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HPE Shadowbase – Digital Resilience, Data Integration, and Data Validation for HPE NonStop Systems

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Agenda

- About Gravic
- Key technology trends and challenges
- Business continuity approaches
- HPE Shadowbase solutions
- Looking ahead and wrap-up





About Gravic



About Gravic

Shadowbase Products Group

- **NonStop innovation for a nonstop world**

- Award-winning software
- Commitment to HPE NonStop and other servers
- 70+ technology patents
- Customers in all regions of the world

- **Mission-critical solutions**

- Data replication, streaming, and validation
- High and continuous availability for digital resiliency

- **HPE's strategic, go-forward partner**

- HPE Global Sales, Support, and Professional Services
- HPE's regional resellers and partners



Gravic HQ in Malvern, PA



Momentum Technology
Partner of the Year 2019



Key technology trends and challenges



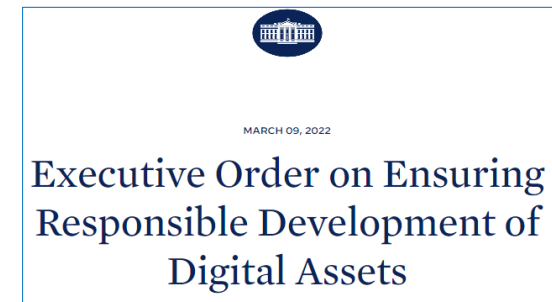
Key technology trends

- **Digital resiliency**

- Protection, detection, containment, recovery and repair capabilities against information and communication technology (ICT) related incidents
- Government regulations underway

- **Ransomware protection**

- Global business concern
- New approaches (e.g., “immutable” backups and “air-gapped” systems)
- **Value of TMF-audited applications cannot be overstated**



Key technology trends

- **Cloud integration and data analytics**

- HPE Shadowbase provides high-volume, performant data streaming for HPE NonStop cloud integration and online analytical processing (OLAP)

- **Virtualization**

- HPE Shadowbase fully supports HPE NonStop virtual environments including Google Cloud Platform, Azure Skytap, and Private Cloud instances

- **HPE GreenLake**

- HPE Shadowbase fully supports HPE GreenLake deployments



Common IT challenges that customers ask our help with

- **Ensuring continuous application availability**

- Avoiding costly downtime
- Recovering rapidly after disasters

- **Migrating online applications**

- Adopting new IT infrastructure
- Upgrading HPE NonStops via *platform refreshes*
- Migrating datacenters

- **Eliminating data and application silos**

- Streaming data across the enterprise
- Maximizing data and its value
- Enabling real-time business intelligence
- Meeting regulatory and audit compliance

- **Modernizing**

- Transforming Enscribe files into SQL databases
- Upgrading from Attunity, GoldenGate, RDF, and other “mature” solutions



