Azure Storage Accounts

Praveenkumar Bouna, CodeWithPraveen.com

Overview of Storage Account

- Namespace for Azure Storage data
- Access through HTTP/HTTPS
- Secure, highly available & scalable

Types of Storage Account

- Standard general-purpose
- Premium block blobs
- Premium file shares
- Premium page blobs

Storage Account Endpoints

Unique namespace for data

Naming convention

3 to 24 characters, numbers, lowercase letters

Unique within Azure

Endpoints Format

Storage Type	URL Format
Blob Storage	https://<storage-account-name>.blob.core.windows.net
Azure Files	https://<storage-account-name>.file.core.windows.net
Queue Storage	https://<storage-account-name>.queue.core.windows.net
Table Storage	https://<storage-account-name>.table.core.windows.net

Azure Storage Redundancy Options

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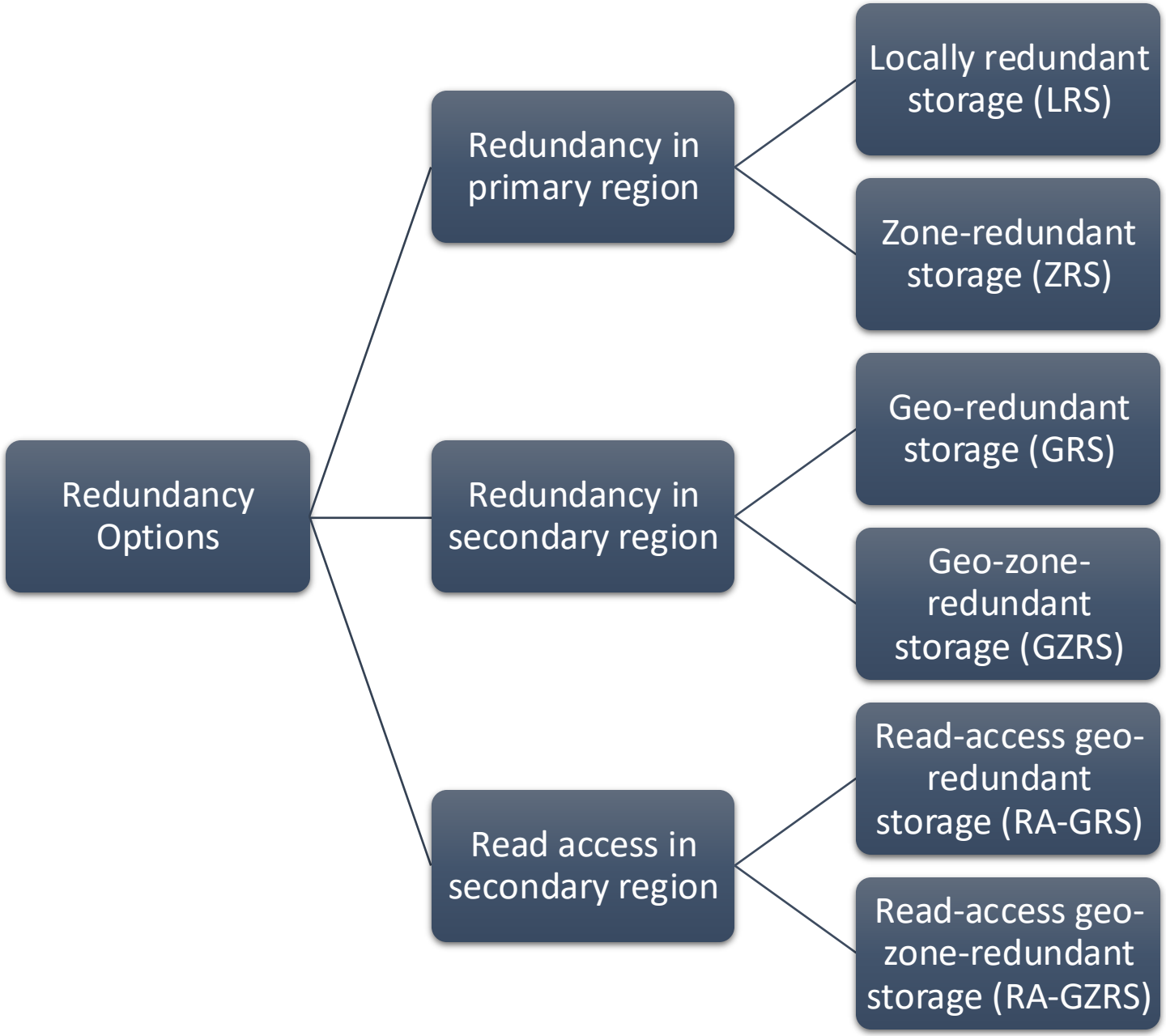
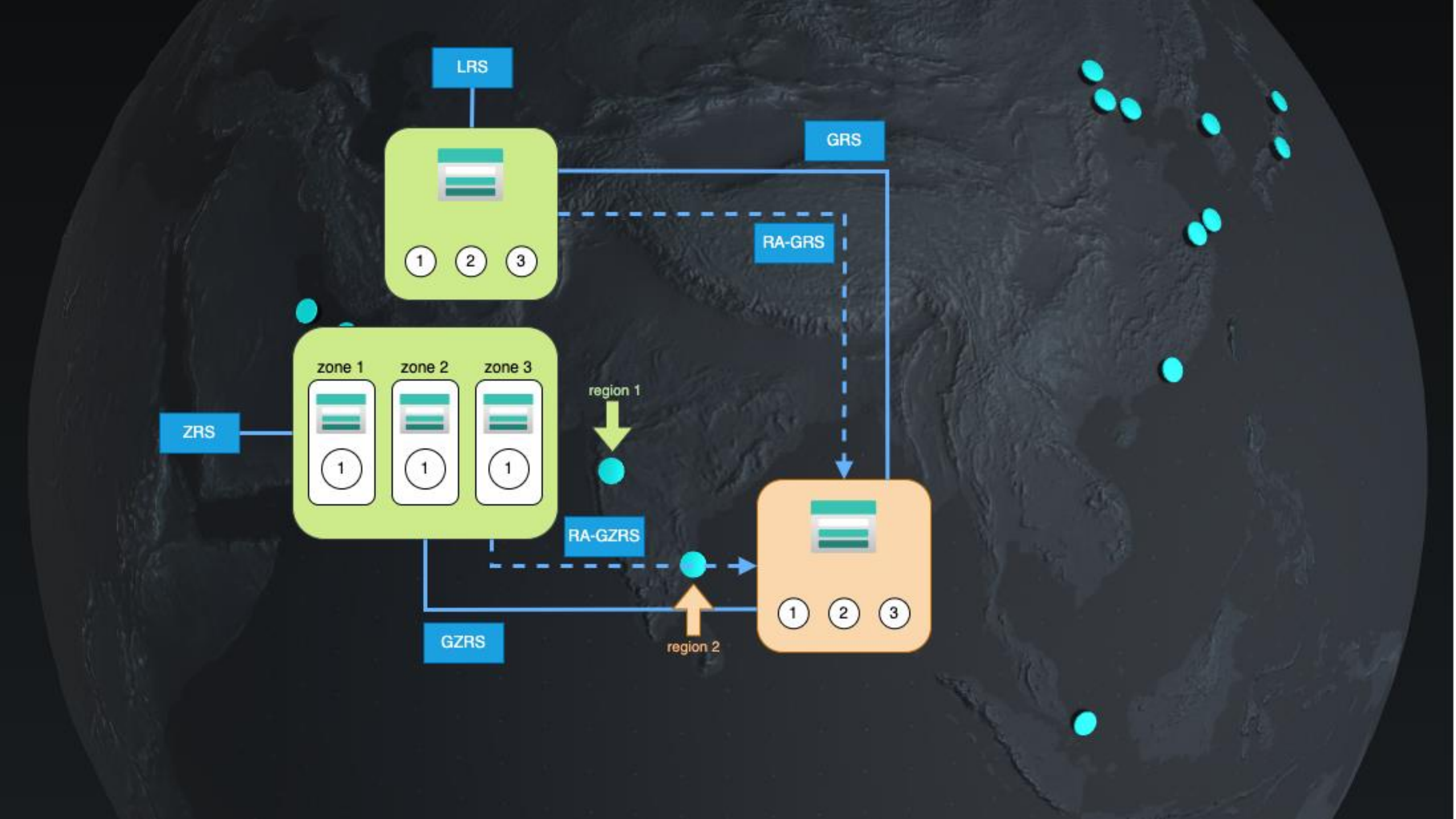
Redundancy Options

