HP NonStop: Heute und in der Zukunft

Peter Hadler
NED Germany

In today's need-it-now world…

When is it okay for your business to be unavailable to your customers?

Never.

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Business failure brings a high cost

Critical server outage cost per hour (US$)

US	$243,421
DE	$371,612
FR	$452,245
UK	$274,138
Average	$368,692

Source: Virtualization Data Protection
ANNUAL REPORT Survey of 500 Enterprises

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And then there was…

Source: ABC News, June 6, 2012

Source: FierceWireless, July 11, 2012

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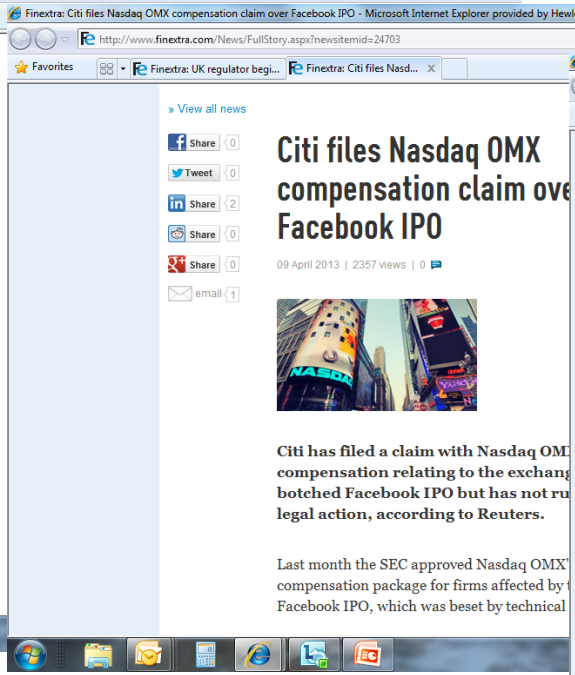
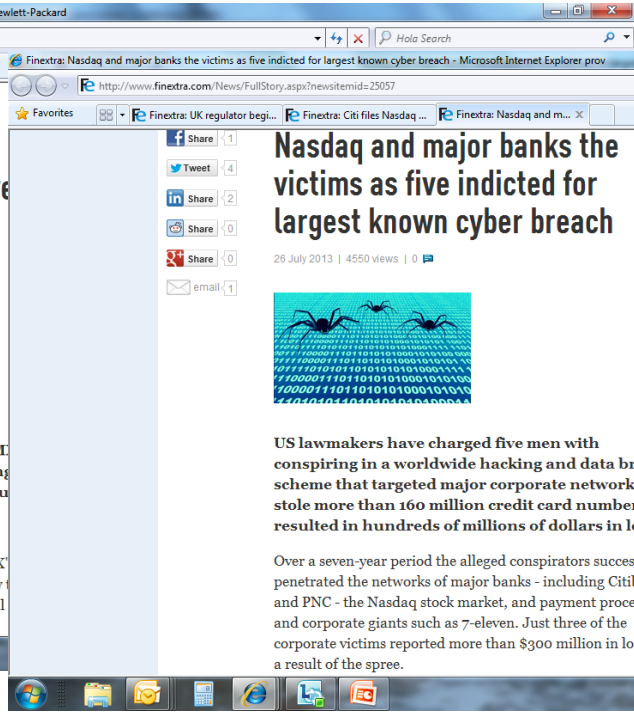
And then there was…

£125 million



$62 million



$300 million

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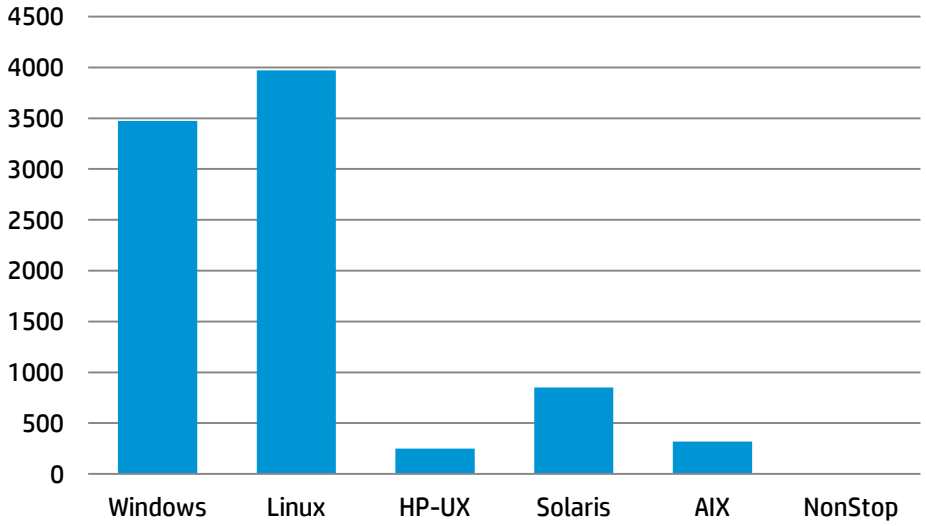
Platform Vulnerabilities

Source: NIST National Vulnerability Database, as of Feb 28th, 2013

http://web.nvd.nist.gov/view/vuln/search



# Sicherheitslücken	
Windows	3473
Linux	3971
HP-UX	250
Solaris	850
AIX	318
NonStop	7

Secure Systems based on vulnerable platforms ?

