



*Tandemworld eNewsletter for August 2012*



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## **Tandemworld Newsletter for August 2012**

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***uLinga for Enterprise Extender (EE) gets traction in the market***

uLinga for EE, the latest addition to the uLinga family of products, has gained some early successes in Canada, the UK, Germany, and now also in the USA. Organizations wanting to migrate away from SNA to native TCP/IP whilst retaining the SNA API's now find a viable and cost-effective alternative to existing solutions in uLinga for EE. Significant cost savings in license cost combined with stellar project and product support from comForte and its development partner Infrasoftware make all of the uLinga products a compelling proposition.

The latest migration project in the USA went live in August replacing SNAX with uLinga for EE. This customer wanted to modernize its network environment, standardize on IP, and save some money at the same time. uLinga for EE provided all that.

To learn more about uLinga please check [www.comforte.com/ulinga](http://www.comforte.com/ulinga).

**Come and see us at these upcoming events in 2012**

OZTUG, Melbourne & Sydney, Australia, Sept 4 and Sept 6

InNUG, Goa, India, Sept 13-15, 2012

PCI Community Meeting, Orlando, Florida, Sept 12-14, 2012

Pan-European GTUG/CONNECT, Dresden, Germany, Sept 26-27, 2012

NonStop Technical Boot Camp, San Jose, USA, Oct 14-17, 2012

PCI Community Meeting, Dublin, Ireland, Oct 22-24, 2012

EBUG Technical Focus Group, London, UK, Oct 22-23, 2012

CNUG, Toronto, Canada, Oct 24, 2012

BITUG BIG SIG, London, UK, December 5-6, 2012

**Stay connected and follow the discussions:**

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***Tributary will Announce ViTAL and Storage Director 4.0***

At NonStop Advanced Technical Boot Camp, San Jose, CA

*Adds NPIV Virtual Front-End Ports*

Tributary Systems, Inc. will release ViTAL® and Storage Director® 4.0 with enhanced connectivity and security features at the NonStop Advanced Technical Boot Camp this October. Tributary is an HP NonStop Enterprise Division OEM supplier, Solutions Developer and HP Business Partner.

Version 4.0 of ViTAL and Storage Director® enable 8Gbps Fibre Channel connectivity with support for the NPIV facility that allows multiple virtual devices to utilize a single physical port for HP NonStop and IBM Mainframe hosts. Among new security features, 4.0 adds several levels and methods of password security to better protect stored data.

ViTAL/Storage Director is a unified robust virtual backup solution for all HP and IBM® platforms, and v4.0 adds new capabilities and enhancements. The total solution includes ViTAL/Storage Director software on HP DL580 servers, with HP disk and tape technology, and HP hardware support. With ViTAL/Storage Director, HP NonStop, IBM Mainframe and open platform customers can unify their backup infrastructure, sharing backup/DR resources among all the environments running in their data centers.

Tributary Systems is discussing ViTAL and Storage Director 4.0 and its unified backup capabilities in Booths 28-29 at the NonStop Advanced Technical Boot Camp in San Jose, California October 14-16.

Tributary Systems, Inc. ([www.tributary.com](http://www.tributary.com)) delivers data protection with vision. Customers include *Fortune 20*, *Fortune 500* and *Fortune Global 1000* companies, as well as small and middle market companies in banking, financial services, retail, telecommunications and healthcare.

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## Brightstrand Health Check Service

*Maximise your hp NonStop(tm) Server environment.*

The BrightStrand International hp NonStop Server Health Check Service has been created in order to provide users of hp NonStop(tm) Servers with a situation report as to the status of their hp NonStop systems and service environments.

The service has been designed by BrightStrand, to assure customers that they are getting the optimum from their current hp NonStop(tm) Server environments. The Health Check will provide a guide to assist customers in making improvements to various service areas. It can also be used as a tool to aid the decision-making process in such key areas as hardware purchasing, system migration and Service Level Agreement (SLA) planning.

The service will take into account a number of factors depending on the pre-defined scope. These may include - procedures, strategies, system performance, configurations and security. The service will involve the monitoring of system metrics, an assessment of general procedures, a review of software revision levels and a general check of the installation.

### Service Objective

The objective of the Health Check is to provide high quality reviews of service areas that have been identified, by the customer, as being of concern or of interest. The main goals of the service will be:

- To advise on compliance with standards.
- To report on efficiency and performance.
- To identify possible problem areas and recommend solutions.
- To advise on current or future strategy.

This will be achieved by engaging a fully qualified and experienced BrightStrand consultant that will work closely with the customer to agree the scope of the engagement and to identify areas of special interest or concern, use BrightStrand tools and solutions to gather the necessary information and documentation, analyse the information and deliver the agreed reports. Consultancy will be provided in the areas of Performance, Capacity Planning, Disaster Recovery, Operations, Database Management, System Security, System Management and Hardware Maintenance.