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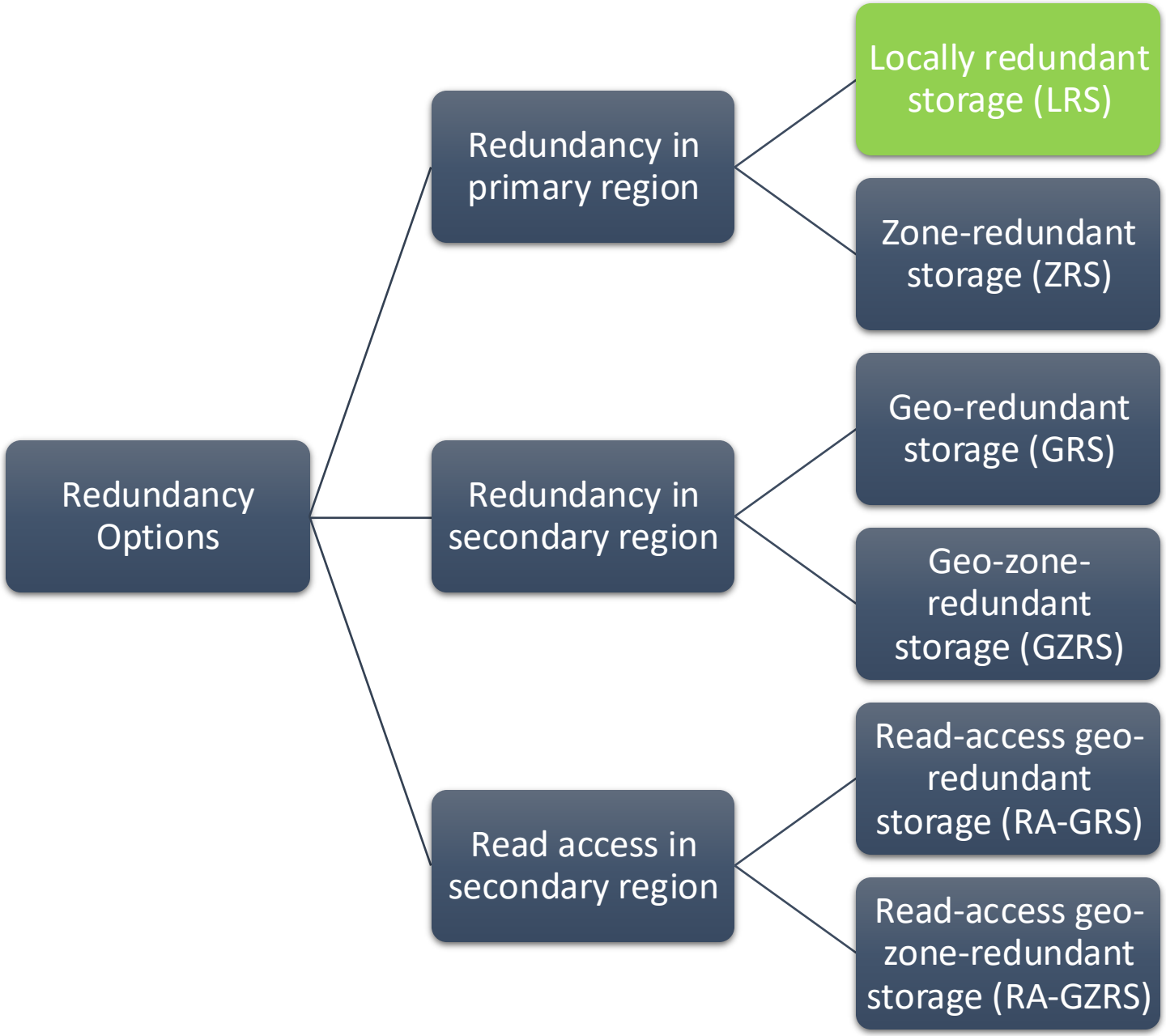
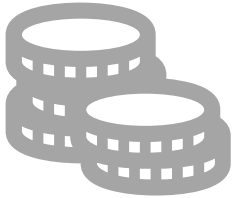
Redundancy Options



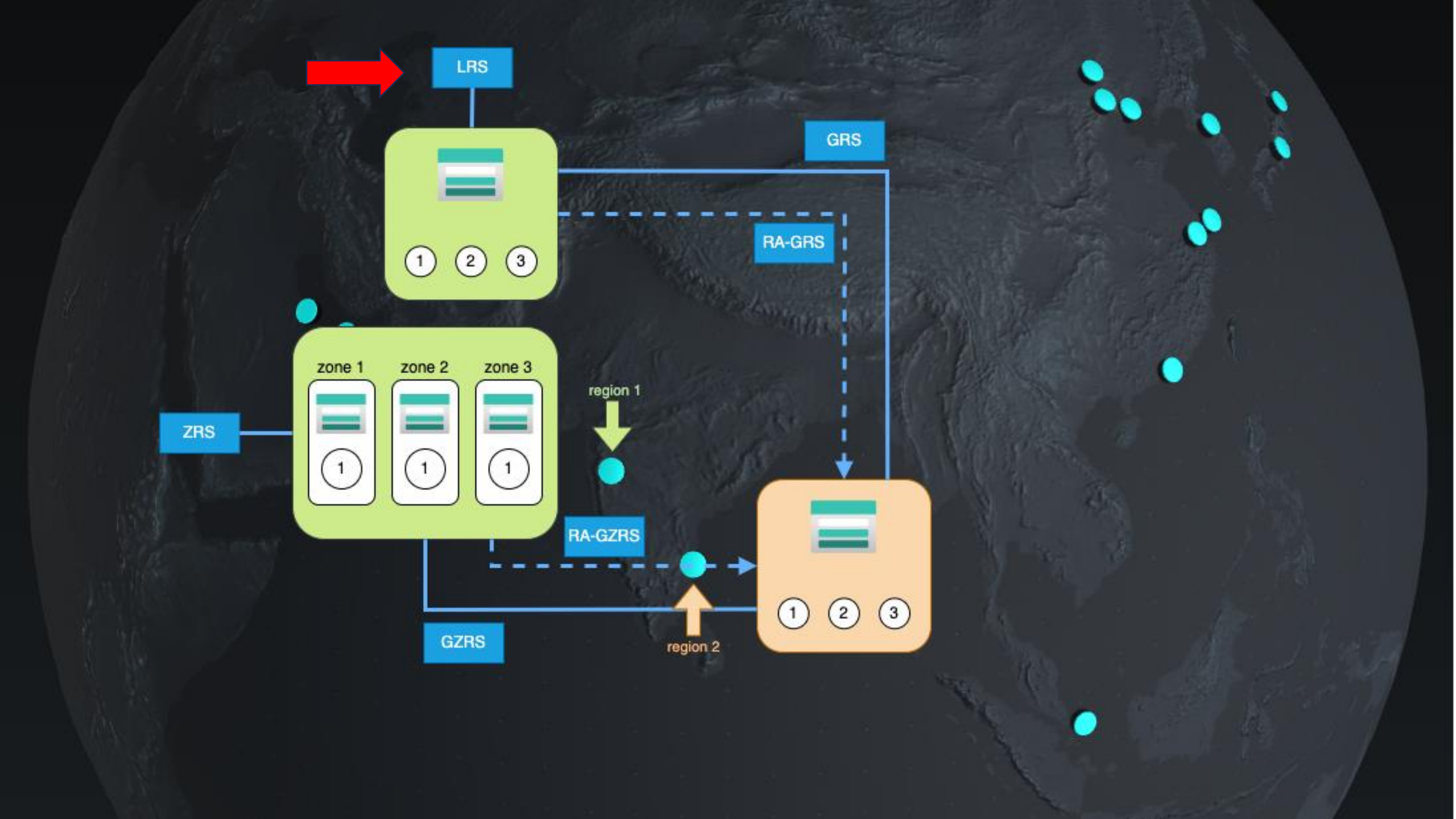
Locally redundant storage (LRS)