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Your mission-critical experience matters

When application availability is vital

ZERO **unplanned downtime**	**Data integrity** **NEVER** **COMPROMISED**	**MINIMAL** **software updates**
Downtime specified in **SECONDS**		**System issues** **PREDICTED** **CORRECTED**

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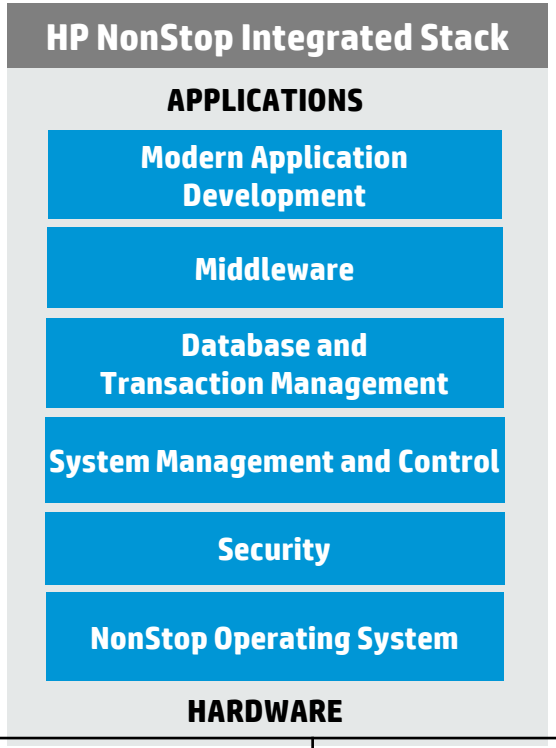
The unique value of HP NonStop

Designed from the ground up for 100% application availability



NonStop Operating System

- Fault-tolerant, scalable, shared-nothing architecture
- Single-system-image clustering up to 255 systems
- Uncompromising data integrity

Security

- Built-in system and application security
- Enterprise security integration
- Software to help with Security audits

System management

- HP Mission-Critical Converged Infrastructure integration
- Industry standard, enterprise class

Database and transactions

- Highly scalable, clustered SQL database with transactional integrity
- Mixed workload support – OLTP, queries and batch

Middleware

- Transparent application fault tolerance and scalability through standard middleware
- Service-Oriented Architecture (SOA)
- Java frameworks for fast deployment

Modern app development

- Java, C/C++, ODBC, JDBC, SOAP, XML
- Eclipse

100%
Uptime: AL4 fully fault tolerant[2]

38 YEARS
Of service and success

10B+
Credit card transactions annually[3]

375M+
Subscribers in advanced Telco network apps[4]

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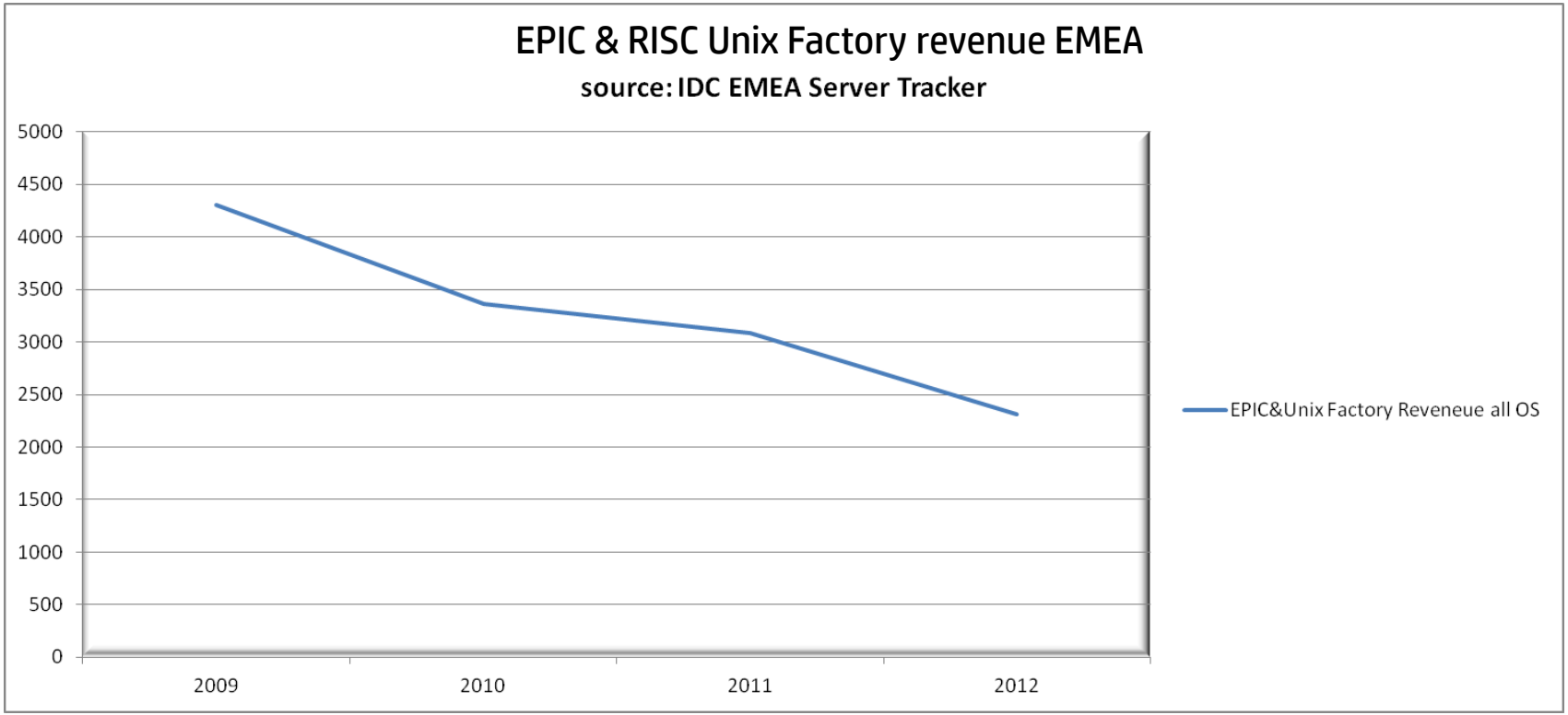
IDC EMEA Server Tracker 1CQ-2013



