



# HP Shadowbase Solutions Overview

**2015 GTUG Conference & Exhibition**

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# Introduction



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# Agenda

- **HP Shadowbase:**
  - Sales, Service, and Support is Now Directly Available from HP
- **HP Shadowbase Product Overview with Shadowbase Success Stories:**
  - Business Continuity
  - Data Integration & Synchronization
  - Application Integration
  - Tools, Utilities, and Add-ons
- **HP Shadowbase Provides Solutions for:**
  - ACI BASE24™
  - GE Centricity®
  - Big Data & Cloud Environments
- **What's New & What's Next for HP Shadowbase**

**Questions? Please ask as we go along...**

# HP Shadowbase Product Suite Overview

## The Shadowbase Extensible Architecture

### Business Continuity & Application Availability Environments

- Active/Passive Disaster Recovery
- Sizzling-Hot-Takeover (SZT)
- Active/Active Continuous Availability
- Eliminate Planned Downtime for Migrations & Upgrades (ZDM)

### Data Integration & Data Synchronization

- Homogenous & Heterogeneous Environments
- Data Transformation, Scrubbing, Filtering & Cleansing
- Extend Replication Capabilities with Embedded Application Logic

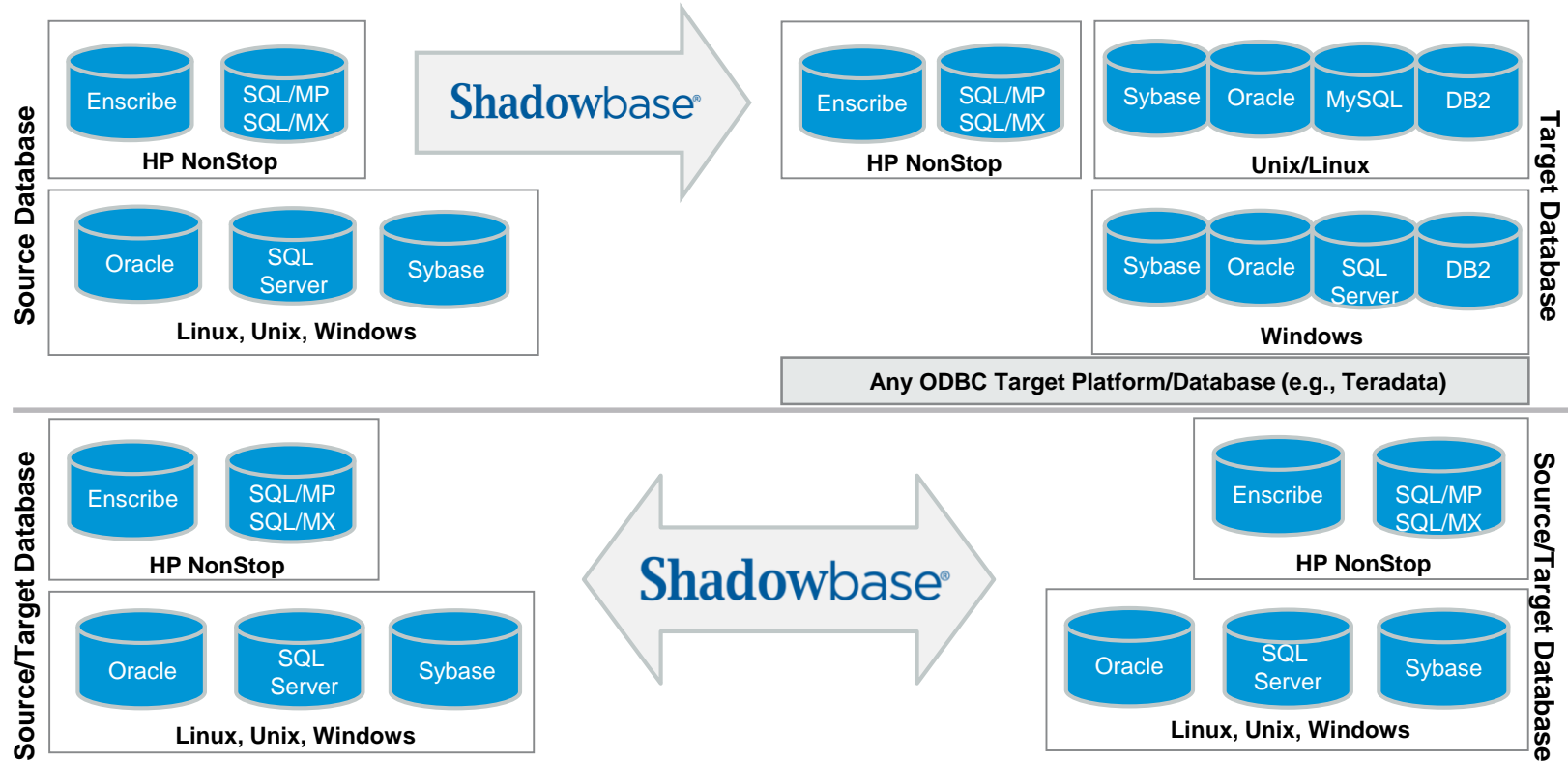
### Application Integration

- Build *Event-Driven* Architectures
  - Process events as they occur; no more polling for needed data
- Build *Real-Time* Architectures
  - Process events when they occur; no more working with “stale” data
- Integrate Disparate Applications with no Application Code Changes
  - Integrate at the data-layer, avoiding costly adapters, middleware, and code changes



# HP Shadowbase Product Suite Overview

Homogeneous & Heterogeneous Uni/Bi-Directional Data Replication



# HP Shadowbase Product Suite Overview

## HP Shadowbase Product Extensions

**Audit Compliance: Mine Audit & Build Archival DB of Business TX's for Reporting & Analysis**



**Audit Compliance: Validate Target Matches Source**



**Load/Refresh Data Warehouses and Data Marts Using Shadowbase ETL Toolkit**



**Build *Real-Time* Business Intelligence and *Active* Data Warehouse Systems**



**Integrate Operational Processing with Ancillary Systems**



**Eliminate Planned Application Downtime for Upgrades and Migrations (ZDM)**



**Restore Corrupted Databases Online Eliminating Application Outages**



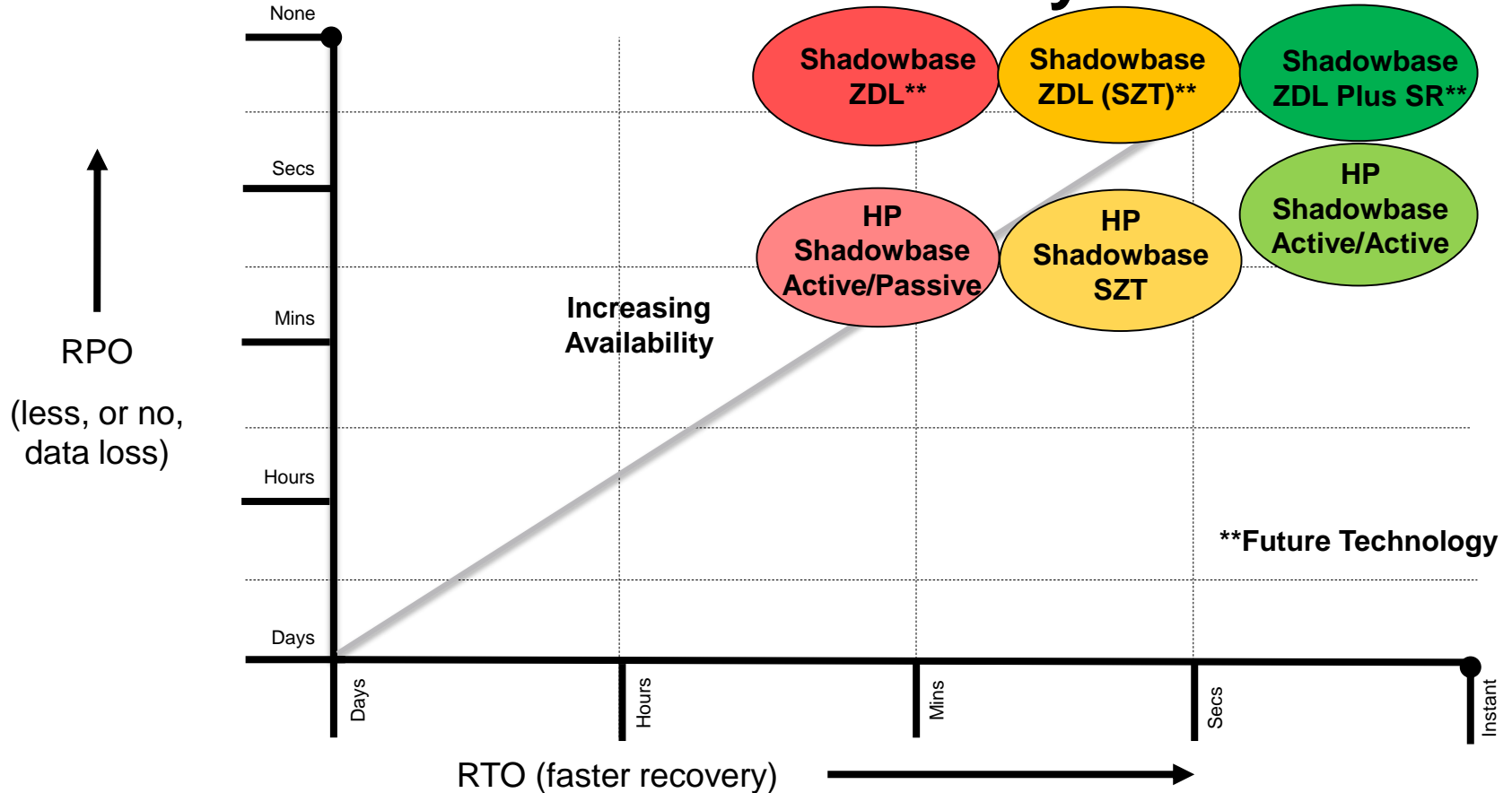
**Initial Online Loading of Target Environment**