Data replicated 3 times
within the same data center



Cheapest option

Limitation: Data loss in case
of local disaster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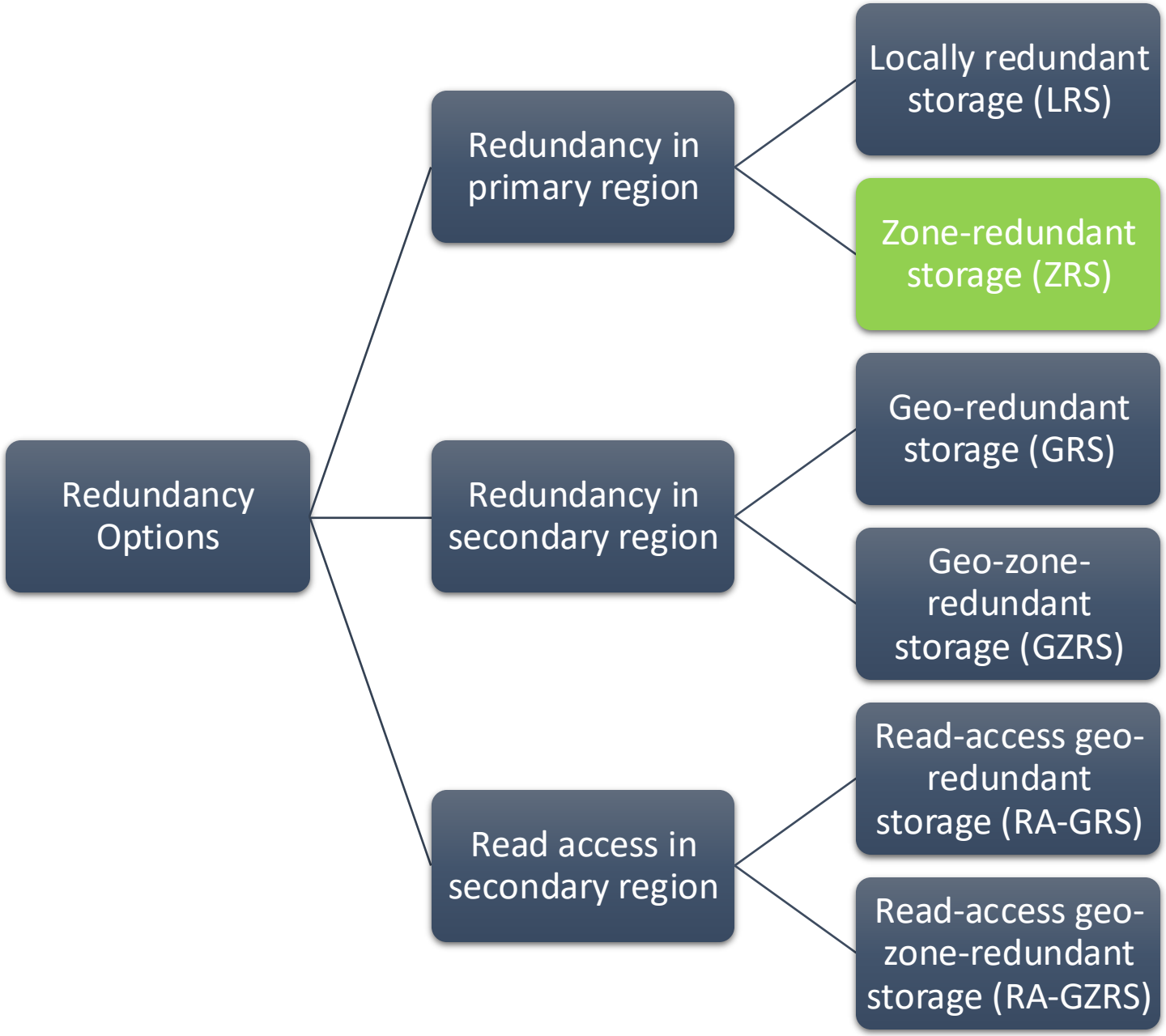
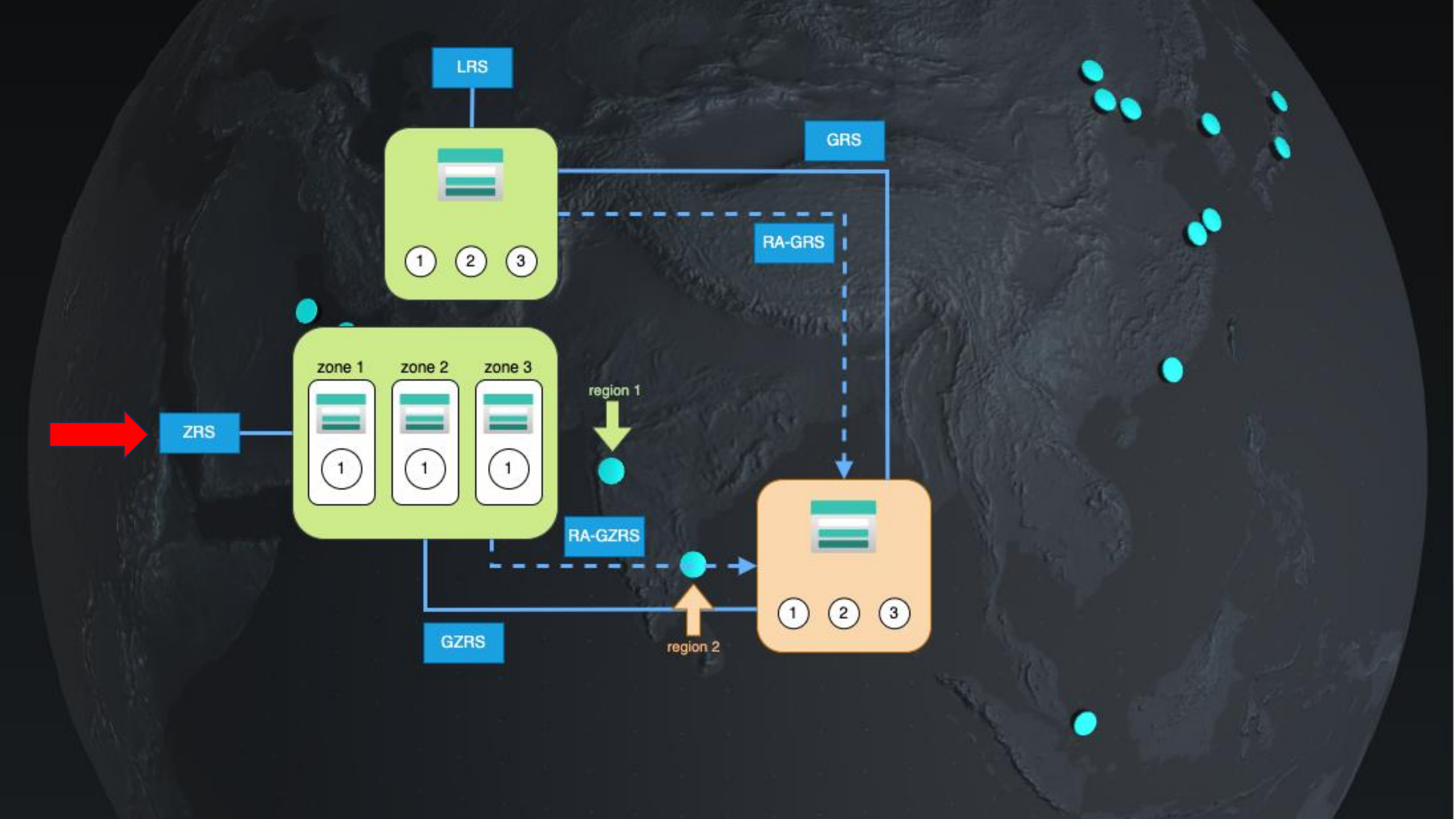


