SmartVista
Modern Payment Solution on NonStop

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Company Snapshot

- Founded in 1995
- Developer and distributor of SmartVista, comprehensive suite of solutions covering every aspect of electronic payments processing
  - Market tested solution
  - Deployed at 90 clients in 28 countries
  - ISO 9001:2000 certified
- Rapidly growing client base consisting of leading local banks as well as major international financial institutions
Key benefits

- Developed using Open Source based standards
- Cross platform solution
- High Availability, Scalability and Reliability
- Three tier logical architecture
- Compliance with international standards
# SmartVista functional components

## Authorization
- Authorization
- Switching & Routing
- On-line fees and limits
- ATM Monitoring
- POS Management
- On-line Fraud Prevention
- International Payment Scheme Interfaces
- EMV script distribution

## Management
- Card Management
- Merchant Management
- Clearing & Settlement
- Exceptions Processing
- Fraud Monitoring & Analytics
- General Reporting
- Credit services
- Loyalty programs
- Fees, Rates, MSC and Limits

## Production
- Full functional card personalization solution
- Magnetic stripe and EMV compliant chip cards
- Interaction with various CMS
- Various personalization and cryptographic equipment
- PIN generation and printing

## Internet
- Payment gateway
- 3D secure
- MPI
- ACS

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**Builds from individual components to complete integrated solutions**

- In-house card processing
- Issuer solution
- Acquirer solution
- Merchant processing
- Personalization center
- TPP/MSP solution
- Switch solution
- Agent organization
- National payment network
- Payment gateway
- Payment services hub
- Billing system
Porting Project Goals

- Port SmartVista FrontEnd switching component on HP Integrity NonStop platform
- Keep NonStop version of SmartVista FrontEnd as close as possible to common UNIX version
- Use proprietary NonStop features if required
- Develop source code translation procedures to keep NonStop version up-to-date
- Suggest a NonStop-based hardware environment
Porting Target – SmartVista FrontEnd

Card & Merchant Management

Integration Component

Authorization Switch

Communication Component

Authorization Kernel

Formatters Component

Auth Engine Component

HSM Component

Database Tier

Business Logic Tier

Integration Tier

Interface Tier
Prerequisites

- Stateless components
- Multiple instances for every process type (similar to NonStop Server Class concept)
- Single-threaded processes
- Message prioritizing
- GUI is not a critical component
NonStop Infrastructure Example
Hardware Infrastructure Features

- Both Active-Passive and Active-Active modes ready
- Less hardware compared to all-UNIX environment
- Uses native RDF feature for replication
- Expand option available for distributed database
- No SAN and hardware mirroring required up to middle-size requirement
- Hardware scalable both vertically and horizontally with no additional options required
Target Implementation Environments

- Pure Switching installations
- Horizontally scaled environments
- Active-Active installations with non-equal nodes
- Where RPO = 0 is a must
- Retention of the Nonstop platform is of priority
Project Goals Reached

- SmartVista FrontEnd ported on HP Integrity NonStop platform
- NonStop version of SmartVista FrontEnd inherits all the functionality of UNIX version
- Runs on top of proprietary layers of NonStop
- Automatic procedures available for source code translation from UNIX version
- Suggested NonStop based hardware environment
Important To Know

- Functionality (including operational) identical to common UNIX-based solution
- OSS used instead of Guardian
- Pathway TS/MP for internal messaging
- Orchestrator pattern for transaction flow control
- Combines specific Nonstop features with Open System approach and vision
- SmartVista BackOffice (non-24x7component) runs on UNIX
## Technical Environment

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<th>RDBMS</th>
<th>Other soft</th>
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<td>HP HPUX 11</td>
<td>Oracle 9i, 10gR2, 11gR1, 11gR2</td>
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SmartVista remains an Open System application on Nonstop
Benefit from NonStop Advantages and Technologies

- SQL/MX™ as an embedded relational database
- Granular field access and isolation levels in SQL/MX
- IPCLIM™ for network management
- TS/MP™ for messaging
- TMF™ for a business transaction commit cycle
- Expand™ for database clustering
HP Labs Feedbacks

- “This is one of the easiest UNIX porting cases we’ve ever participated in”
- “The architecture of the solution meets the requirements of NonStop with only minor changes”
- “You already have fault tolerance and resilience features that don’t need to be changed when ported to NonStop”
- “The solution is highly scalable by design”
- “It’s exciting to have a modern payment solution on NonStop”
Why NonStop

- Banking and processors NonStop Install base of over 400 for Tier 1 banks worldwide
- NonStop customers have great confidence in the HW
- HP has done well to enhance with open systems technology and performance
- Customers reluctant to give up NonStop benefits
Why SmartVista on NonStop

- Easier option to change application only on NonStop
- Proven solution with 99.998% availability on Unix
- Built with fault tolerant principles
- Over 90 clients
- Large customers
SmartVista NonStop – Strategic Initiative

- Provide a viable and solid alternative to Legacy Based solutions with an end-to-end value proposition
- NonStop solution for Switching, Authorisation and Fraud Prevention
- Unix solution for back-office, EOD, card management, Reports, Merchant Management, Settlement/Reconciliation, Disputes/Chargeback
- Minimize migration risk
Thank you!