For further details please contact Dave Stewart today on +44 (0)7831 775115 or email him on [dstewart@brightstrand.com](mailto:dstewart@brightstrand.com).

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## Companies Need New Fall Resolutions for BC/DR

Hello Everyone,

We hope that you all have had great summer vacations, or holidays, as they say in certain parts. We look forward to the fall each year as it is a busy, busy time. It seems that once September rolls around and the kids are back in school, customer deployments and prospect's interest pick way up. Certain prospects without a DR approach (or at least one they have real confidence in) periodically inquire each fall about Business Continuity. So, it seems to me that we need our New Year's resolutions to be issued in the fall instead of at the end of the year...

The **New Fall** resolutions for customers without a truly working DR should be to finally get those deployments implemented because the cost of a DR system is small compared to a lengthy outage and loss of data. What is nice about BC/DR is that HP will gladly ship you a system and the DR/BC vendor will gladly install its software – and it can all be done before the busy Christmas holiday season! Then you can really enjoy the New Year as you will have a much shorter list of New Year's resolutions. For more information, please contact us at +1 610-647-6250 or [SBProductManagement@gravic.com](mailto:SBProductManagement@gravic.com) to discuss your specific situation and to learn more about the solutions we offer.

Regards,

Paul J. Holenstein

Gravic EVP

**Please Visit Gravic at these Upcoming Shows**



**GTUG, Dresden, 25-27 September**



**Connect NonStop Advanced Technical Boot Camp**, San Jose, 14-16 October



**CTUG Fall Conference**, Toronto, 24 October



**BITUG Big SIG**, London, 6 December

For more information, please visit: [www.gravic.com/shadowbase](http://www.gravic.com/shadowbase).



<http://www.linkedin.com/company/gravic-inc./shadowbase-data-replication-305119/product>



<http://www.facebook.com/pages/Gravic-Shadowbase/116969767814>

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### ***Mission Critical Security for your Mission Critical Applications***

XYPRO continues to lead the way with Mission Critical Security Solutions for your HP NonStop servers. Join XYPRO at several NonStop Security events in September like GTUG in Dresden and the India NonStop User Group in Goa. See how XYPRO can deliver the security and peace of mind you need to combat the current and future threats facing your Mission Critical environments and applications. The XYGATE suite of products continues to offer industry-leading authentication, auditing, encryption and compliance solutions, and our new partnerships take our capabilities even further.

Our recently announced partnership with Voltage gives our customers more encryption, tokenization, and masking options, including Format-Preserving Encryption (FPE). Our partnership with IdentityForge means that your NonStop user provisioning can be integrated with your enterprise Identity and Access Management (IAM) solution. And our brand-new partnership with NetAuthority introduces highly secure, yet simple and transparent, device-level authentication – critical in these days of Bring Your Own Device (BYOD). The sessions provide overviews for these products and their capabilities – join us at one of these events to hear more.

Barry Forbes

VP of Sales & Marketing

XYPRO Technology Corporation

[www.xypro.com](http://www.xypro.com)

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### ***Musings on NonStop!***

***August, '12***

***The opinions expressed here are solely  
those of the now self-employed author***

If last month I wrote about perceptions, perhaps this month I should be writing about the new reality. For those following commentaries and posts associated with NonStop it would have proved impossible not to have seen one observation or another made on the release of the latest NonStop server – the NS2100. Positioned at the low-end of the product line, but every bit as NonStop as every other member of the NonStop server family, it drops below the US\$100K mark (for orders of one, no less!) for the first time that I can recall.

But what does this new reality mean? Will NS2100s find their way into the corner grocery store to support a handful of checkout lanes and a solitary ATM? Will they perhaps find a way onto railway stations handling a bunch of ticket dispensing machines? Or would it even be conceivable that a few NS2100s might even find their way into the homes of the rich and famous, who are anxious never to miss a video download, the right mix of interior lighting themes for every occasion, or just to one-up fellow stars' and moguls' video and music libraries via an always-on, fault tolerant capability, that would survive the random bullet hole

through the disk platters after all, what's \$100K for these privileged few ...

For those who missed the specifics, check out the blog's on HP's web site. In the post of August 15, 2012, "Thought you were too small to run NonStop? Think again" by JoeNonStop (aka Joe AtoZ) you will find some of the details. "Key features of the HP Integrity NonStop NS2100 server include a standards-based architecture using the Intel® Itanium® 9300 series processors, Intel's latest Itanium processor technology, as well as integrated hardware and software that enables application out-of-the-box fault tolerance," JoeNonStop opens with. "The NS2100 is a flexible platform for heterogeneous environments, with a full choice of application architectures as well as management tools and complete application compatibility with all other NonStop servers. While the NS2100 is an entry-class server, it benefits from unique platform attributes, such as lowest total cost of ownership (TCO), a real-time database, an integrated stack, end-to-end security and massive scalability within the HP NonStop portfolio. In other words, it is still 100 percent NonStop."