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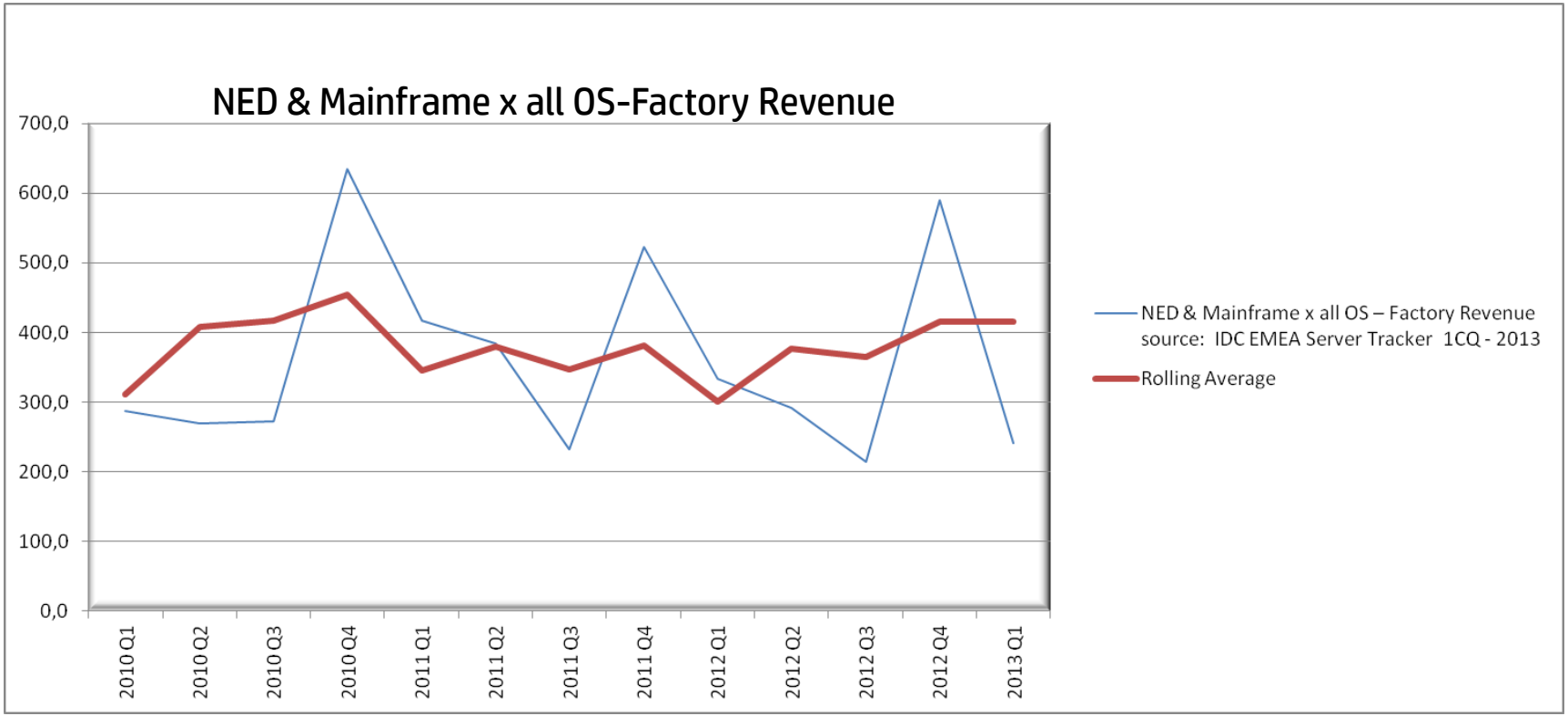

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ReD PRISM® real-time

2012 HP AllianceONE
Partner of the Year
Innovation Category

ReD PRISM® real-time implementation for Pulse

Pulse have adopted the ReD PRISM monitoring and risk management system

ReD PRISM is implemented on HP Integrity NonStop architecture

HP award

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Threats in Germany…mass data compromise

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CRIME

Massive credit card fraud exposed

Concerns about data privacy have led a number of banks to replace thousands of credit cards. Mastercard and Visa uncovered the security breach after data from a Spanish partner company was stolen by thieves.

