BACKBOX VTC AND RANSOMWARE PROTECTION
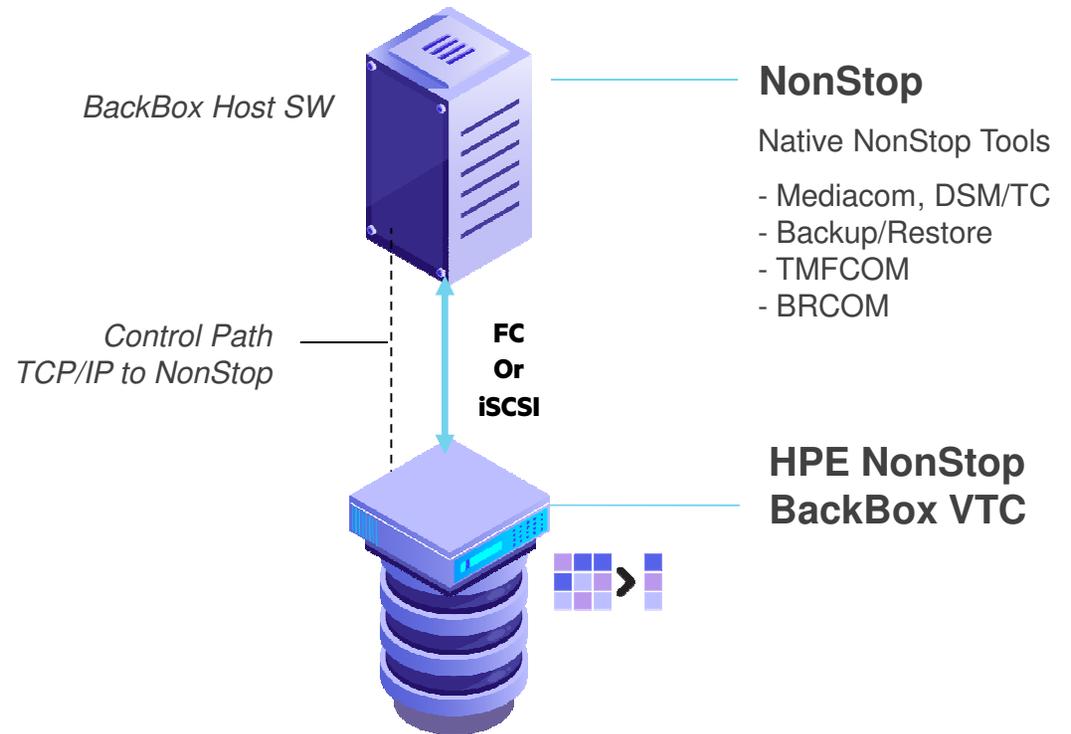
EBITUG 2023
Mirko Buzolitch