Zone Redundant Storage (ZRS)

Data replicated across 3 zones

Data available even if a zone is down

Use cases: High availability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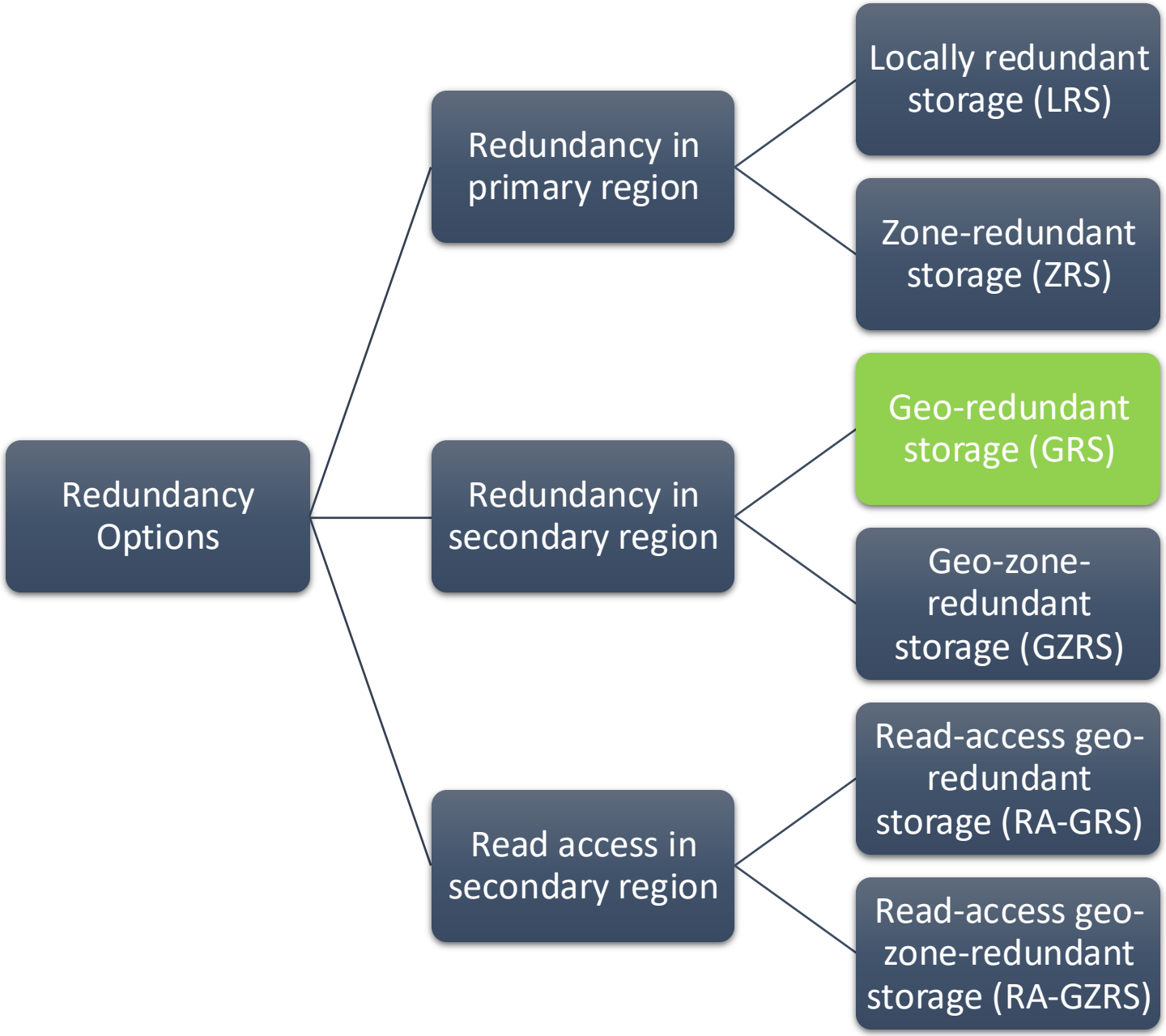
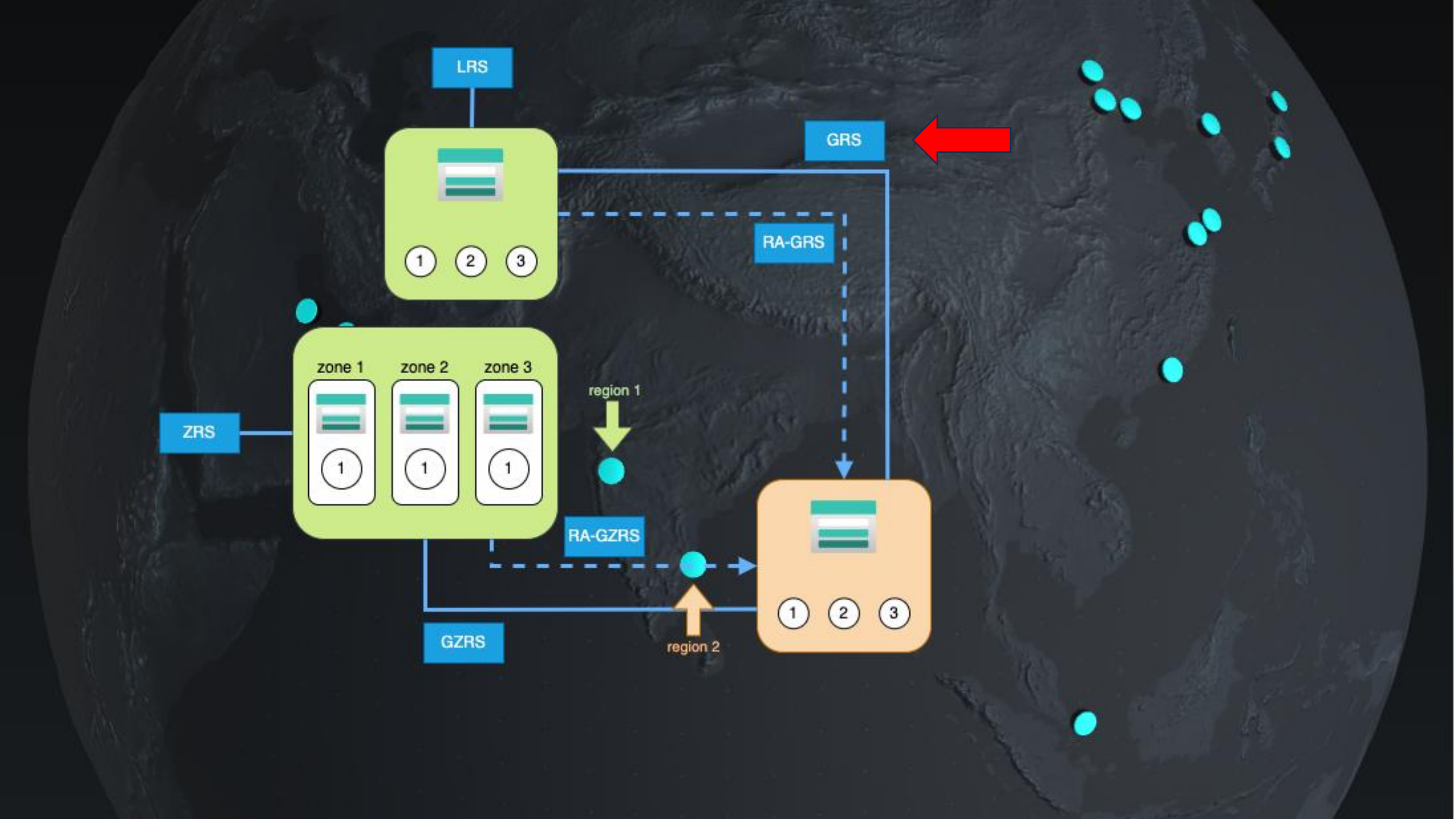
Redundancy Options



