 24 nodes per cluster)Familiar NFS and SMB interfacesFlashCloud file system for object storageManage as a single pool of storageGlobal namespace (GNS), FlashMoveData protectionCloud snapshots, FlashMirrorHigh securityAES-256 encryption (FIPS 140-2 compliant), KMIP | | | NAS |
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| High security AES-256 encryption (FIPS 140-2 compliant), KMIP | | Manage as a single pool of storage | Global namespace (GNS), FlashMove |
| | | Data protection | Cloud snapshots, FlashMirror |
| Efficiency LZ4 compression | | High security | AES-256 encryption (FIPS 140-2 compliant), KMIP |
| | | Efficiency | LZ4 compression |

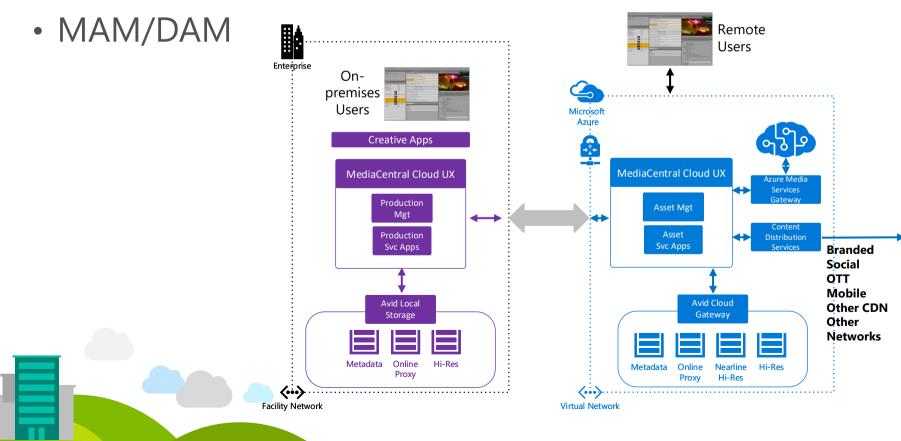
Ingest and Asset Management

- Offline data migration
- Express
- Perforr



Ingest and Asset Management

- Offline data migration
- ExpressRoute
- Performant hybrid storage

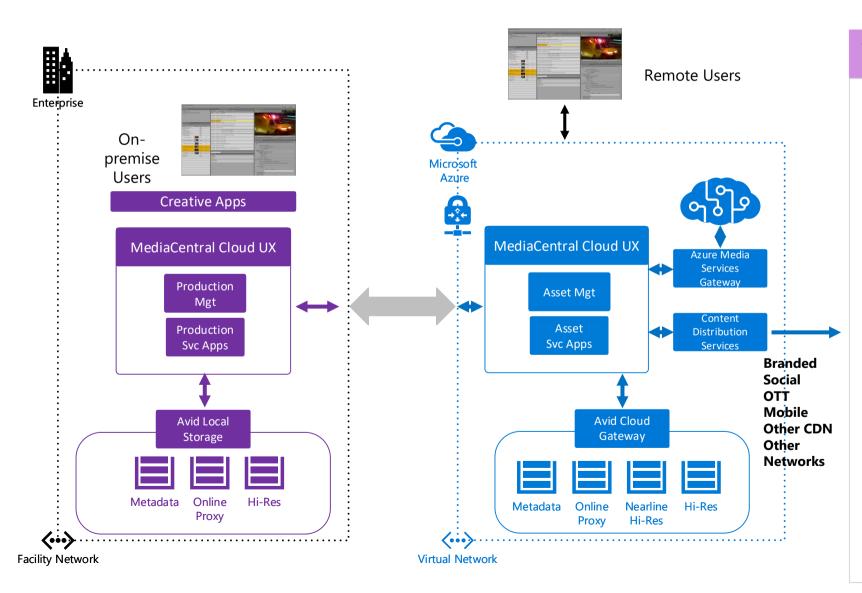


What You Get

•

- Extend collaboration beyond editorial users – rights, review, transcription, localization etc.
- Utilize secure tiered storage for media staging and archive matched to content usage – proxy vs hi-res vs shooting ratio vs cost
- Streamline packaging workflows for distribution and campaigns
- Augment ancillary processes using Cognitive services

Post Editorial – Cloud Asset Management



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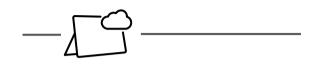
New Surface Devices

- Surface Hub 2
- Surface Studio 2
- Surface Pro 6
- Surface Laptop 2
- Surface Go





Intelligent security



- Session wipe with Hub
- Always updated



- Firmware-level security with SEMM
- Work anywhere securely with eSim
- Biometric identification

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Windows 10 and Surface, when used in a layered solution, can **meet the strictest security requirements** for use in classified environments such as the classified programs at the NSA





Azure Video Al

Cloud-based speech and vision services



Advanced search across printed text, spoken words, faces



Build actionable intelligence from media archives



Enhance content discovery and engagement through AI