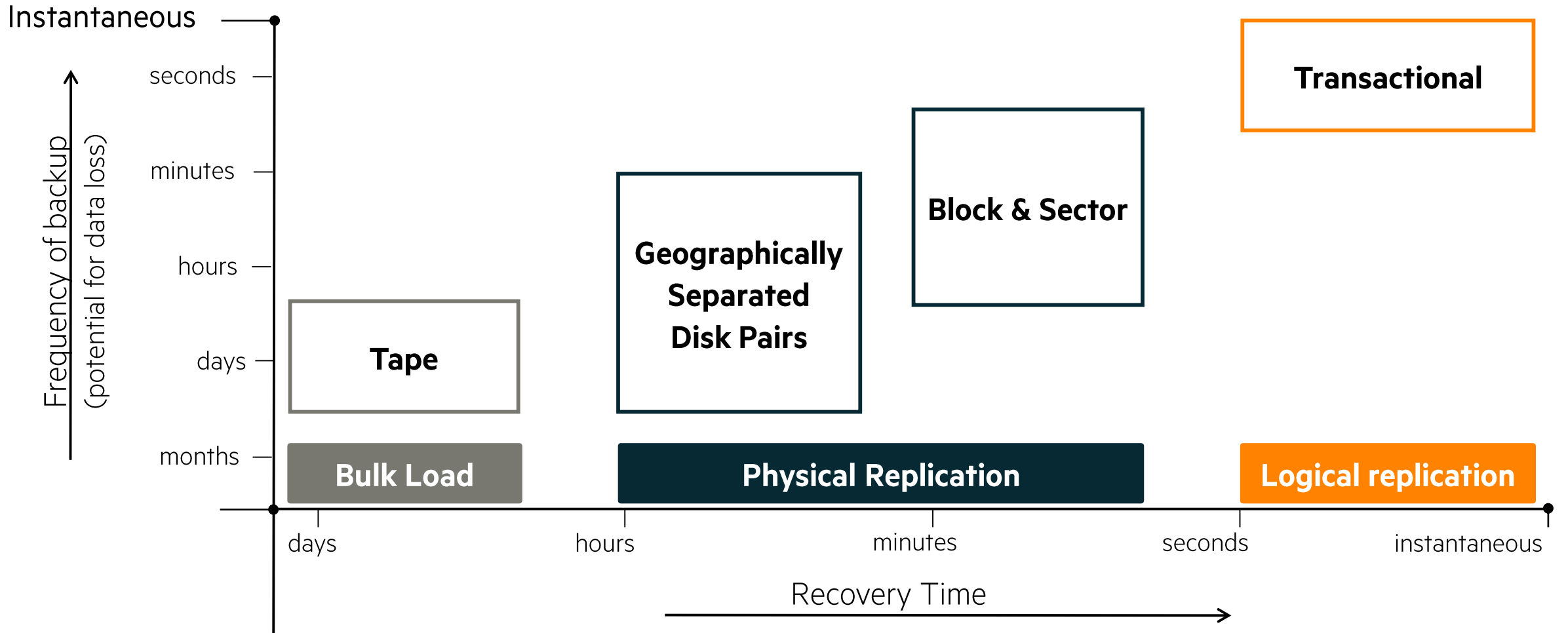


Business continuity approaches



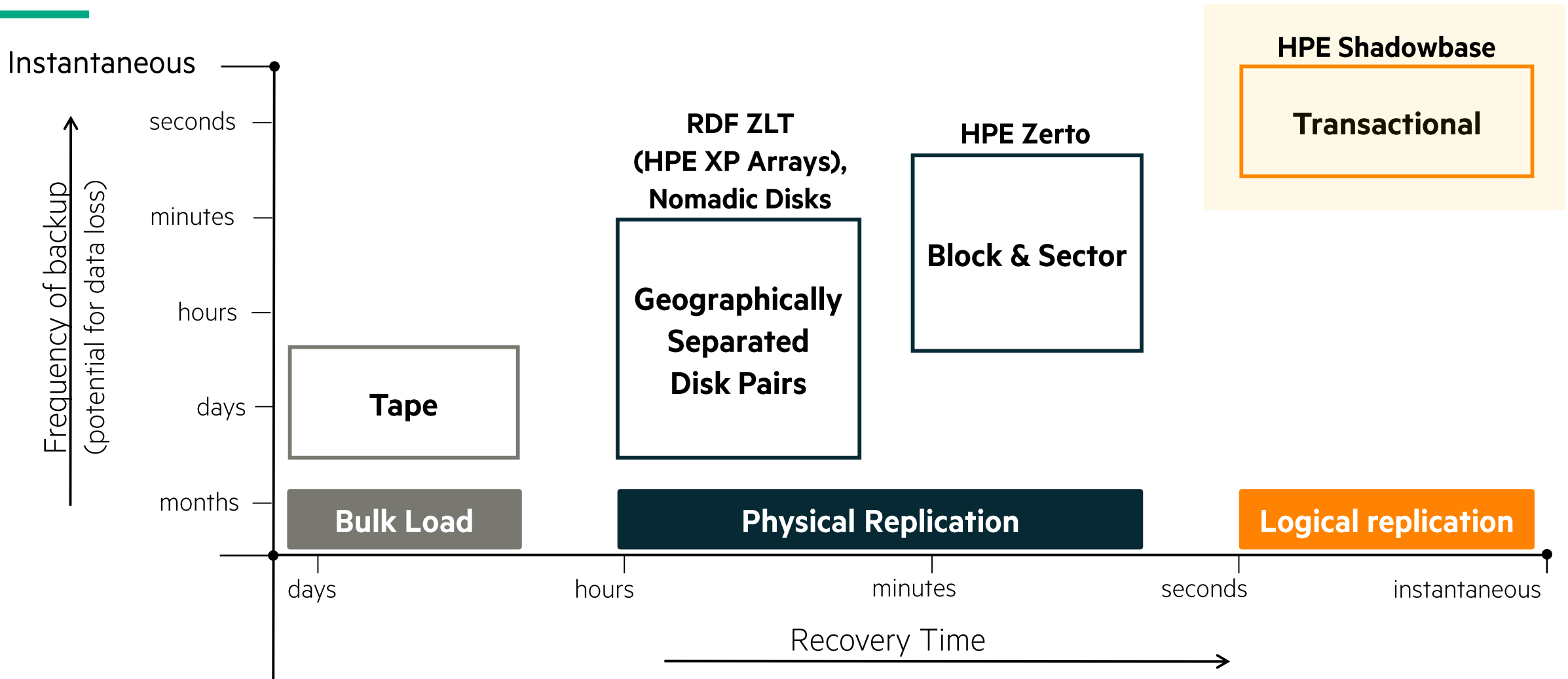
Business Continuity

Approaches and outcomes



Business Continuity

Approaches and outcomes



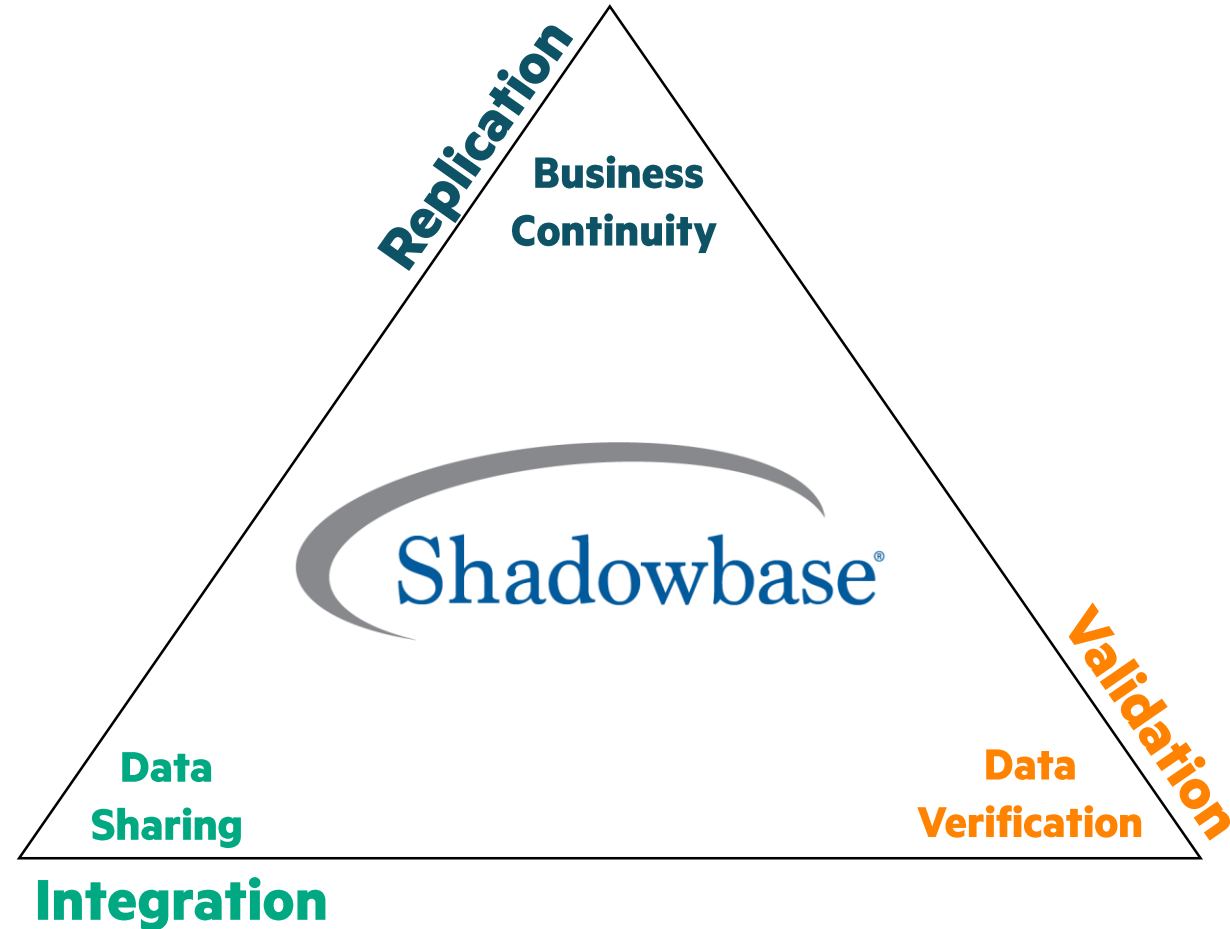


HPE Shadowbase solutions



HPE Shadowbase data solutions

3 pillars: Replication, Integration, and Validation



HPE Shadowbase

Business Continuity solutions



Digital Resiliency

- Extreme application availability: achieving century uptimes
- Extreme data resiliency with zero data loss and rapid recovery

Use Case

ZDM

Zero Downtime Migration for California Credit Union

ShadowbaseSoftware.com/Publications/Use-Cases/ZDM-for-Credit-Union/



Capabilities

- Eliminate unplanned downtime
 - **Active / Passive** Disaster Recovery (DR)
 - **Active / Almost-active** “Sizzling-Hot-Takeover” (SZT)