May, 2023

HOST-BASED CONTROL

With context-free controllers
CONTROLLER

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BackBox Host Software

- Domain Manager
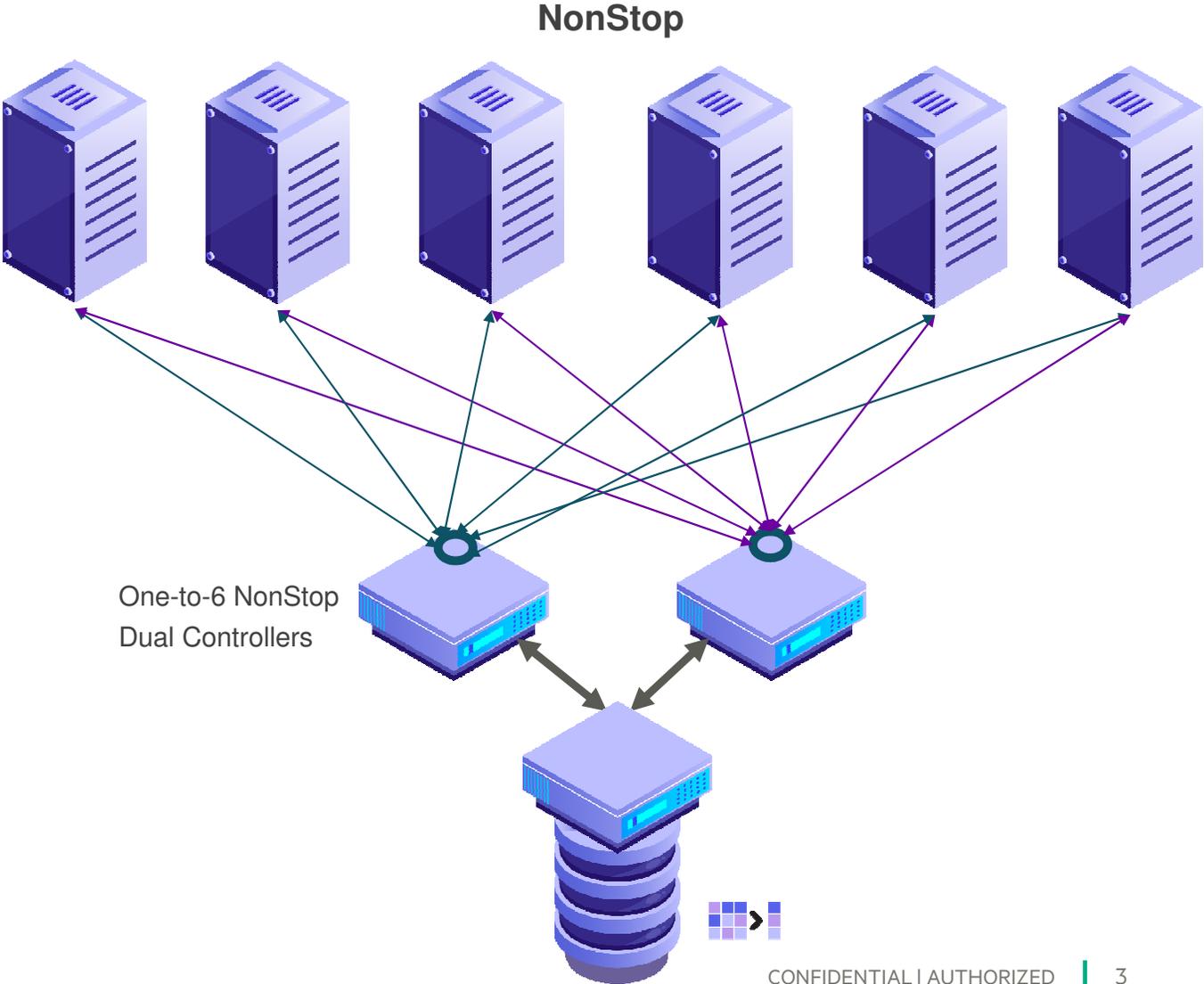
- Event Extractor

- Metadata Catalog

BackBox Host SW

Control Path
TCP/IP to NonStop

FC
Or
iSCSI

NonStop

Native NonStop Tools

- Mediacom, DSM/TC
- Backup/Restore
- TMFCOM
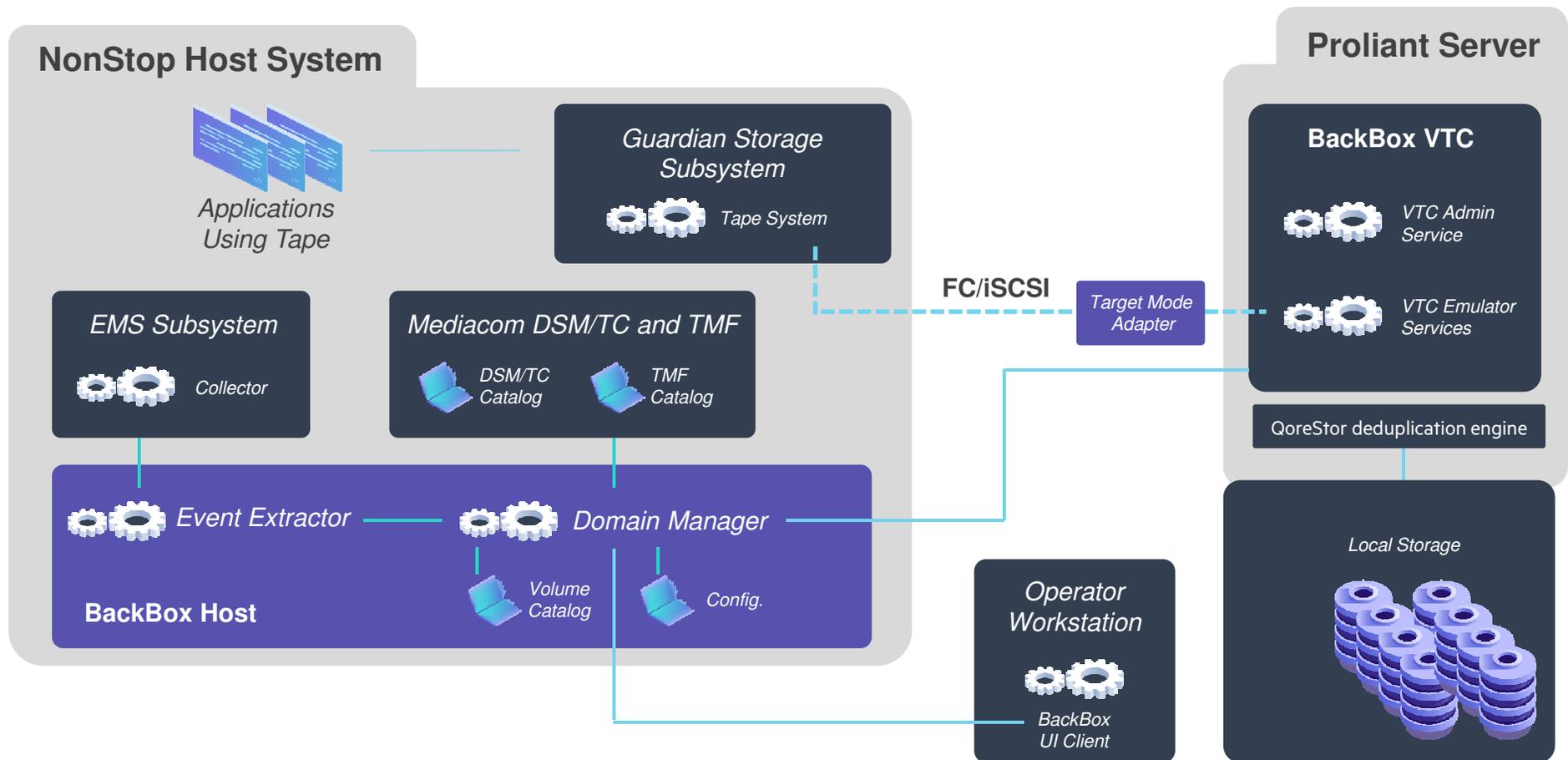- BRCOM

HPE NonStop
BackBox VTC

SHARED VTC PAIR

The same pair of VTC can be share by multiple host providing a fault tolerant architecture.

Large configuration can use more than 2 VTC

NonStop

One-to-6 NonStop Dual Controllers

NONSTOP TAPE COMPONENTS WITH BACKBOX & QORESTOR

NonStop Host System

Applications Using Tape

Guardian Storage Subsystem

Tape System

FC/iSCSI

Target Mode Adapter

Proliant Server

BackBox VTC

VTC Admin Service

VTC Emulator Services

EMS Subsystem

Collector

Mediacom DSM/TC and TMF

DSM/TC Catalog

TMF Catalog

QoreStor deduplication engine

Event Extractor

Domain Manager

Volume Catalog

Config.