Geo-Redundant Storage (GRS)

Data replicated to a secondary region

Both regions have 3 copies each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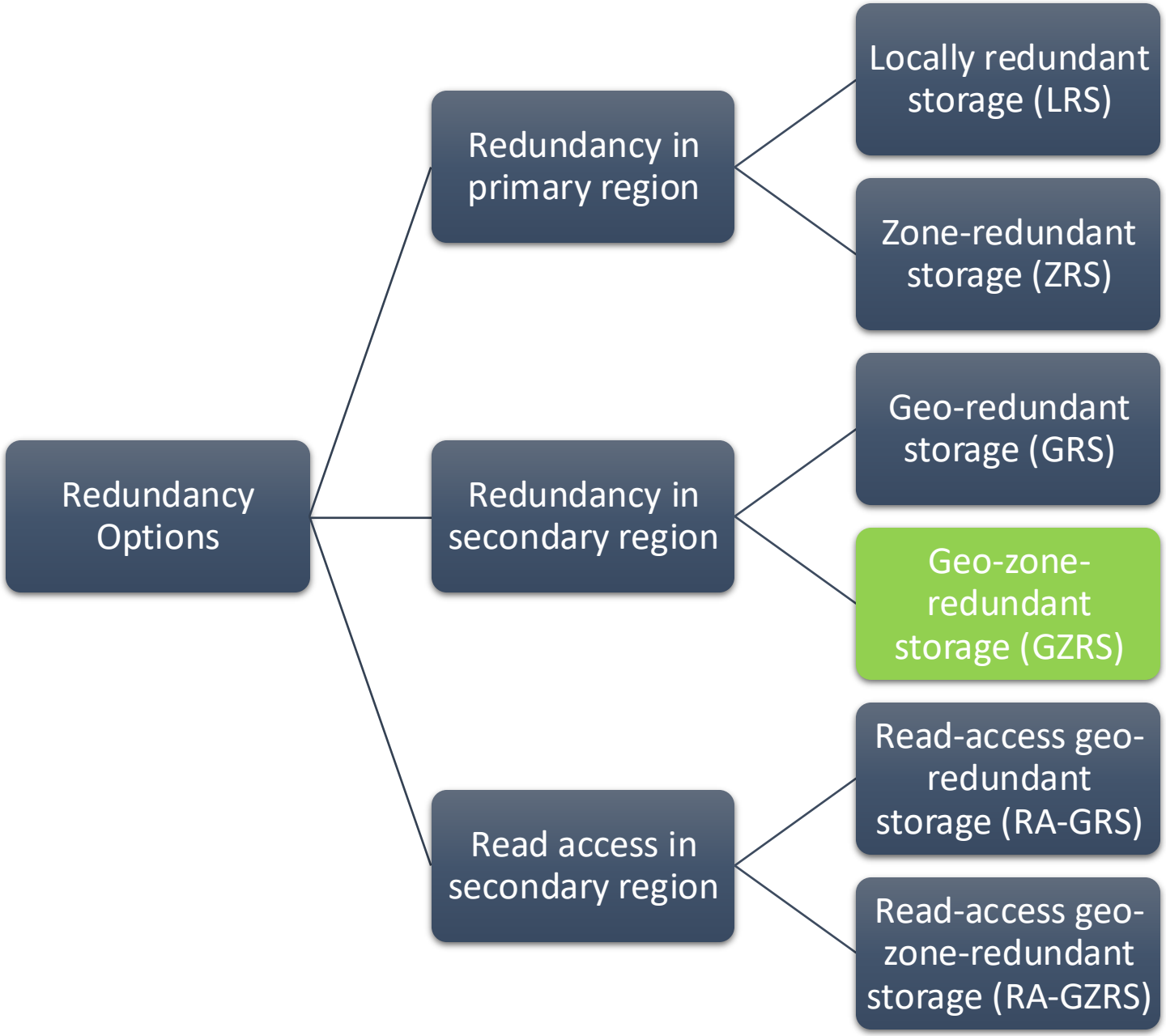
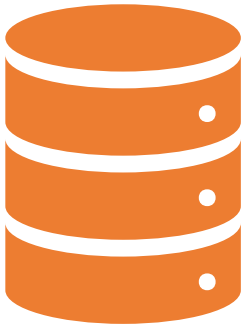
Redundancy Options

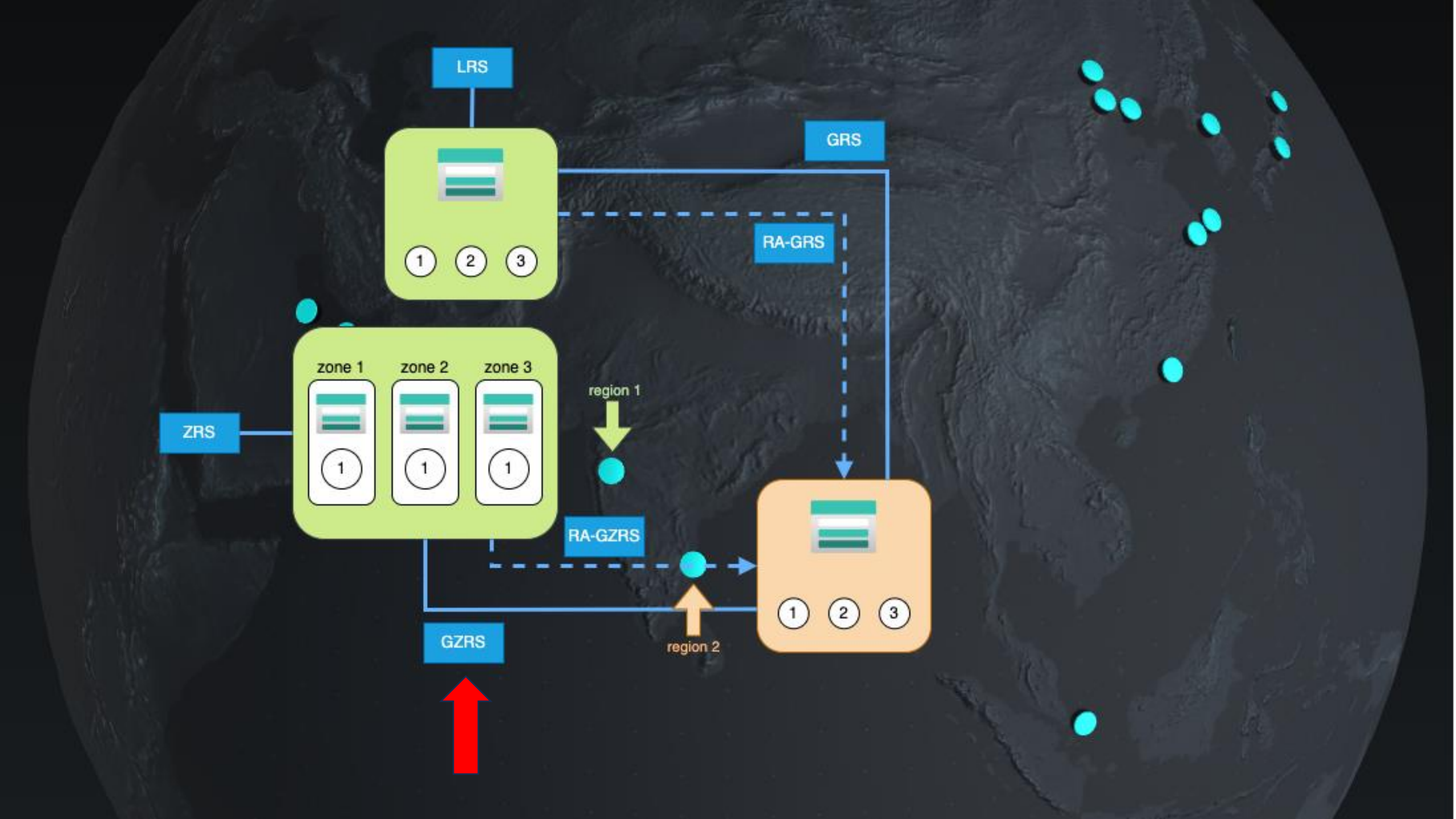


Geo-Zone-Redundant Storage (GZRS)