 - **Active / Active** Continuous Availability (Hot-Hot)
- Eliminate planned downtime
 - Use Zero Downtime Migration (ZDM) for upgrades, migrations, and platform refreshes
 - Provide **continuous application availability** and **eliminate business risk** while the migration occurs
- Eliminate data loss
 - **Shadowbase Zero Data Loss** (ZDL, EAP)
 - Synchronous replication technology

HPE Shadowbase

Data and Application Integration solutions



Data Streaming

- Eliminate data and application silos
- Integrate data from one database into a different database or application for competitive advantage

Use Case

AI BC DI

Real-Time Fraud Detection and Resolution for Financial Switch

ShadowbaseSoftware.com/Publications/Use-Cases/Fraud-Detection-for-Financial-Switch/



Capabilities

- Like-to-like and dissimilar environments
- Unlimited data transformation, scrubbing, filtering, cleansing, and scalability
- Extend replication capabilities with embedded application logic

Popular uses

- Analytical processing
- Cloud integration
- Data streaming and change data capture
- Data warehouse feeds
- Fraud detection
- Real-time business intelligence

HPE Shadowbase

Data Validation: Compare and Repair



Source and target data validation

- Find and resolve data discrepancies
- Helps meet regulatory requirements
- Proves data consistency to key stakeholders

Use Case



Massive Datacenter Migration for Money Transfer Firm

[ShadowbaseSoftware.com/Publications/Use-Cases/Massive-Datacenter-Migration-for-Money-Transfer-Fir](https://ShadowbaseSoftware.com/Publications/Use-Cases/Massive-Datacenter-Migration-for-Money-Transfer-Firm)