**Command & Control GUI from your Windows Workstation**



# HP Shadowbase Business Continuity Overview





# HP Shadowbase For Data Integration

## Shadowbase Manages Data Mapping for Source to Target

- Many datatypes mapped automatically
  - For example: CHAR, VARCHAR, numerics, many dates/times, etc.
- Complex datatypes mapped via either Data Mapping scripts or the Shadowbase User Exit capability

## Data Scrubbing and Cleansing

- Blank and null-fill processing, NULL mapping, date/time cleansing, etc.

## Data Filtering and/or Aggregation

- Remove events being replicated based on data content
- Consolidate multiple events into one

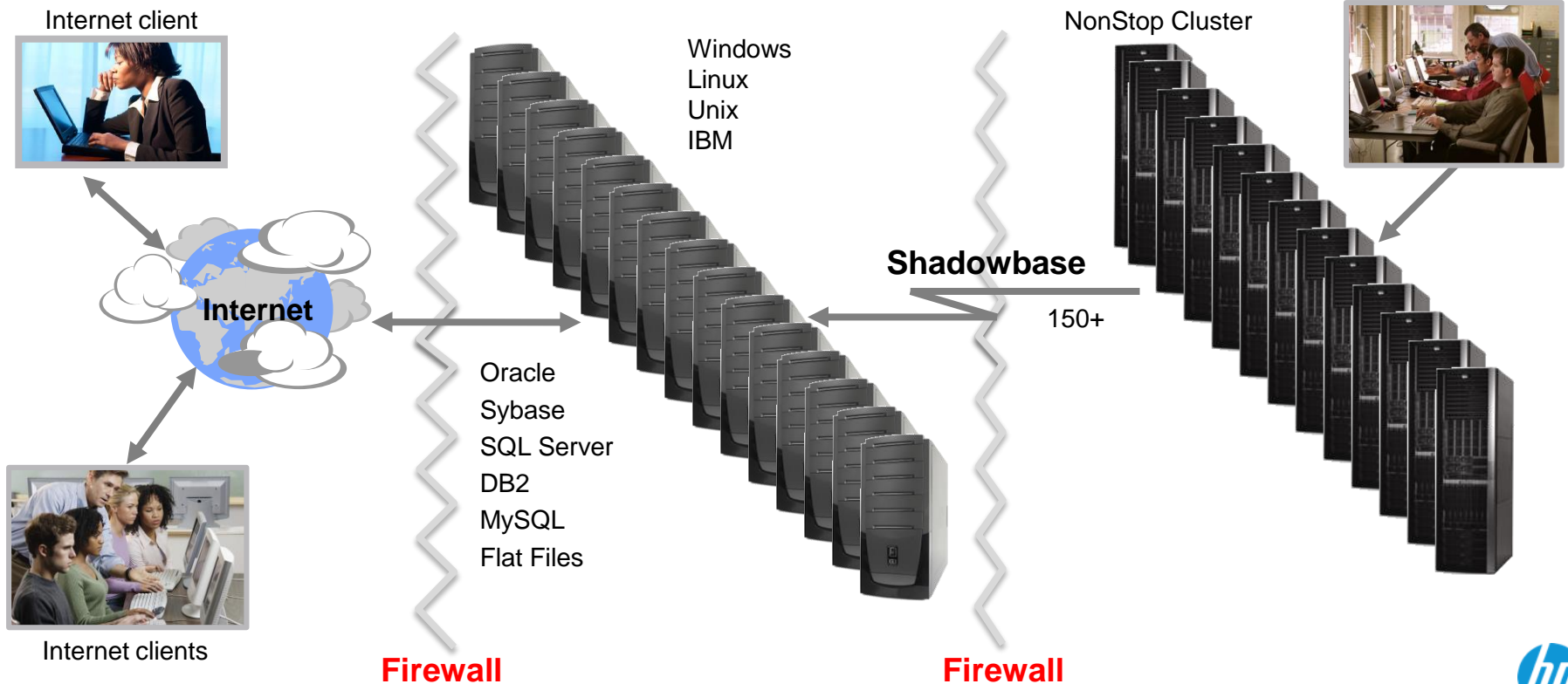
## Non-Relational to/from Relational Data Formats