BackBox Host

Operator Workstation

BackBox UI Client

Local Storage

HPE NONSTOP BACKBOX EMBEDDED QORESTOR®

SOLUTION FOR RANSOMWARE PROTECTION

CLOUD STORAGE EXPANSION

BackBox Domain

NonStop System

DL380 Gen 10 running Windows Server 2019

BackBox VTC Software

QoreStor ® VM

Internal Storage

T3

Moved deduplicated data

Cloud Tiering Capacity 3:1

Immutable Storage
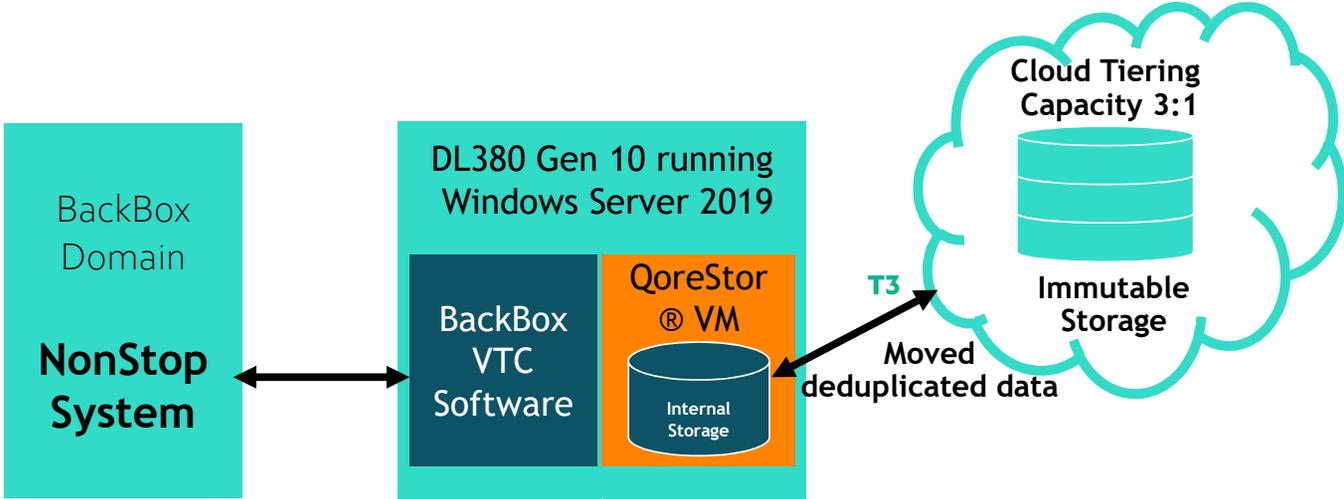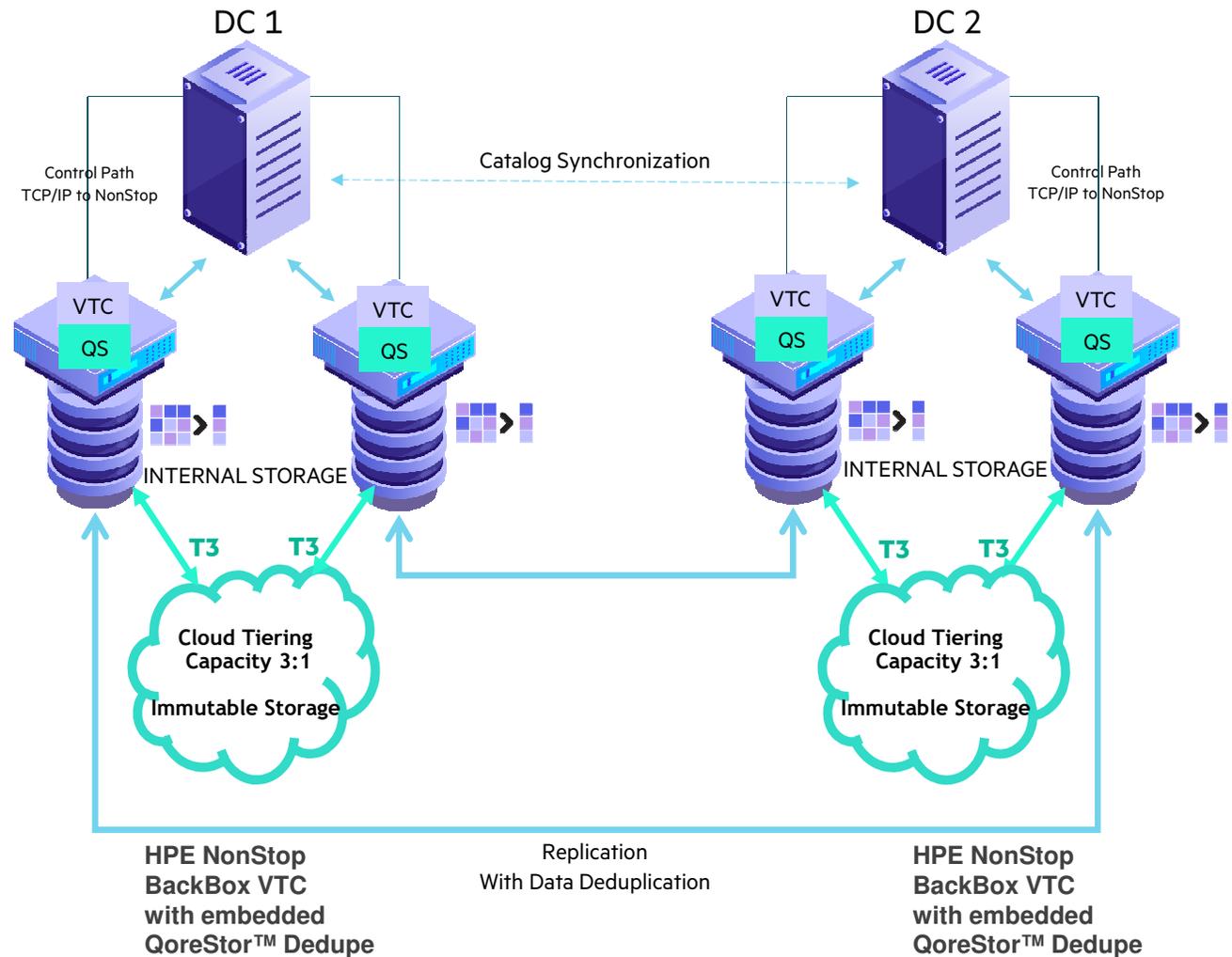
FAULT TOLERANT OPTION
A BETTER FAULT TOLERANCE USING QORESTOR® ON BOTH VTC