Capabilities

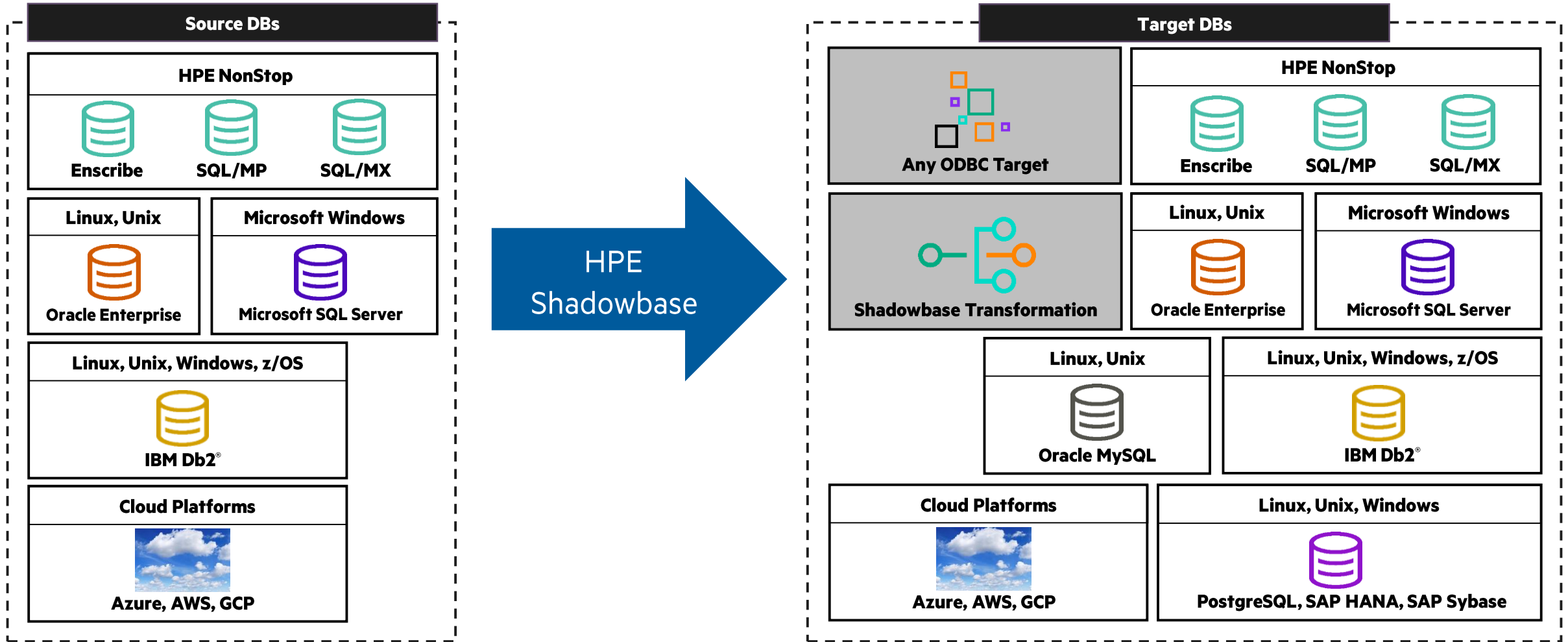
- Runs online and on-platform
- Supports Enscribe, SQL/MP, and SQL/MX
- Repair function
- Works with all data replication engines

Key benefits

- Ensures backup is ready for an immediate takeover
- Verifies data for migrations, platform refreshes, etc.
- Creates timeline of data points when the DBs matched

