

Storage Architecture and Assessment

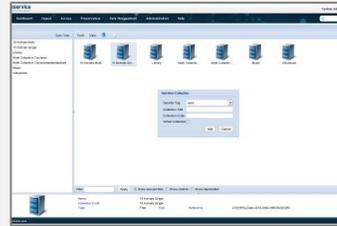
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Current infrastructure

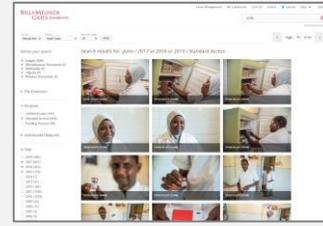
CORE SYSTEMS



Adlib
Metadata for all collections



Preservica
Digital stacks



Cortex
Asset Management and Access System



STORAGE LAYER

Preservation

Staging

WORKFLOW TOOLS

Transfer

Digital forensics

Image and AV

Metadata extraction and normalization



Current storage



Machines shown indicative of type and do not correspond to exact quantities.

Redesigning our digital stacks – completed analysis

Environmental scan of storage practices at other archives

High-level assessment of several cloud vendors against Digital Preservation Storage Criteria v. 2.0

Gates Archive Storage Requirements (DRAFT)						AVS	Azure	Chronopolis	DPN
Number	Criteria	Category	Description	Priority (Must, Should, Could)	What Layer Does this Apply to?				
1	Provides integrity checks	Content integrity	Performs verifiable and/or auditable integrity checking as part of the preservation storage	Must	Application and storage layer supports	YES	YES	YES	YES
2	Supports independent integrity checks	Content integrity	Supports fixity checking by other parties, for example the content-owning institution	Must	Application and storage layer supports	YES	YES?	YES	YES
3	Provides preservation actions	Content integrity	Provides tools and/or services to support digital preservation actions (e.g. fixity checking, migration, auditing processes) as part of the preservation storage	Could	Application and storage layer supports	YES?	YES?	YES	YES?

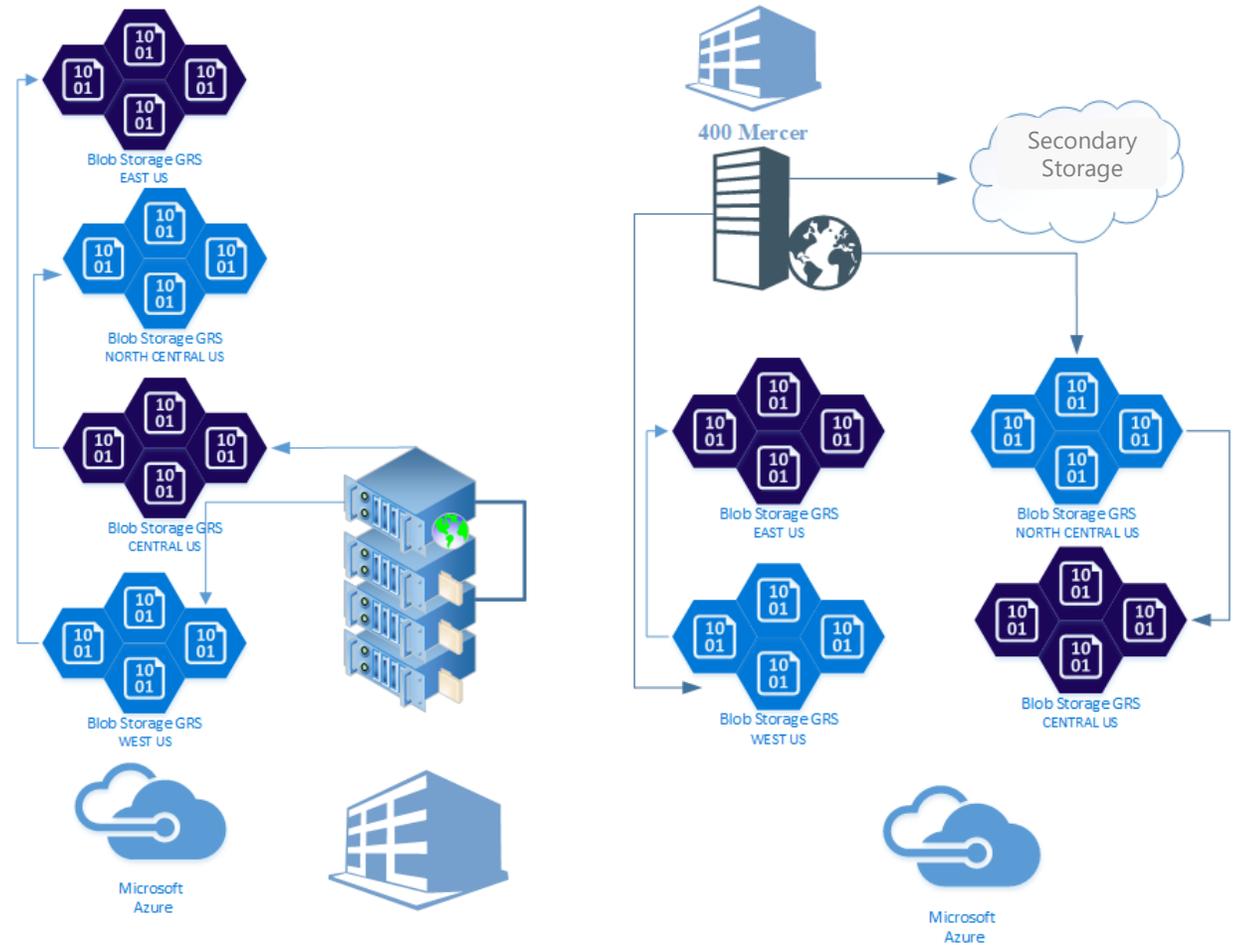
Redesigning our digital stacks – in progress analysis

In-house design meetings with partner organizations' IT

Development of high-level options

External consultation

Final decision and procurement



Two potential future-state preservation storage options

Digital stacks project – rethinking staging storage

Staging storage policy to clarify area ownership, purpose, and how long assets should stay on storage

Initial audit with data custodians to review content on staging storage

Regular audit and reporting mechanisms (in progress)



Lessons learned

Importance of professional guidance such as the Digital Preservation Storage Criteria and '3-2-1' rule to create a common language between DP practitioners and storage engineers

Key factors in our design – organization size; video; cloud strategy

Aspects of cloud architectures that nuance professional guidance

- geo-redundancy
- trust in integrity checking
- handoffs between application and storage layers
- exit planning