Zone-redundancy in primary region

Data replicated to secondary region with 3 copies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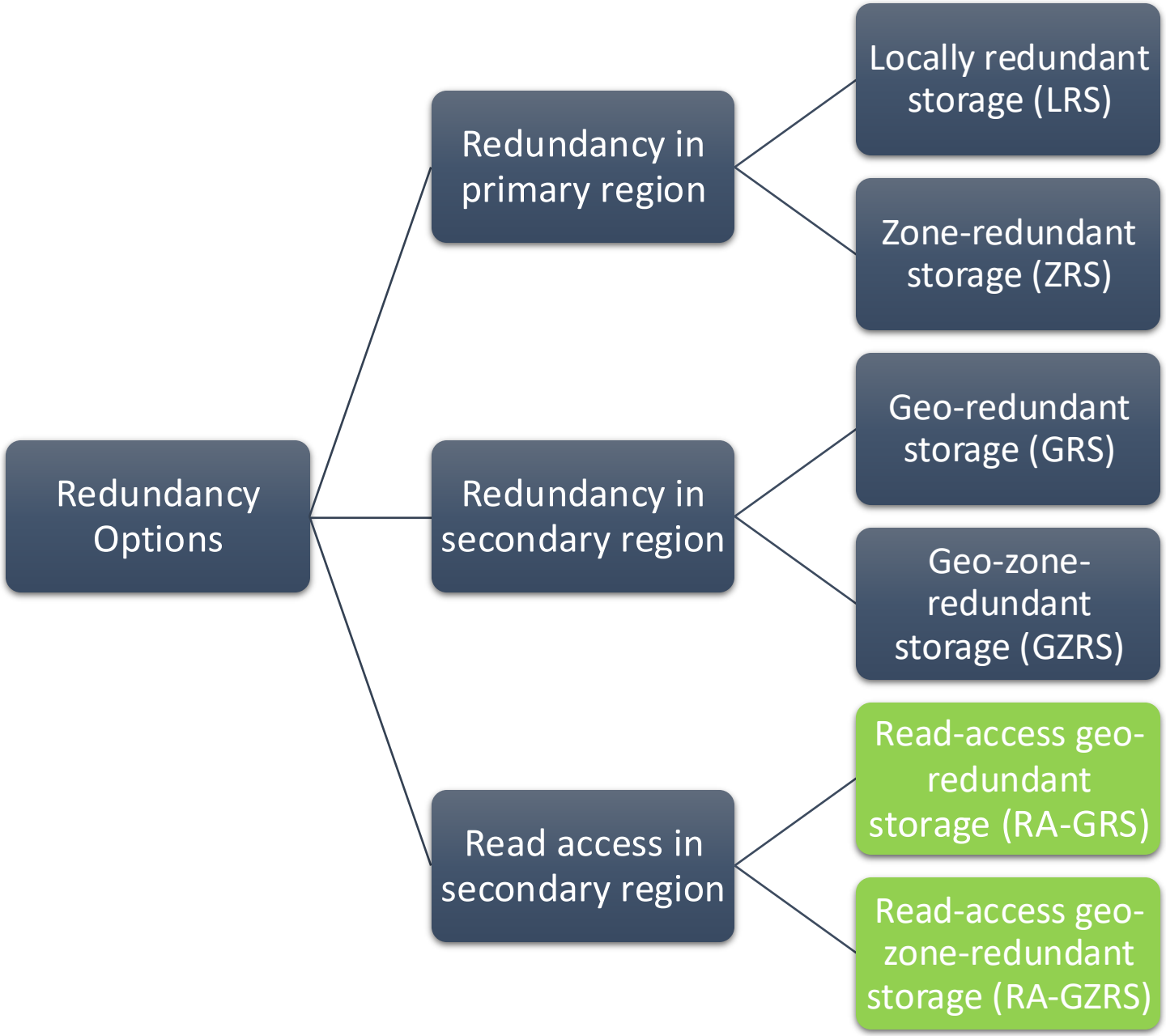
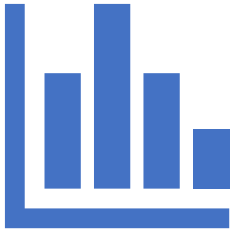
Read-Access in Secondary Region