Each VTC has its own QoreStor®

Backup are split on two QoreStor®

Each QoreStor® replicate to its correspondent DR QoreStor®

If a QoreStor® fails during a restore, we use Copy Pool to restore a file from remote storage
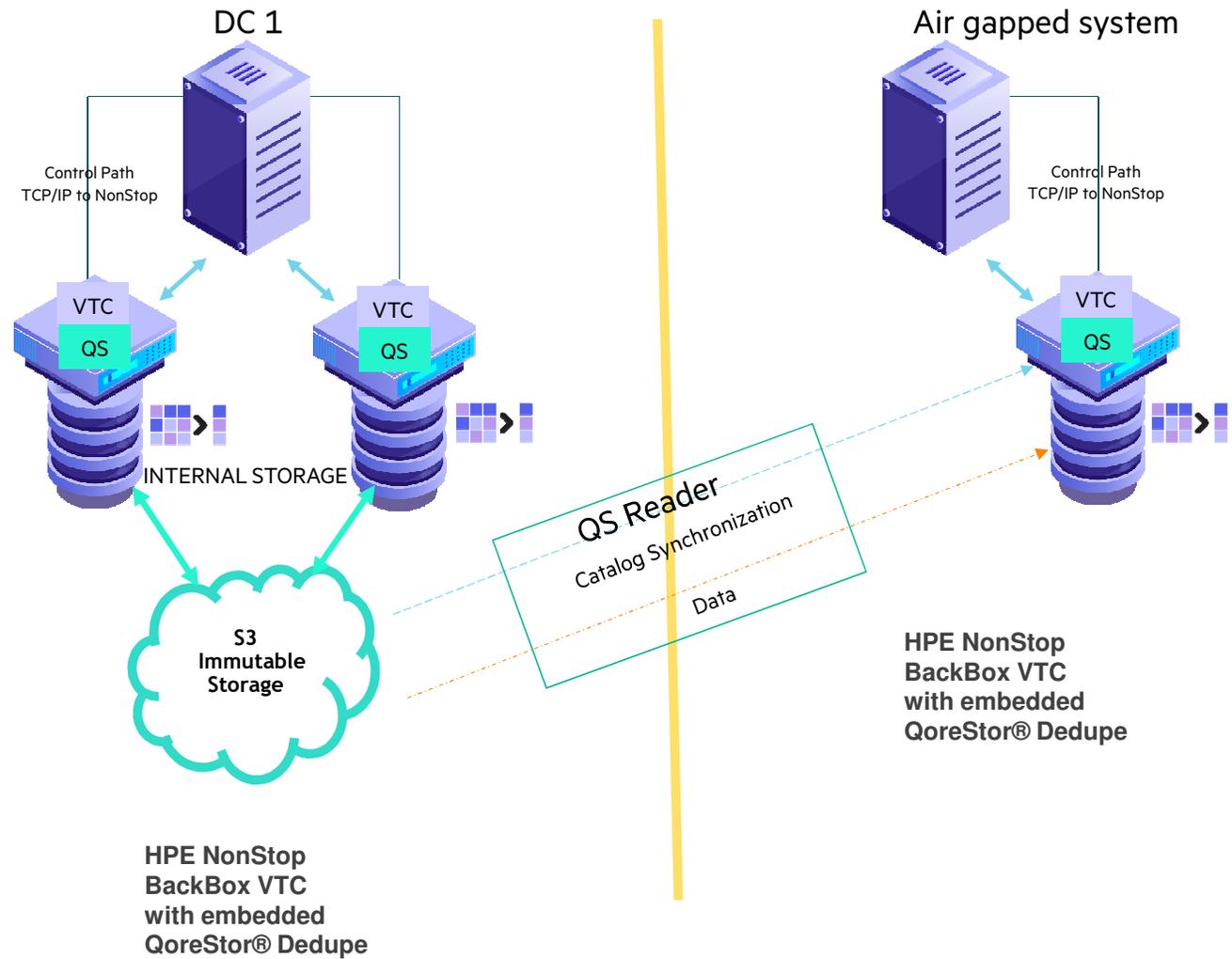