- Data normalization support provided (for redefinition support, array fan-out, etc.)
- For example NonStop Enscribe to Oracle



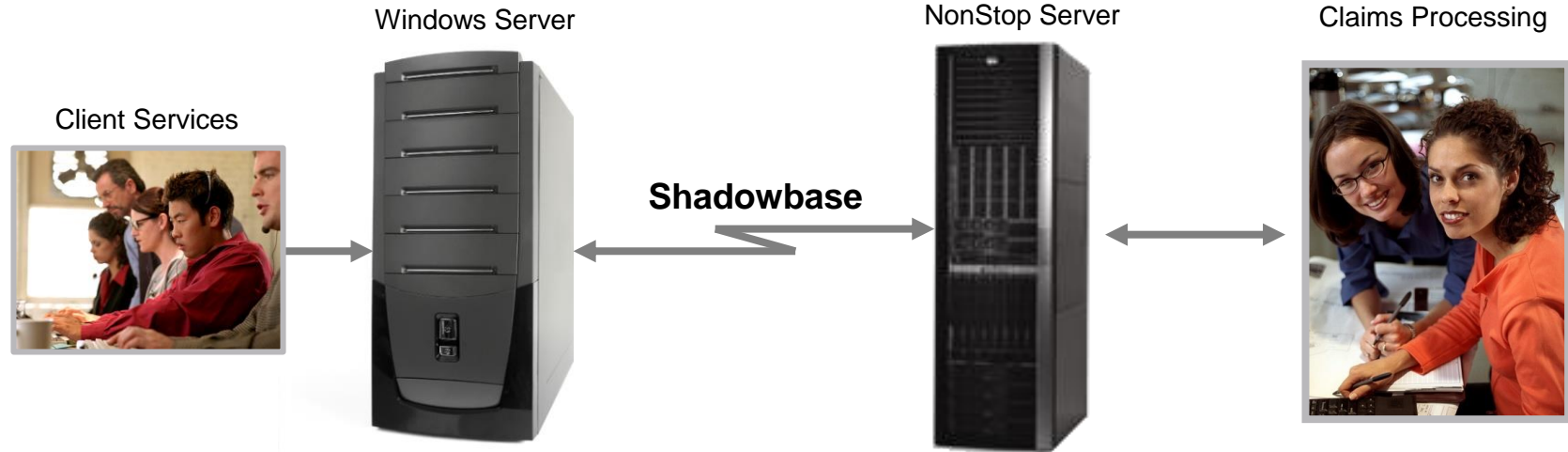
# HP Shadowbase For Data Integration

Large Scale SaaS: Integrating HP NonStop trading applications with online trading applications



# HP Shadowbase For Data Integration

Application Integration: Insurance Claims Processing - Integrating an HP NonStop Claims Processing application with an MSSQL Forms Processing Application



# HP Shadowbase For Application Integration

## Shadowbase Enables *Event-Driven Architectures*

- Shadowbase monitors the transaction log and can “trigger” on all DML or DDL database activity (e.g., inserts, updates, or deletes)
  - Avoid inefficient polling for changes

## Shadowbase Provides *Real-Time Event Delivery*

- As soon as the event occurs in the database, Shadowbase sees it and can processes it
  - Avoid using “stale” data