Redundancy Options

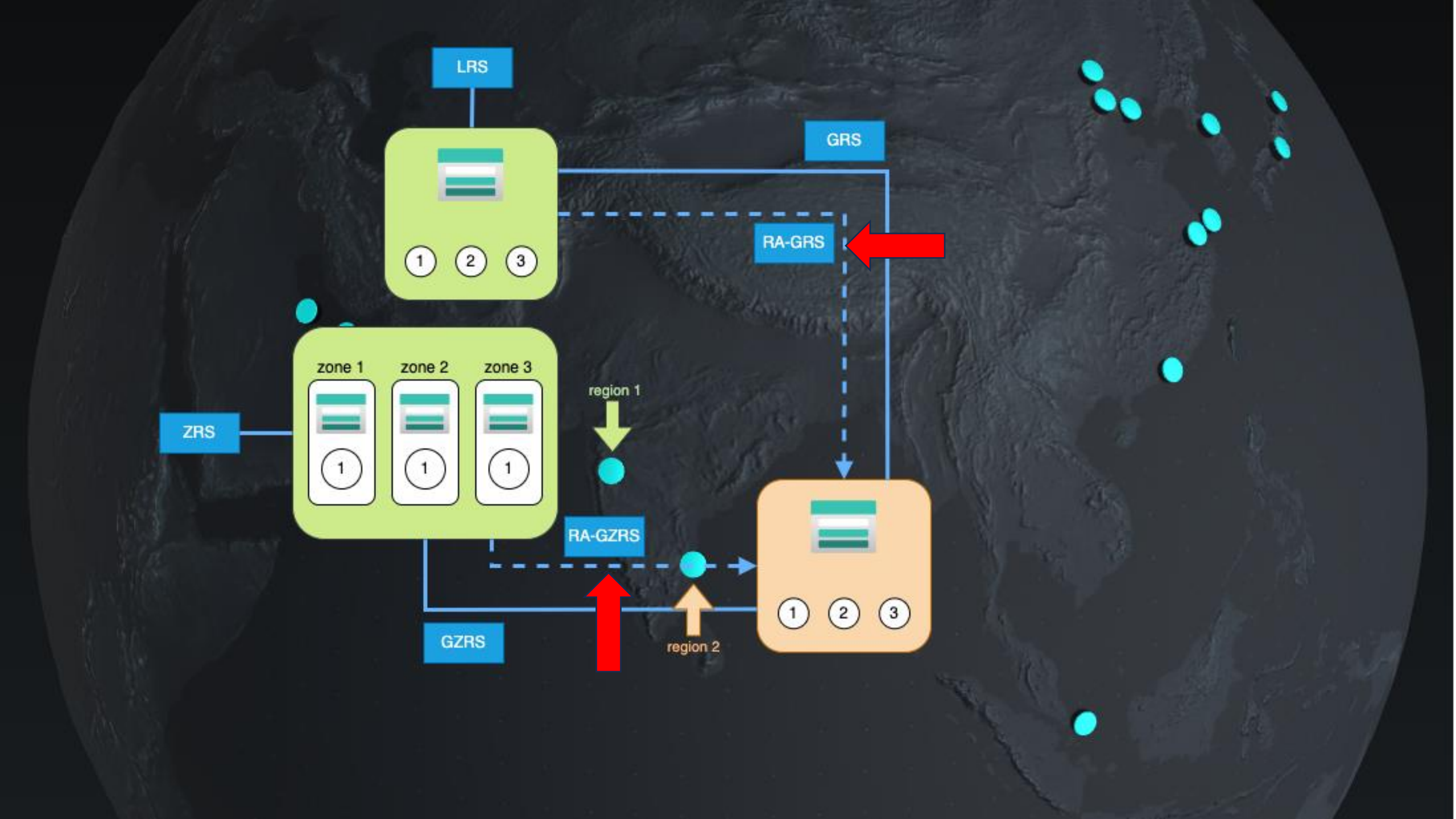


Read-Access in Secondary Region



Read access to data in the secondary region

Redundancy in primary region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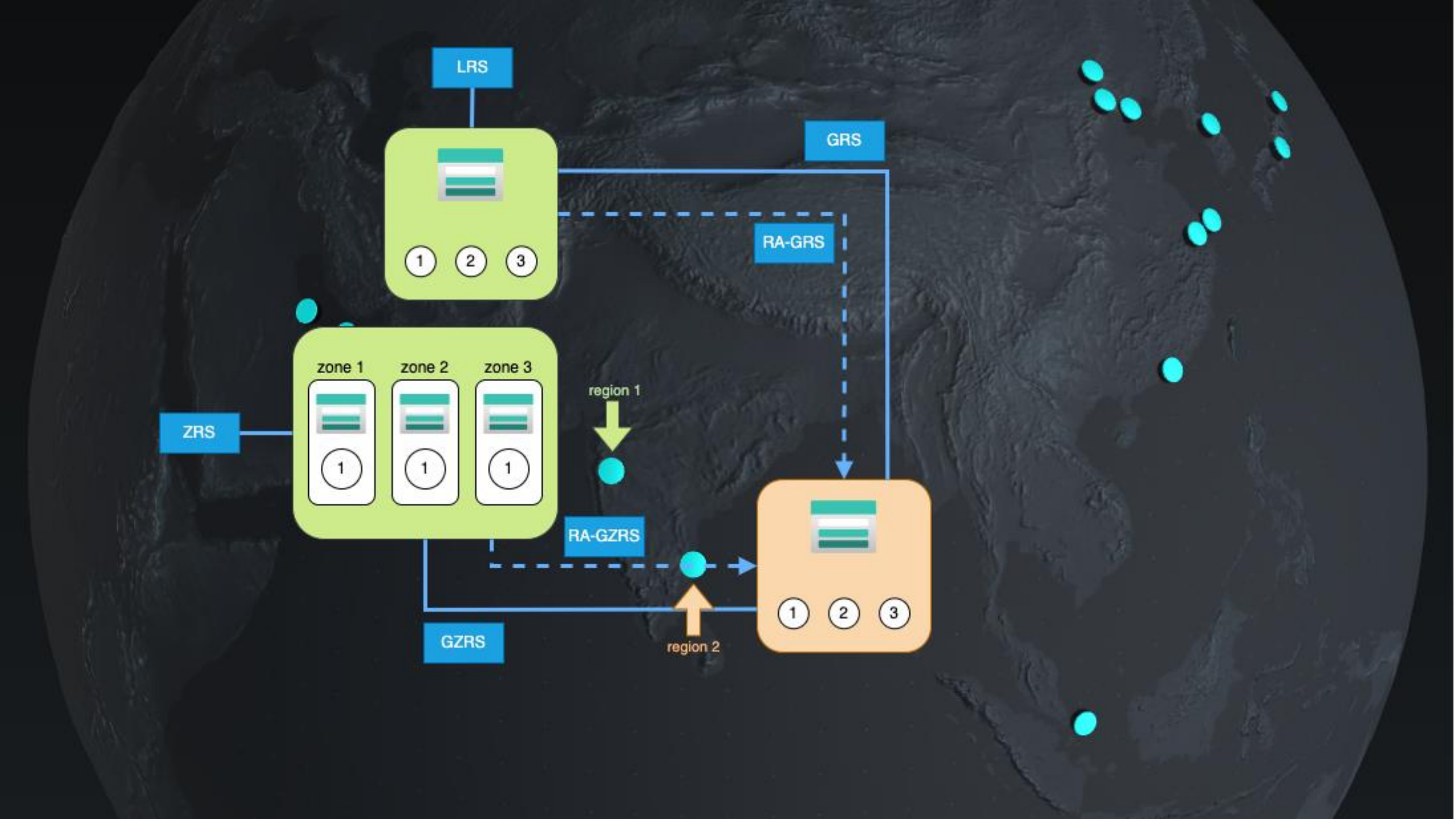
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Azure Storage Services

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Types of Azure Storage Services

Azure Blobs

Azure Files

Azure Queues

Azure Disks

Benefits of Azure Storage

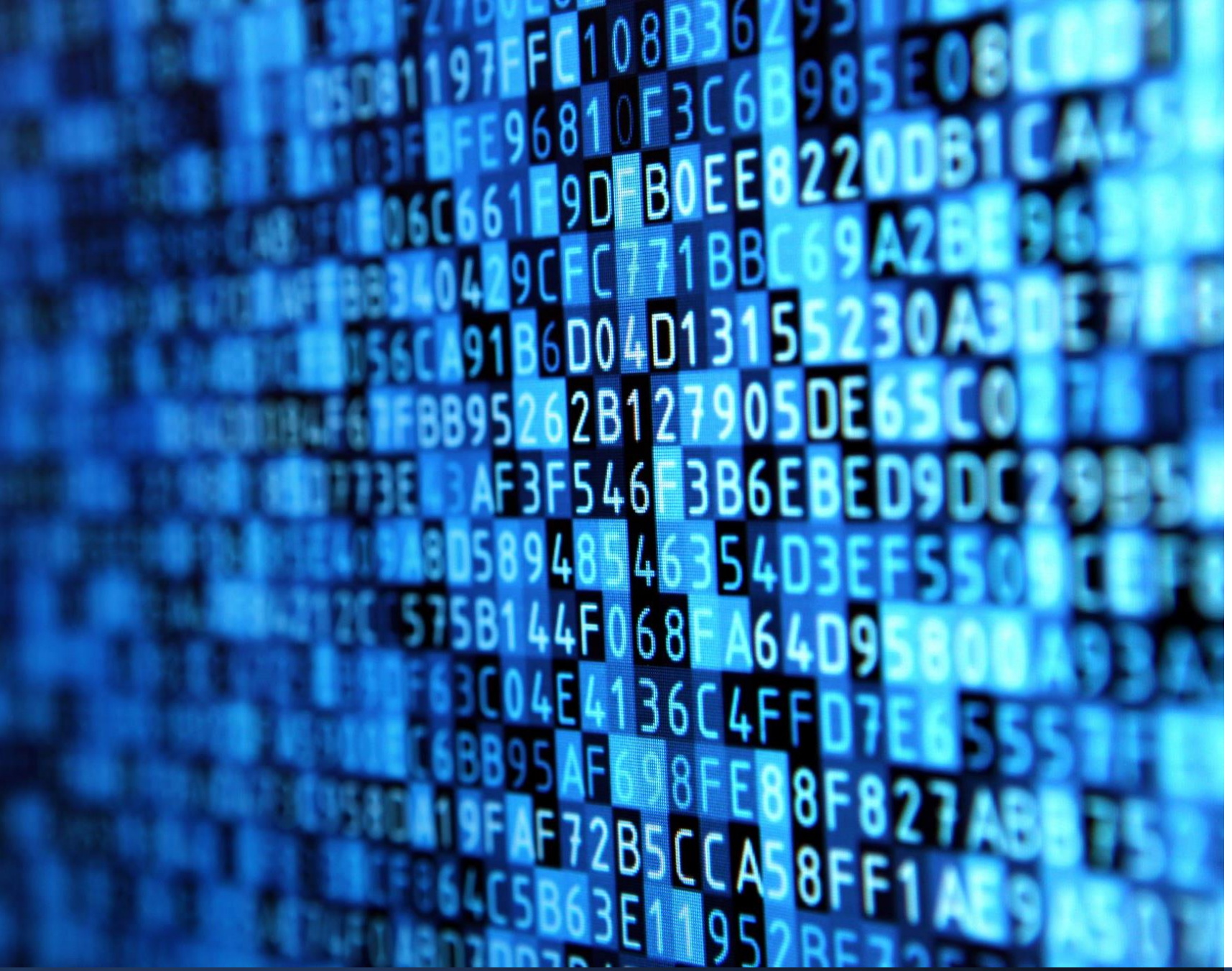
- Highly available
- Secure
- Scalable
- Managed

Azure Blobs

- Object storage solution – image, video, files, etc
- Store image, video, audio, files, etc.
- Accessible via URLs, API, CLI, SDKs.

