HP NonStop: Heute und in der Zukunft

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NED Germany
In today’s need-it-now world...

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

Never.
## Business failure brings a high cost

### Critical server outage cost per hour (US$)

<table>
<thead>
<tr>
<th>Country</th>
<th>Cost (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>$243,421</td>
</tr>
<tr>
<td>DE</td>
<td>$371,612</td>
</tr>
<tr>
<td>FR</td>
<td>$452,245</td>
</tr>
<tr>
<td>UK</td>
<td>$274,138</td>
</tr>
<tr>
<td>Average</td>
<td>$368,692</td>
</tr>
</tbody>
</table>

Source: Virtualization Data Protection

ANNUAL REPORT Survey of 500 Enterprises
And then there was...

Source: ABC News, June 6, 2012

Nasdaq Outlines $40M Fund for Facebook IPO Glitches

Source: FierceWireless, July 11, 2012

FT Orange network outage could cost €20M in repairs and customer compensation

July 11, 2012 | By Paul Rasmussen

The French government is investigating France Telecom Orange after the operator's network collapsed for nearly 24 hours.

The countrywide failure, which stopped Orange customers from making calls or sending text messages, has prompted the French government to call for an audit of critical national infrastructure. Of note, the investigation will cover all French mobile operators and has sidelined telecoms regulator ARCEP, according to Reuters.

Raymond James Analyst Stephane Beyazian estimated that the weekend's outage would cost France Telecom Orange between €10 million and €20 million in repairs and compensation to customers, but the longer-term impact of a heavier government hand on the sector was hard to quantify.
And then there was...

£125 million

$62 million

$300 million
Secure Systems based on vulnerable platforms?
Your mission-critical experience matters

When application availability is vital

- **ZERO** unplanned downtime
- **MINIMAL** software updates
- Downtime specified in **SECONDS**
- **NEVER** compromised data integrity
- **PREDICTED** system issues

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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
38 YEARS Of service and success
10B+ Credit card transactions annually
375M+ Subscribers in advanced Telco network apps
IDC EMEA Server Tracker 1CQ-2013

EPIC & RISC Unix Factory revenue EMEA

source: IDC EMEA Server Tracker

EPIC&Unix Factory Revenue all OS
IDC EMEA Server Tracker 1CQ-2013

NED & Mainframe x all OS-Factory Revenue

- Blue line: NED & Mainframe x all OS – Factory Revenue
- Red line: Rolling Average

Source: IDC EMEA Server Tracker 1CQ - 2013
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
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.

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 Credit Card Commission (KKA), told Deutsche Welle.
Hotel chain Starwood warns of possible credit card fraud

Customers who stayed at one of the hotels owned by international hotel conglomerate Starwood within Germany may have been victim to widespread credit card fraud, the company confirmed on Tuesday.

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Romanian wanted for ATM fraud in Germany

Romanian citizen Marian Vencea 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
Anything unusual about the ATM?
ATM Fraud

False card-slot overlay....
ATM Fraud

Anything unusual about the pamphlet holder?
ATM Fraud

What’s in the holder? A remote camera....
ATM Fraud

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

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
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 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.
BPC Banking Technologies delivers enterprise performance on IBM Power platform

BPC Banking Technologies, the leading provider of Open System payment solutions for the global financial industry, reports on the successful completion of a 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 220,000 ATMs carrying out 10.6 million transactions an hour. During the 2 hour stress test, SmartVista sustained an average of 1,876 TPS, which equates to an ATM network with more than 300,000 ATMs operating at full

2,932 TPS
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/VMS database product. The SmartVista benchmark tests were designed to verify the performance, reliability and scalability of SmartVista while operating under a range of mission-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, 100 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...
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

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

NonStop Core Licensing allows the system to grow with your business.
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)
Types of NonStop Services

HP Technical Services
HP Enterprise Services

**HP NonStop Division – SDI**

* Solution/Software Development and Implementation
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
## Distinguishing between SDI, TS & ES services

<table>
<thead>
<tr>
<th>Type of NonStop Service</th>
<th>SDI</th>
<th>TS</th>
<th>ES</th>
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</thead>
<tbody>
<tr>
<td>NonStop architecture panning and design</td>
<td>🟢</td>
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<tr>
<td>NonStop migration services</td>
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<tr>
<td>NonStop Disaster Recovery planning and implementation services</td>
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<tr>
<td>Database architecture planning, design and migration</td>
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<tr>
<td>Application architecture planning, design and modernization</td>
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<tr>
<td>Performance and benchmark services</td>
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<td>Security service</td>
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<tr>
<td>3rd Party engagement, software installation and implementation service</td>
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<tr>
<td>Evolution Assessment Services</td>
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<tr>
<td>NonStop infrastructure and platform technical services</td>
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<tr>
<td>Managed Services / Out tasking</td>
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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
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)

Linux

Guardian

HP NonStop

 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 CDC**
  - Migrate VSAM, IMS, DB2

- **ATTUNITY CONNECT**
  - Migrate RMS, Rdb, Oracle

- **ATTUNITY REPLICATE**

- **IBM**

- **ORACLE**

- **HP OpenVMS**

- **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 unterstützt 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 Herausforderungen 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!