A probe has been launched into credit card fraud

Thousands of credit card holders have been told to hand back their cards after fraudsters in Spain illegally obtained information about their accounts.

The massive credit card recall involves more than 100,000 credit cards in Germany. Customers of Germany's cooperative banks have been hardest hit with more than 60,000 affected. A spokesman for the association of cooperative banks BVR said the fraud involved Visa and Mastercard credit card holders who recently traveled to Spain.

But other banks and savings institutions in Germany are also affected.

"It's a massive replacement program. A number of credit card distributors have been affected including some from other countries. We are not sure how many cardholders were in Spain at the time in question," Andreas Martin of the German Central Credit Card Commission (ZKA), told Deutsche

Date 18.11.2009

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EUROPE

Marta complex

Cardinals in charge of electing the new pope are sleeping at a cardinal -friendly hotel.

» Sede vacante - The papal transition

» 'We're still pope!' - Germans flock to Rome

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Threats in Germany…POS skimming…

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Threats in Germany…ATM Skimming

Romanian wanted for ATM fraud in Germany

Posted on March 7, 2012 • Filed under: ATM Scam, Europe, Germany

Ads by Google Fraud ATM Card Scam New ATM

Romanian citizen Marian Vancea Darabani was issued an arrest warrant on Monday, March 06, 2012 by the German authorities for ATM fraud. In 2010 Darabani and his criminal organization equipped an ATM with a data gathering device, and used the information to create counterfeit credit cards which later they used to extract the sum of 108,866 euro from multiple citizens bank accounts. Read Article

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.... using SOPHISTICATED methods...

Anything unusual about the ATM?

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ATM Fraud

False card-slot overlay….

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ATM Fraud

Anything unusual about the pamphlet holder?

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ATM Fraud

What's in the holder? A remote camera....

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ATM Fraud

Exploded view of the camera….

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Credit Card Fraud - Counterfeit

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Lusis Clients

and

Their Use of the TANGO Technology

lusis
Payments

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BankservAfrica

- SASwitch: c. 2.6 bn txns per year, BASE24 on HP NonStop
- Evaluated 6 vendors:
  - ACI
  - Distra
  - Lusis
  - Openway
  - Opus
  - S1
- Selected TANGO because:
  - functionality exceeded
  - SOA flexibility
  - configurability
  - integral data replication tools
  - real-time monitoring
  - tracking and tracing tools
  - licensing and fee model
  - SDK promoted self-sufficiency
- Pilot proved rapid development and deployment
- Real-Time Clearing (RTC) included in migration
- Production rollout complete March 2013

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Exploiting HP NonStop Fundamentals

- TANGO is a flexible, modern architecture, deeply integrated into the modern HP open technologies:
  - Uses the OSS Operating System rather than Guardian
  - The database comprises TMF-protected SQL-MX tables
    - Reduced I/O latency
  - Uses Unix sockets for inter-process communication
    - No connection overheads
- The TANGO ESB Architecture (Dispatcher) provides similar scalability and availability to TS/MP
- TANGO provides Active/Active capability using built-in application functionality
  - No reliance on 3rd party tools

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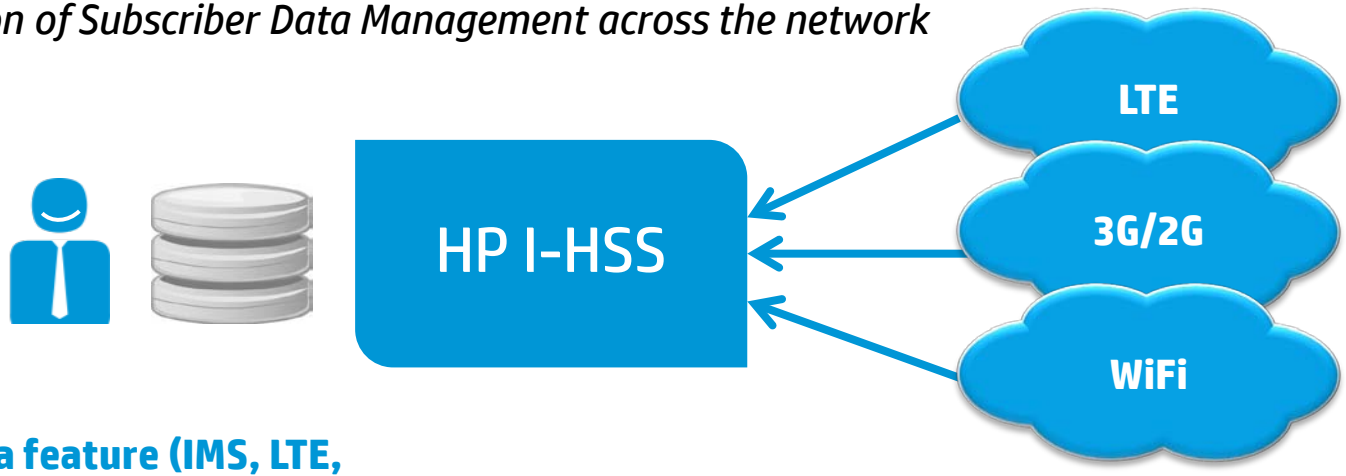
HP Integrated HSS (I-HSS)