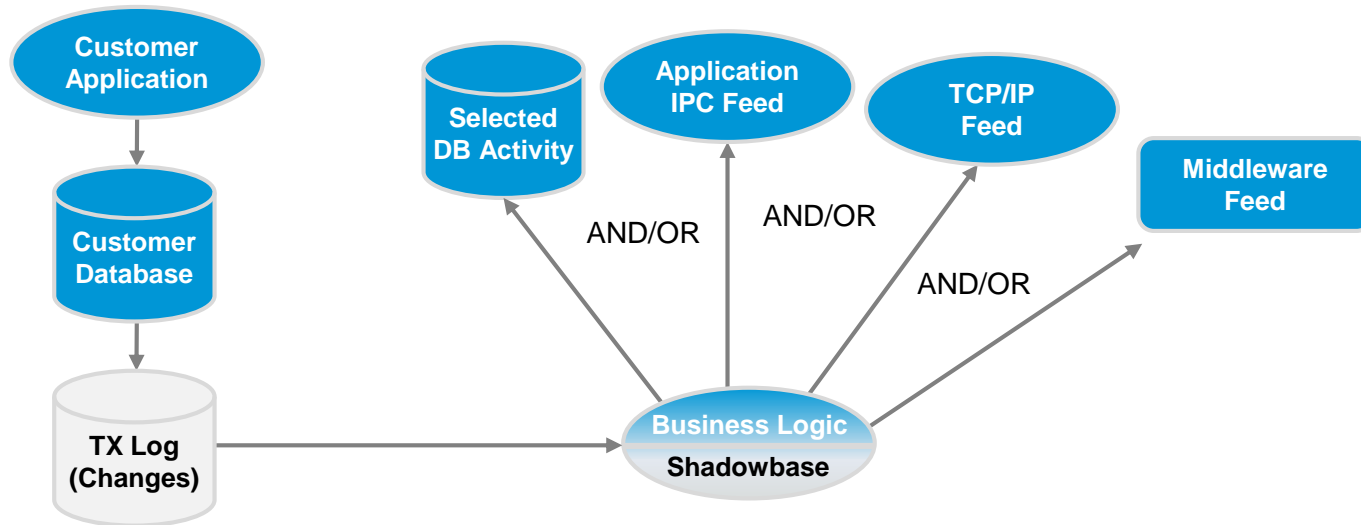
## Shadowbase Integrates at the *Data Layer*

- No need to modify application code (assuming you **have** the code)
- Shadowbase acts as the hub, feeding pertinent database change events to all other system(s)
- Build efficient data-driven Publish/Subscribe event-notification architectures using replication as the middleware
- Events being replicated can be delivered in any format using any supported connectivity option



# HP Shadowbase For Application Integration

## Database Event Capture & Delivery



### Function:

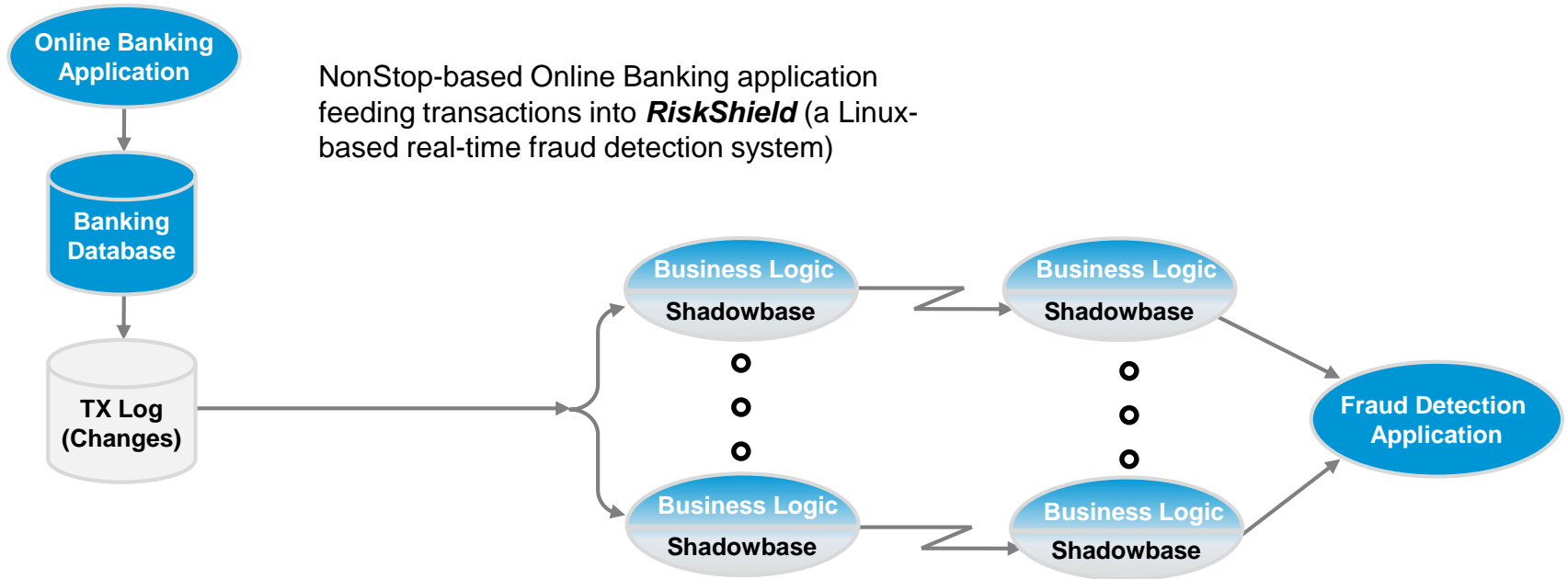
Shadowbase “sees” all changes to the customer’s database...and can act on them in real-time.