DC 1

DC 2

Control Path
TCP/IP to NonStop

Catalog Synchronization

Control Path
TCP/IP to NonStop

VTC

QS

VTC

QS

VTC

QS

VTC

QS

INTERNAL STORAGE

INTERNAL STORAGE

T3   T3

T3   T3

Cloud Tiering
Capacity 3:1

Immutable Storage

Cloud Tiering
Capacity 3:1

Immutable Storage

**HPE NonStop
BackBox VTC
with embedded
QoreStor™ Dedupe**

Replication
With Data Deduplication

**HPE NonStop
BackBox VTC
with embedded
QoreStor™ Dedupe**

AIR-GAPPED ENVIRONEMENT
FOR STAND-BY PRODUCTION SYSTEM

Production backup and catalog metadata are moved to the cloud

They stay on the cloud until needed. At that point the Metadata is reconstituted on the NonStop and the data restored from the cloud.

The QSReader can read data that have been stored by another QoreStor® instance

DC 1

Control Path
TCP/IP to NonStop

VTC

QS

VTC

QS

INTERNAL STORAGE

S3
Immutable
Storage

QS Reader

Catalog Synchronization

Data

Air gapped system

Control Path
TCP/IP to NonStop

VTC

QS

**HPE NonStop
BackBox VTC
with embedded
QoreStor® Dedupe**

**HPE NonStop
BackBox VTC
with embedded
QoreStor® Dedupe**

QORESTOR®
When to use it

- When data deduplication is required
- When replication is required
  - Replace expensive tapes for off-site backup by replication to DR site or Cloud
  - Reduce network costs with a low-bandwidth replication
- When encryption at rest is required
  - Protect customer backup data with encryption
- Cloud archiving expansion
  - Expand storage capacity with cloud archiving by up to 300%
  - Deduped data moved directly to the cloud without being rehydrated
    - Transfer data 20x faster
    - Drastic cloud storage savings

Additional Features with QoreStor

- Less footprint, less power and less cooling

- All-in-one pricing includes everything: deduplication, replication, encryption and cloud archiving

- Single technology embedded QoreStor® is managed using the BackBox VTC management console

- Rapid CIFS client secure and fast data transmission

- Cloud Tier storage increase the storage capacity by 300% - at no extra cost

- Term license available for QoreStor®

THANK YOU

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