Integrated subscriber management application for all network types in UDC architecture:

Future proof evolution of Subscriber Data Management across the network



Network access as a feature (IMS, LTE, WiFi, VoLTE, M2M)

- Reduce signaling traffic between discrete applications/boxes
- Simple management in one platform
- Reduced floor space due to scale per blade
- No single point of failure of a Real-time profile synchronization
- Exposing operational profile to other apps (Ud)

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Customer Win

MEGAFON
The Future Depends on You

Megafon – Second Largest Mobile Operator in Russia

- 62 Million subscribers in Russia
- Plans to introduce LTE into 40 cities around Russia
- Planning to offer marketing campaign in May to drive more SIMS into the market
- Revenue $8.3billion

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BPC Banking Technologies SmartVista achieves Oracle Exadata Ready status

SmartVista is Supported and Ready to Run on Oracle Exadata Database Machine

BPC Banking Technologies, a leading provider of Open System payment solutions for the global financial industry, today announced that its SmartVista end-to-end e-payment solution has achieved Oracle Exadata Ready status through Oracle PartnerNetwork (OPN). Today's announcement demonstrates that BPC Banking Technologies supports SmartVista suite with Oracle Exadata Database Machine and Oracle Solaris 11, Oracle Linux.

The validation was carried out on Oracle Exadata X2-2 Quarter Rack (Database Servers + Storage Servers) as well as on Oracle SPARC T4-1 server. The test for validation demonstrated more than 2,000 TPS using the Quarter Rack configuration that means 7.2 mln transactions per hour. Companies running this configuration may easily serve over 7 mln customers per hour. For organizations requiring even greater throughput SmartVista can also be deployed on Exadata X2-2 Half Rack or Full Rack configurations that further increases the choices available to organizations

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BPC Banking Technologies delivers enterprise performance on IBM Power platform

SmartVista demonstrates exceptional performance and availability on IBM Power 780

BPC Banking Technologies, the leading provider of Open System payment solutions for the global financial industry, reports on the successful completion of set of audited performance and availability tests for SmartVista. The tests were conducted at the IBM Systems Solution Centre Labs in Bangalore, and were audited by KPMG. During the test, BPC's switch solution, delivered peak performance of 2,932 TPS (transactions per second) with 40% server utilization, demonstrating that the configuration had ample capacity for growth.

The tests were designed to replicate real-world situations, operating under very high transaction loads. These outstanding results prove that SmartVista can support the volumes generated by extremely large ATM networks, as 2,932 TPS equates to an ATM network with more than 520,000 ATMs carrying out 10.5 million transactions an hour. During the 2 hour stress test, SmartVista sustained an average of 1,875 TPS, which equates to an ATM network with more than 330,000 ATMs operating at full