### Uses:

Shadowbase acts as a *capture process* for change events from the database/audit trail and notifies or delivers them to downstream files, applications, or middleware.

# HP Shadowbase For Application Integration

Real-Time Fraud Detection NonStop Source to SBOS Target



# Shadowbase Success Stories

## Multi-Shadowbase-Use Case Studies

Application & Data Synchronization – First Data Corp.



Availability Modernization – Royal Bank of Canada

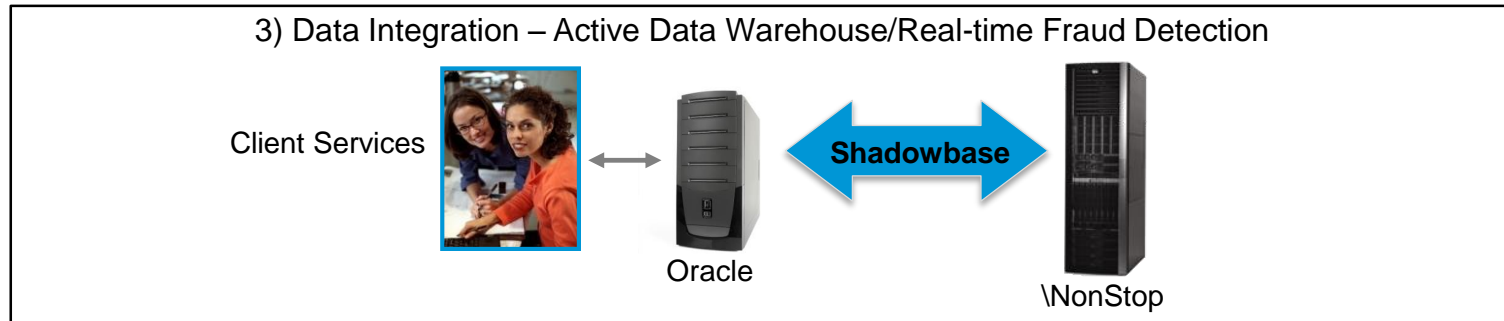
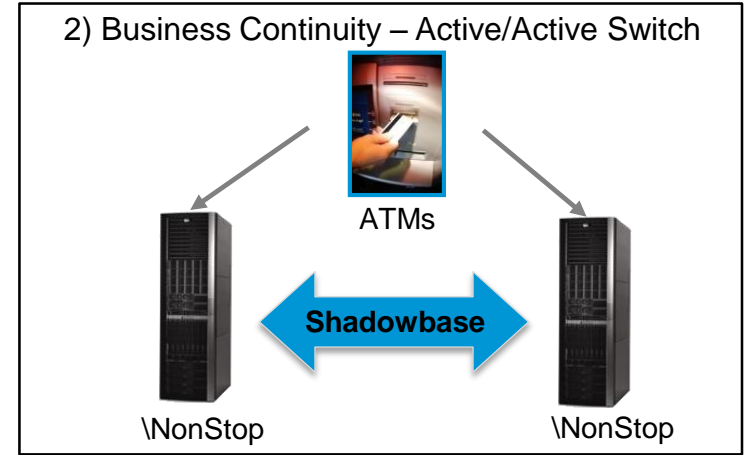
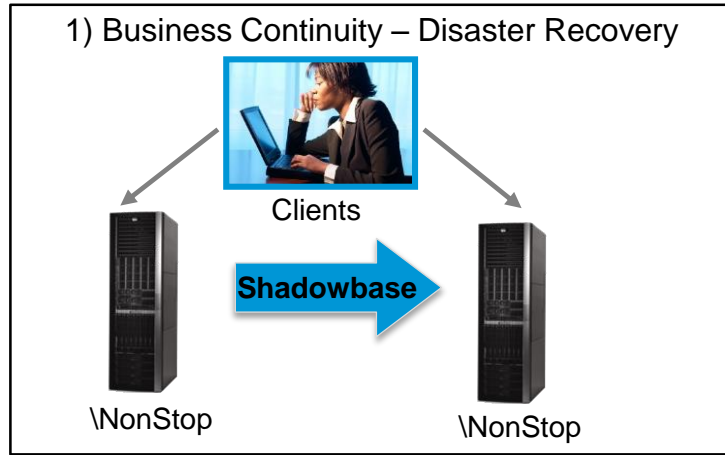