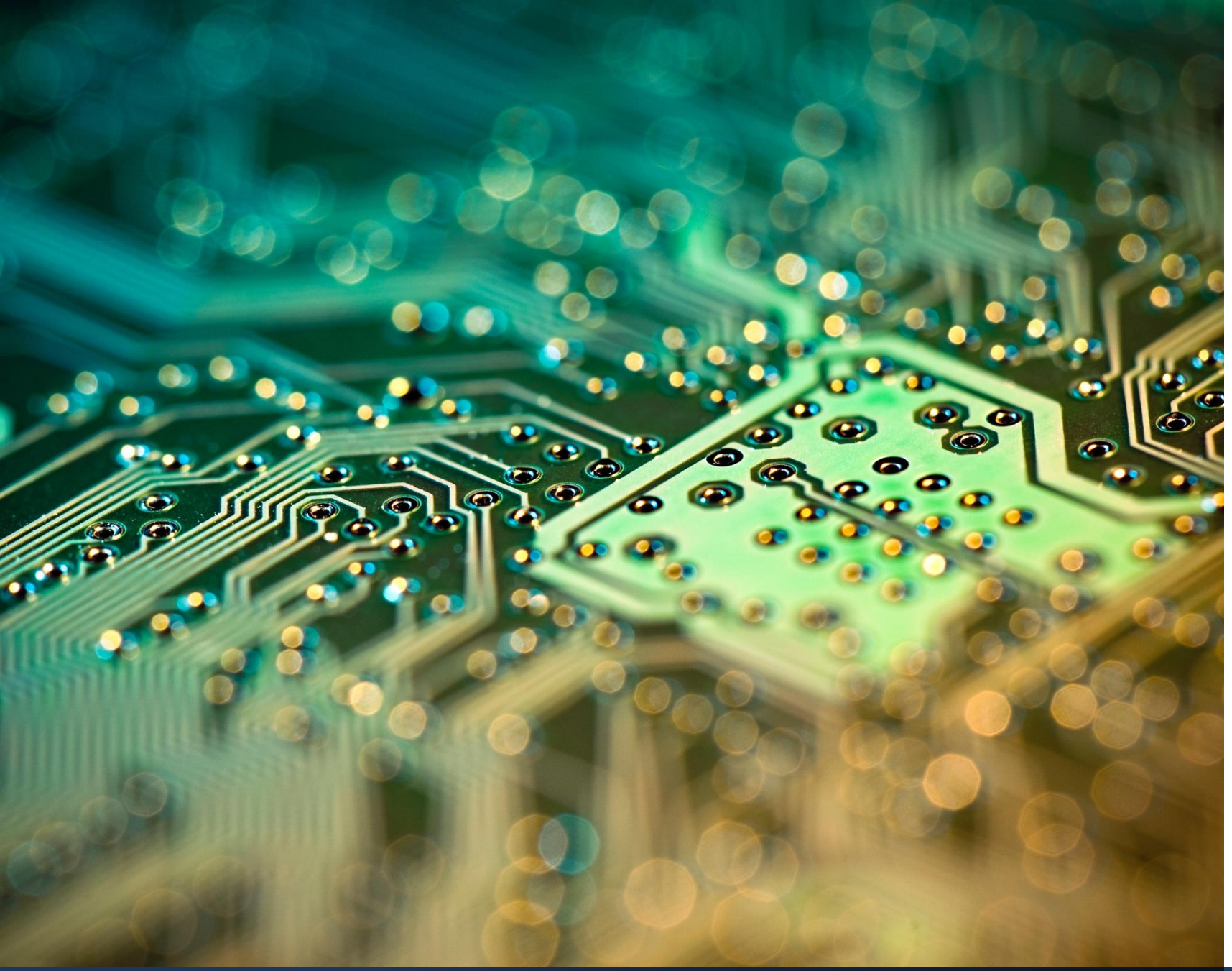
Azure Files

- Fully managed file shares
- Accessible via SMB or NFS protocols
- Similar to network share



Azure Queues

- Store large number of messages
- Accessible via HTTP/HTTPS



Azure Disks

- Azure Managed Disks
- Block-level storage volume

Azure Blob Storage Tiers

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Blob Storage Tiers

Access Tier	Online/ Offline	Minimum Storage days	Access Cost	Storage Cost	Use as Default Tier	Ideal Use Case
Hot	Online	NA	Low	High	Yes	Accessed frequently
Cool	Online	30	High	Low	Yes	Accessed infrequently
Cold	Online	90	High	Low	No	Accessed infrequently
Archive	Offline	180	High	Low	No	Rarely used

Azure Migration

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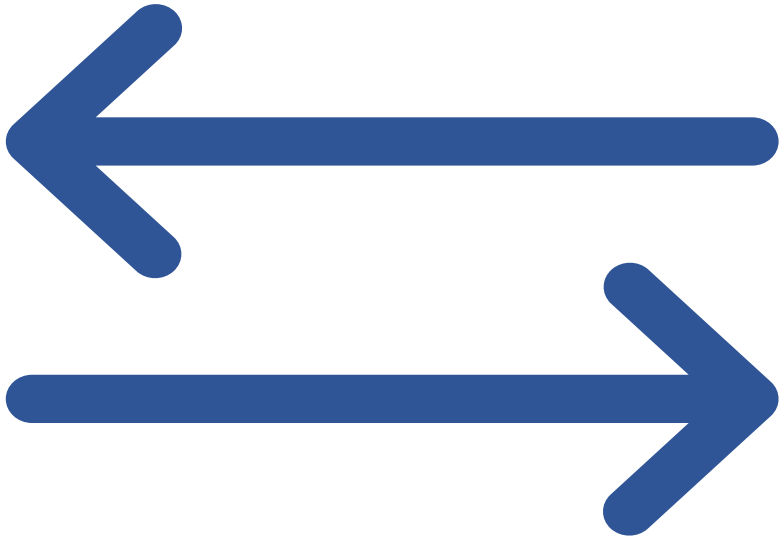

Azure Migrate

- Unified migration platform
- Extensive toolset:
  - Azure Migrate: Discovery and assessment
  - Migration and modernization
  - Data Migration Assistant
  - Azure Database Migration Service
  - Web app migration assistant
  - Azure Data Box

Azure Data Box

- Physical migration service
- Reliable and inexpensive data transfer
- Ideal use cases:
  - One-time migration
  - Moving extensive library
  - Bulk transfers
  - Periodic uploads

Azure File Movement Options

- AzCopy
- Azure Storage Explorer
- Azure File Sync

Azure File Movement: AzCopy

Upload & download files

Copy files between storage accounts

Synchronize files

Works with other cloud providers

One-direction synchronization

Azure File Movement: Azure Storage Explorer

Standalone app

Graphical interface

Manage files & blobs

Upload to & download from Azure

Move between storage accounts

Backend: AzCopy

Azure File Movement: Azure File Sync

Centralize file shares in Azure Files

Windows file server as a CDN

Bi-directional synchronization

Access data locally