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2,932 TPS

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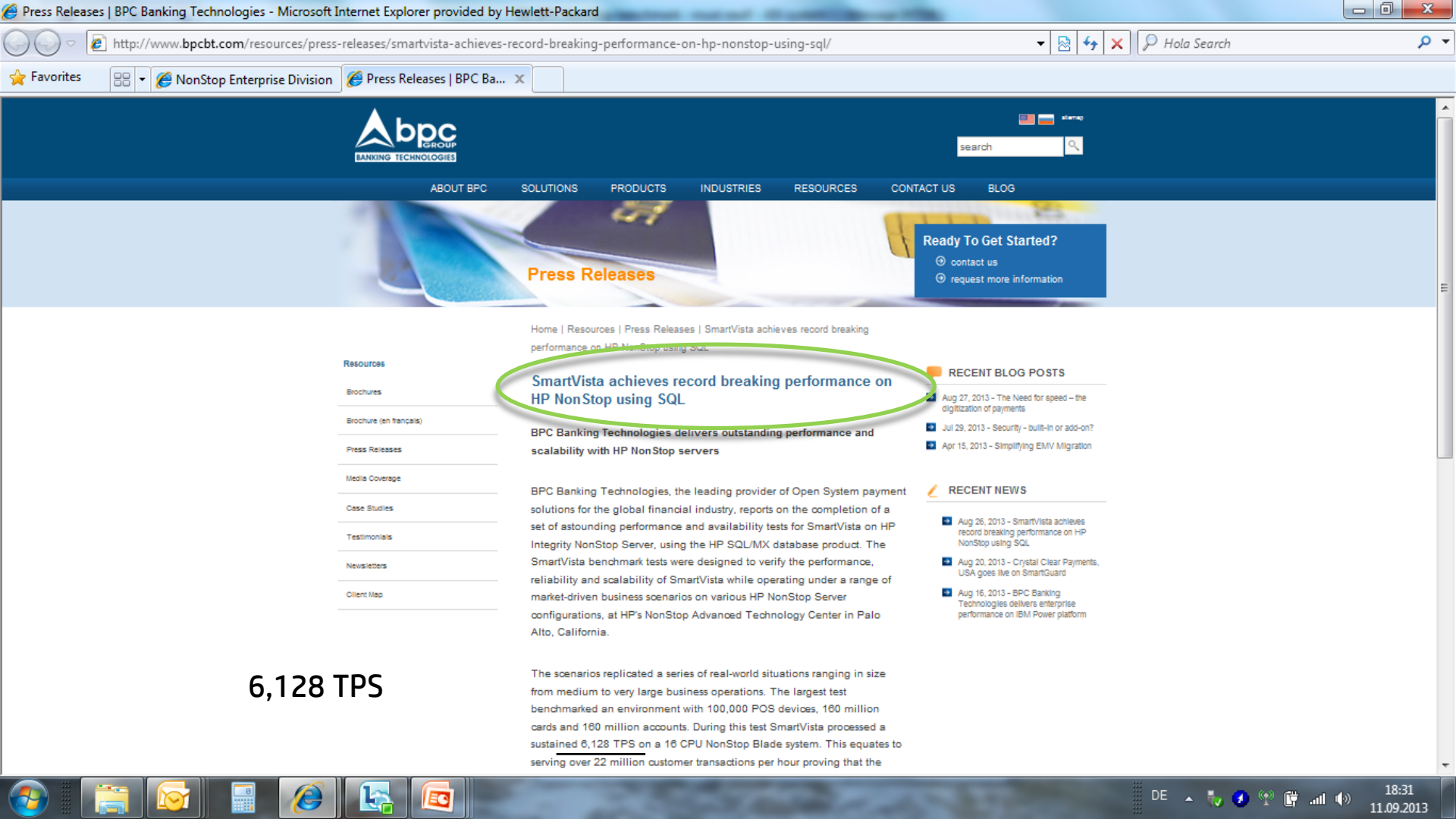
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SmartVista achieves record breaking performance on HP NonStop using SQL
BPC Banking Technologies delivers outstanding performance and scalability with HP NonStop servers
BPC Banking Technologies, the leading provider of Open System payment solutions for the global financial industry, reports on the completion of a set of astounding performance and availability tests for SmartVista on HP Integrity NonStop Server, using the HP SQL/MX database product. The SmartVista benchmark tests were designed to verify the performance, reliability and scalability of SmartVista while operating under a range of market-driven business scenarios on various HP NonStop Server configurations, at HP's NonStop Advanced Technology Center in Palo Alto, California.
The scenarios replicated a series of real-world situations ranging in size from medium to very large business operations. The largest test benchmarked an environment with 100,000 POS devices, 160 million cards and 160 million accounts. During this test SmartVista processed a sustained 6,128 TPS on a 16 CPU NonStop Blade system. This equates to serving over 22 million customer transactions per hour proving that the
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6,128 TPS
DE
18:31
11.09.2013

HP Integrity NonStop Servers

Meeting Mission Critical customer needs

Entry Class

HP Integrity NonStop NS2100

- Emerging markets
- Fully fault-tolerant
- 2 to 4 CPUs
- Single core (fixed)
- Medium or Dev/Test

Mid-Class

HP Integrity NonStop NS2200

- Medium/emerging Markets
- Stand-alone Applications
- 2 to 4 CPUs
- 2-core (fixed)
- Medium/Heavy workloads

Enterprise Class

HP Integrity NonStop BladeSystem NB56000c

- Medium to Enterprise Markets
- Complex application environments
- 2 to 16 CPUs
- 2-core or 4-core (customer's choice)
- Heavy Workloads/Large databases

NonStop Core Licensing allows the system to grow with your business

Common across all NonStop servers:

- NonStop fundamentals – availability, scalability, data integrity, common modular architecture and open development tools
- Built on Intel 9300 /9500Itanium processors, running J-series NonStop OS

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HP Integrity NonStop BladeSystems

NB56000c and NB56000-cg

Third generation of Integrity NonStop BladeSystems

HP NonStop OS RVU J06.16 (or later)

1.5X* the performance capacity compared to the current NB54000c

- (2-core to 2-core, 4-core to 4-core)

Built on proven HP Integrity Blade BL860c i4

- 2-core or 4-core software licensing (Core Licensing)
- New Intel® Itanium® 9500 series 4-core capable processor (AKA Poulson)

Gen8 CLIM I/O components

Uses the next generation HP BladeSystem c7000 enclosure

- 2 – 16 processors per node
- Clustering up to 16,320 cores (via expand)

NB56000c

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HP NonStop SDI Services

Holger Villringer
EMEA NonStop SDI Program Manager
Phone +49 6227 357 293 Mobile +49 175 4388 800