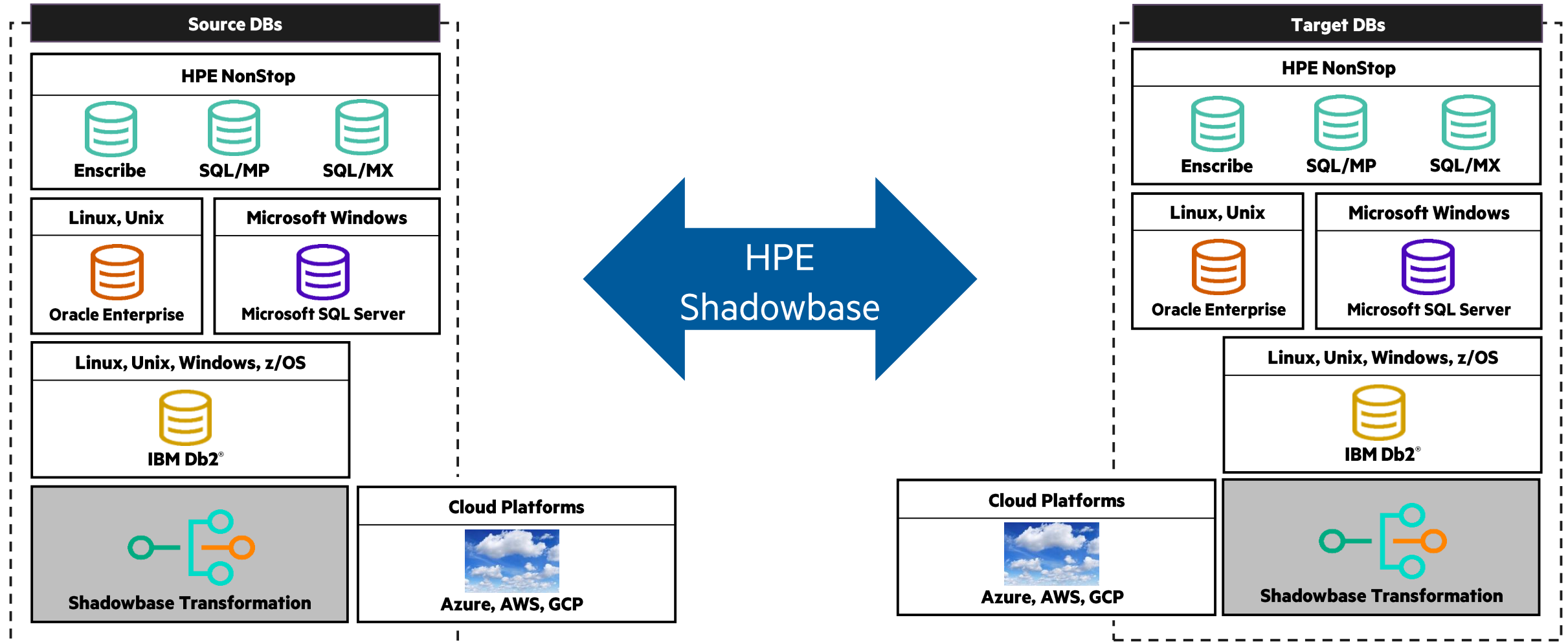
Homogeneous and heterogeneous uni-directional data replication and streaming

All combinations supported



Homogeneous and heterogeneous bi-directional data replication and streaming

All combinations supported





Summary

Looking forward & wrap-up



Looking forward

What's coming down the road

1. Synchronous Replication – Shadowbase Zero Data Loss (ZDL)

- Early-adopter program, please speak with us
- New *ZDL Implementation* Professional Services offering

2. Ransomware, air-gapped systems, Digital Resilience, and “cold” DR defense mechanisms

- Speak with us to discuss new/evolving architectural solutions using Shadowbase

3. Heterogeneous Compare

- E.g., NonStop vs Oracle, SQL Server, DB2, Sybase, MySQL, PostgreSQL, and others

4. Native Shadowbase port on IBM Mainframe z/OS to support Db2 as a source and target



Other sessions of interest



- BASE24 ATM Active-Active BC with Shadowbase
 - Yogesh Teli, AVP, BASE24 Development, Barclays Bank
 - Tuesday, 1:50pm



- Advanced Digital Resiliency and Data Integrity Architectures for Mission Critical Servers
 - Paul Holenstein, EVP, Shadowbase Products Group, Gravic, Inc.
 - Wednesday, 11:40am
- Demo: Rapidly expand NonStop databases and workloads into the Cloud
 - Presented by HPE Team
 - Available on-demand at HPE booth

Wrap-up



Arthur's Peak, Edinburgh, Scotland

- HPE Shadowbase is HPE's strategic *go-forward* data replication and streaming solution
- Globally sold and supported by HPE
- HPE Shadowbase can help you achieve Zero Application Downtime and Zero Data Loss



Thank you

Product-related questions: ask your HPE Sales team

Technical-related questions: SBProductManagement@Gravic.com

Marketing-related questions: PRHolenstein@Gravic.com