Traditional Disaster Recovery & Beyond – Vodacom



# Shadowbase Success Stories

## Implementations at First Data Corporation

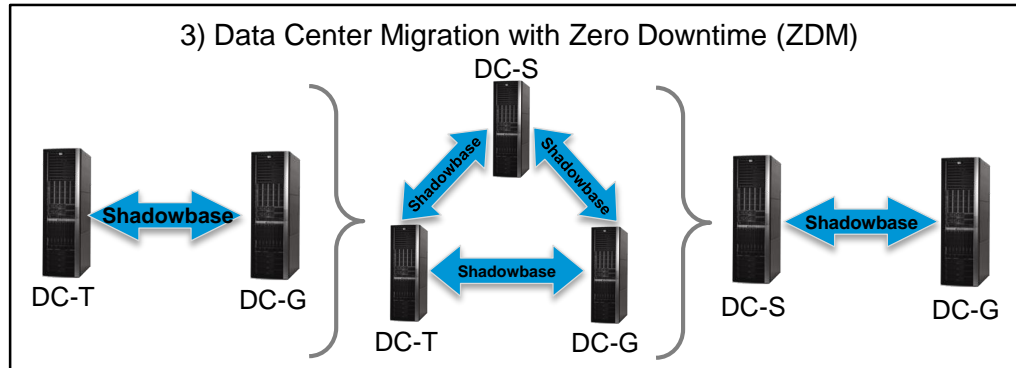
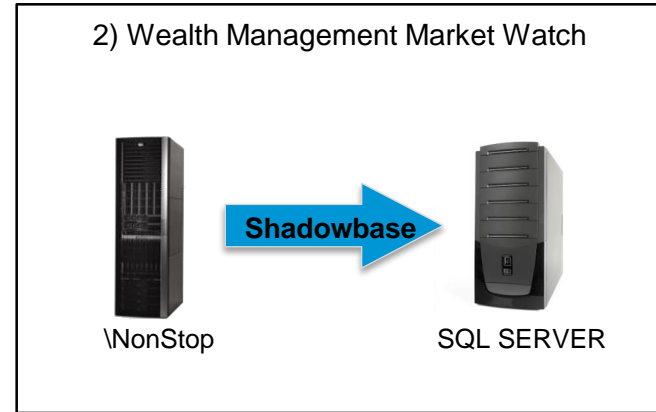
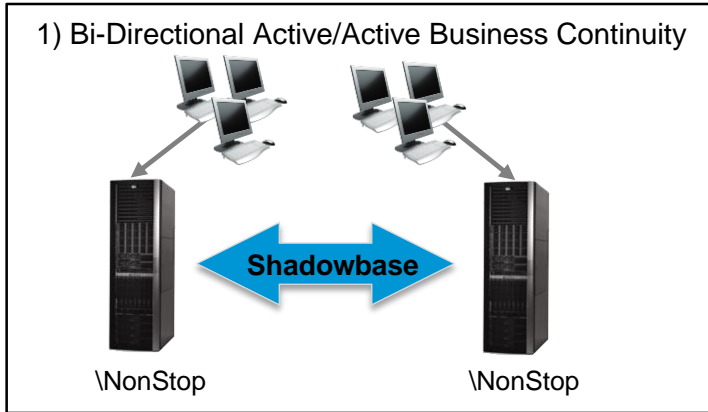