September 2013

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Types of NonStop Services

HP Technical Services

HP Enterprise Services

HP NonStop Division – SDI*

* Solution/Software Development and Implementation

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NonStop SDI – an overview

SDI – Solution/Software Development and Implementation

Managed as part of Advanced Technology Center

Access to broad array of resources

- Internal experts and consultants
  - SDI/ATC technical consultants
  - NED Pre-Sales
  - NED TS Services
- External specialists (via third-party agencies)
- Lab equipment for benchmarking
- Project management resources

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Distinguishing between SDI, TS & ES services

Type of NonStop Service	SDI	TS	ES
NonStop architecture panning and design	✓		
NonStop migration services	✓		
NonStop Disaster Recovery planning and implementation services	✓		
Database architecture planning, design and migration	✓		
Application architecture planning, design and modernization	✓		
Performance and benchmark services	✓		
Security service	✓		
3rd Party engagement, software installation and implementation service	✓	✓	
Evolution Assessment Services		✓	
NonStop infrastructure and platform technical services	✓		✓
Managed Services / Out tasking			

SDI Partner and Agencies

Resources:

- ESQ – Implementation services
- ESQ – Software License - where required
- Lusis – Payments app implementation/migration services
- Lusis – TANGO App software License and services
- Brightstrand – NonStop resources, hosting services
- PayX – Payments resources
- Xypro – Security app implementation
- Mphasis – Resources initially for Oracle migrations
- Elan IT & Tata – resources
- & other smaller/UAS based for resources

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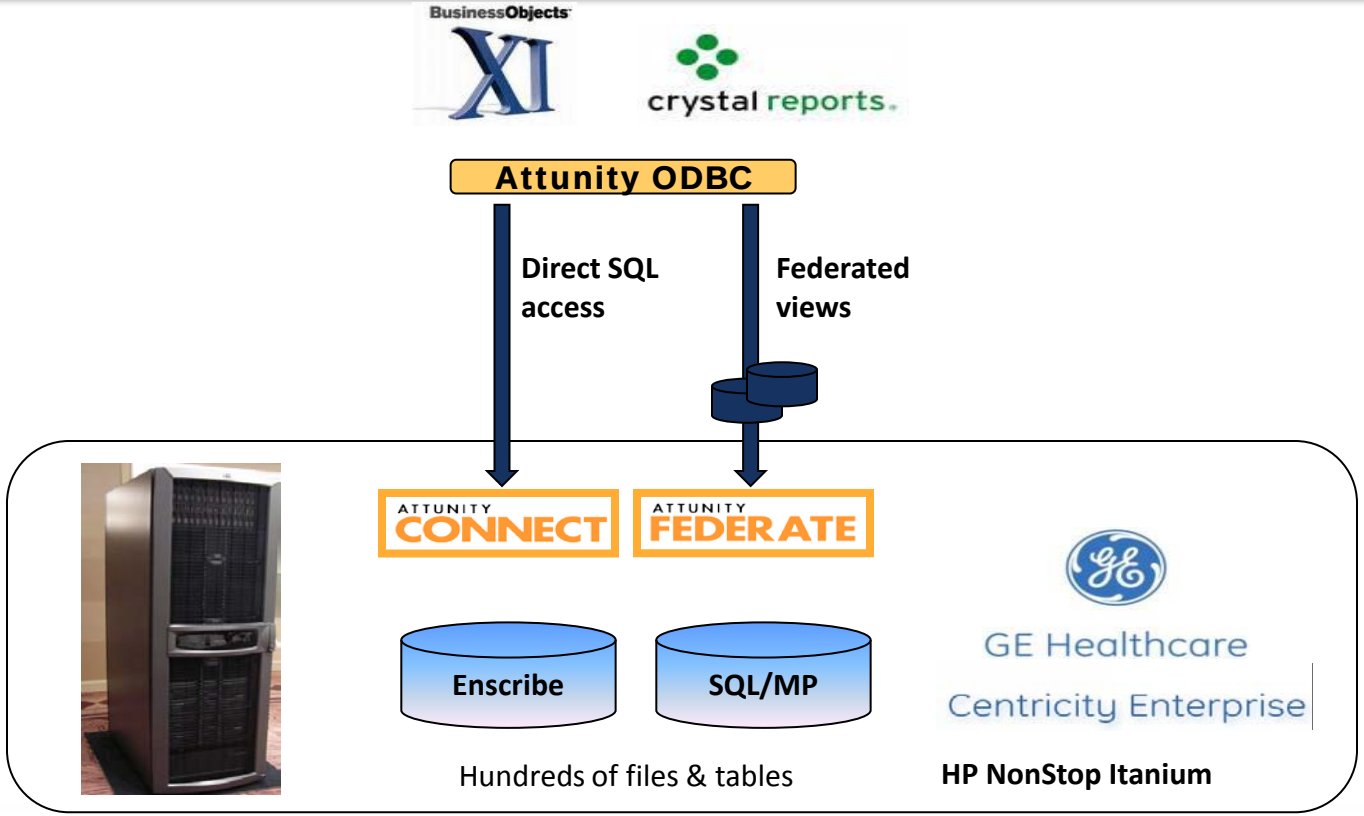
» Solutions for HP NonStop:

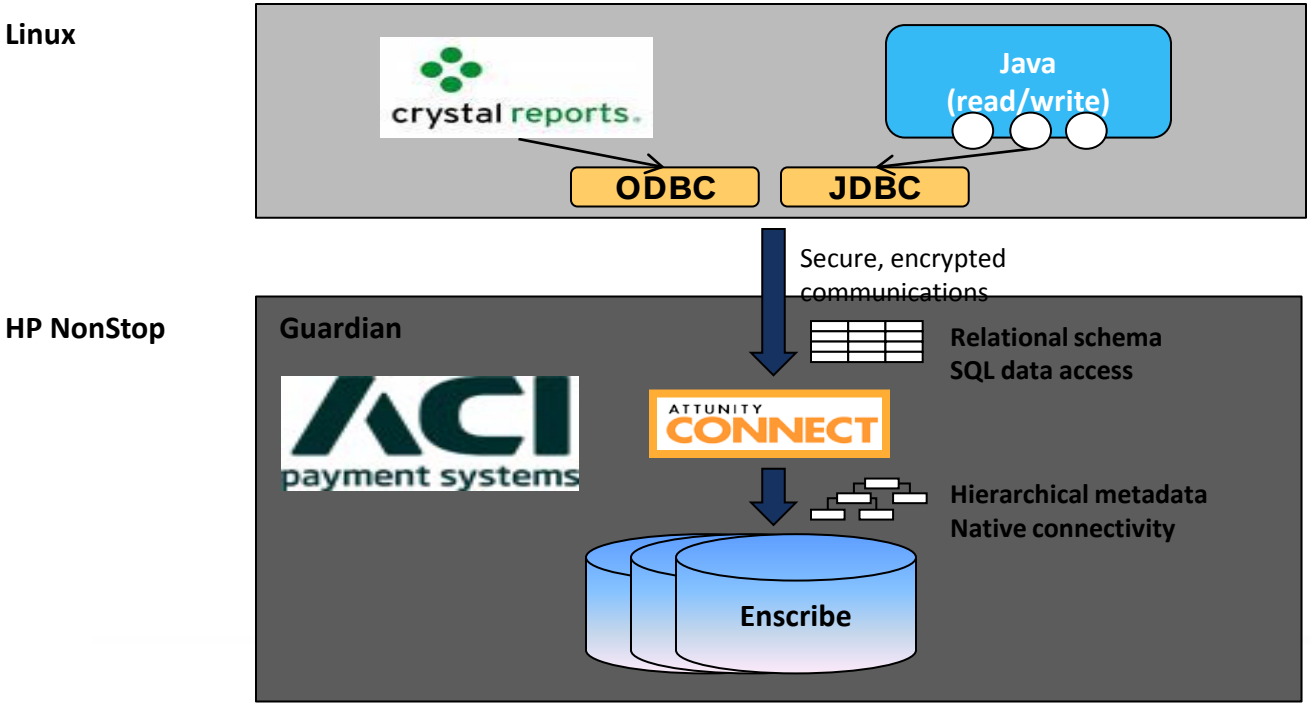
1. Big Data Analytics
2. Live Reporting
3. Migration
4. Modernization
5. Mobile Integration

Customer: Nebraska Medical Center
Live Reporting with HP NonStop Data



Customer: Financial Services
Live Reporting on ACI Base24 data

- **Reports can access Base24 Enscribe files** (e.g. ATM tracking)
- **New apps can manage configurations** (e.g. in Java, .NET)



Migration Solutions for HP NonStop

ATTUNITY

IBM

ATTUNITY CDC
ATTUNITY CONNECT

Migrate VSAM, IMS, DB2

ORACLE

ATTUNITY REPLICATE

hp UX

HP OpenVMS

ATTUNITY CDC
ATTUNITY CONNECT

Migrate RMS, Rdb, Oracle

HP NonStop

Sind das Ihre Herausforderungen im Application Management?

- Die technische Dokumentation unserer Software ist weder vollständig noch aktuell
- Wir wissen nicht genau wie unsere Geschäfts-Prozesse unterstütz werden
- „Time to market“ von Änderungswünschen ist zu lang
- Die Kosten der Software-Wartung sind zu hoch

Können Sie sich vorstellen, dass es nur ein bis zwei Tage dauert, um diese Herausforde-rungen zu meistern?

Nach 30 Tagen Probebetrieb können Sie den Nutzen sicher beurteilen

Der Software Qualitäts-Check

ITP kommt zu Ihnen und

- installiert ITP-PANORAMA,
- scannt Ihre Anwendungen,
- zeigt alle Verknüpfungsfehler (bugs),
- schulen Ihr Entwickler-Team in vier Stunden,
- unterstützt Ihr Team 30 Tage
- bei der Arbeit in echten Projekten

Thank you
GTUG 2013 – Go in and win a NonStop deal!

IBM

ORACLE