# Shadowbase Success Stories



## Implementations at Royal Bank of Canada



# Shadowbase Success Stories

## Implementations at Vodacom



Billing/Admin



Unix - Oracle



\NonStop 1

Bi-Directional  
Business  
Continuity



\NonStop 2

Cointel for Online Game Show



Windows - SQL

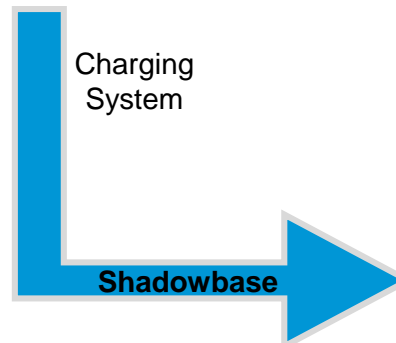


\NonStop 3

Recharge  
Cards &  
Air Time  
Transfer



Charging  
System



\NonStop 4



# What's Next for HP Shadowbase (1)



## Sync Replication – Shadowbase ZDL™ (Zero Data Loss)

- Shadowbase Synchronous Data Replication Engine with Guaranteed Data Delivery (Zero Data Loss at Failure)
- Incorporates HP *NonStop Synchronous Replication Gateway* API
- Active/Passive, Sizzling-Hot-Takeover, and Active/Active Architectures Supported
- Data is **Safe-Stored** on the Target before Source is Allowed to Commit
  - Data Collisions Are Possible in Active/Active Architectures
- File/Table and TX Level Granularity
- POC Completed, Beta Programs Underway; Contact Gravic if Interested...

## Sync Replication – Shadowbase ZDL Plus SR™

- Leverages *Shadowbase ZDL* Architecture to Provide:
  - Zero Data Loss if a Failure
  - Collision Avoidance for Active/Active Architectures
- Data is **Applied** into the Target Database before Source is Allowed to Commit
- Beta Program to Follow *Shadowbase ZDL*



**Interested in Learning More? See Separate Presentation on Shadowbase Synchronous Replication**

**NOTE:** *Shadowbase ZDL™* and *Shadowbase ZDL Plus SR™* are future technologies and require HP's *NonStop Synchronous Replication Gateway*; *specifications are subject to change without notice and delivery dates are not guaranteed...*



# What's Next for HP Shadowbase (2)

## Shadowbase Oracle Log-Reading Source Support

- Add Oracle Source Support (Log-Reading REDO via LogMiner for RAC environments)
- All Platforms

## Shadowbase DB2 Log-Reading Source Support

- Add DB2 as a Source (Log-Reading via Journal/Redo)
- Linux, Unix, AIX, Windows (Native Port)

## Shadowbase DB2 Source/Target *Appliance* Support

- Support for “any” DB2 Target via a “Data Appliance” Approach
- Support for “any” DB2 Source via a “Data Appliance” Approach
  - i.e., Provides DB2 Support for All Other Environments (e.g., AS/400, IBM MF)

## Shadowbase IBM Mainframe z/OS Port

- Port of Shadowbase DB2 target architecture into zLinux z/OS VM
- Port of Shadowbase DB2 source architecture into zLinux z/OS VM
- Eliminated need for data appliance for MF Replication

**NOTE:** *Specifications are subject to change without notice and delivery dates are not guaranteed...*



# Why Choose HP Shadowbase?

## Proven Technology

- Shadowbase is deployed at hundreds of sites, including many of the most-demanding NonStop sites

## Flexible Solutions for Your Business Challenges

- Business Continuity, Data Integration & Synchronization, Data Warehouse Feeds, Application Integration, Real-time Business Intelligence

## Global Sales Organization

- Global Reseller Presence from HP Sales, and local time zone/language support from select regional resellers

## Global 24x7 Support Organization

- Global Reseller Presence from the HP GNSC, and local time zone/language support from select regional resellers

## Affordable, and Committed to the NonStop Platform

- Improves TCO via Overall Cost Advantage and Features
  - “One Product, Many Solutions”
- We are partnering and investing with HP in many innovative enhancements
  - “Only on NonStop”



# Are You Looking to Replace Your Existing Data Replication Solution?

Is your current solution overly *expensive*?

Are you unhappy with the *Product Support* from your current vendor?

Are you dissatisfied with the *features* offered by your current solution?

Does your current solution not satisfy your growing *Data Replication requirements*?

Or, do you have new, unmet needs for Business Continuity or Data and Application Integration?

**Then please speak with us or your HP Account Team about *HP Shadowbase!***

- Free, no-obligation, 60-day Trials/Proof-of-Concept available
- Porting and conversion services are also available



# Thank you



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