Yes, it's the much sought-after entry-level NonStop and a system that may introduce ISVs to NonStop for the very first time. It's affordable and it's easy to port applications to – as JoeNonStop adds, "The HP Integrity NonStop NS2100 combines economies of standards-based modular computing with all the trusted continuous availability and data integrity of the NonStop name ... While it is not a general purpose replacement for all workloads or industries, the NS2100 allows customers to invest in a fully fault tolerant solution that is 100 percent NonStop to accommodate their workloads, at a lower price point."

However, this post by Joe NonStop was eclipsed by a couple of days when UK publication, The Register, headlined with "HP gears down NonStops for midrange, emerging markets. Cheaper than a Linux cluster – and less hassle", according to journalist, **Timothy Prickett Morgan**, "The NonStop 2100 is based on the rx2800 i2 rack-mounted server, which debuted back in April 2010 with the rest of the Integrity and Superdome servers sporting Intel's 'Tukwila' quad-core Itanium 9300 processors. This is a two-socket server, just like the blade servers that other Integrity machines are, but HP only puts one processor in the system and, depending on the model, only activates one, two, or four cores in that single socket."

Yes, this is a NonStop in every possible way. The "package" looks every bit the way HP has been packaging rack and blade systems for some time – I sense the folks inside the manufacturing facility in Singapore would be hard pressed to tell you differences between any of the NonStop systems they were assembling, other than the internals of this system may be a little light on compared to peers being assembled. The Register does give a little more insight though into just how well NonStop is performing of late and this is every bit as illuminating as the speeds and feeds reported but it was clear with the following reference that they had an opportunity to talk to HP NonStop Enterprise Division (NED) Director, NonStop Product Management, Strategy & Technology, Randy Meyer - "HP does not break out sales of the NonStop products from other systems in the Business Critical Systems unit, and therefore Meyer cannot get specific about how this line is doing."

Followed by "We are growing customers, growing market share, and growing our ISV partner base – and we're not losing customers," Meyer tells (The Register), adding that the cost of clustering up Linux systems for high availability is no cheaper than these new NS2100 machines and that is why HP has been able to grow the NonStop installed base. 'Customers love their NonStop machines and they run them forever and ever.'" And I suspect he is right – ISVs are going to love this product!

"While we are still assessing the value proposition and who will be the likely users of such systems," sources within well-known NonStop partner, Attunity, confided to me as the news broke, "We will definitely be associated with mission-critical transaction processing where data will be captured and for us, that simply represents another important source of data that we will want to integrate with as data enterprises are already capturing, storing and analyzing for better business competitiveness."

As for the markets, it is in the ServerWatch section of the web publication, ITBusinessEdge, where we get a little more insight into what HP's intentions are. In the August 14, 2012, post "HP Extends Its Itanium NonStop Servers" writer, Sean Michael Kerner, notes that "the NS2100 doesn't replace any server, but extends the NonStop portfolio to more customers, and is targeted at financial services, manufacturing, telecommunications, and healthcare industries, and emerging markets," Mark Pollans, Worldwide NonStop Product Manager at HP, told ServerWatch. "Think of any markets NonStop is currently serving, but in smaller countries, operations and businesses ... Customers buy NonStop as an integrated solution: system, operating system, database, open middleware, and often the application," Pollans said. 'It runs clustered, fault tolerant and scalable out of the box.'"

Is anyone at this point thinking Apple, for instance? Should HP succeed with NS2100 in (a) attracting more ISVs to port to NonStop, (b) capturing new users who had otherwise viewed NonStop as too expensive, and (c) opening doors to new opportunities in emerging markets (who thought the skilled staff needed would have been too big a hurdle to jump), then having an out of the box, complete package, with choice of applications to run, reads as though it's a page right out of the Apple playbook.

While a far cry from what most of us associate with Apple today, for me there's just a whiff of a potential to emulate Apple's success and for that alone, it's worth some serious reading time to dig through all that has just been released. Success is always fleeting and hard to nail down but in this instance, with what we are seeing from the speedy take-up among the hardcore and very cynical press may indeed be heralding a new reality we just didn't see coming!

Richard Buckle  
Founder and CEO

Pyalla Technologies, LLC  
Email: [richard@pyalla-technologies.com](mailto:richard@pyalla-technologies.com)

**[Following my blogs? My web publications? My discussion Groups?](#)**

**[Check out \(copy and paste to your browser\):](#)**

**[Don't forget to check out my opinions paper:](#)**

**["Improving HP NS Data Movement: On-premise and in the Cloud, A New Approach To Optimize Intelligence for BI and Analytics."](#)**

**[#BI](http://bit.ly/HuGful)**

[Real Time View](http://www.itug-connection.blogspot.com/) at <http://www.itug-connection.blogspot.com/>

.... And check out the Group on LinkedIn, [Real Time View](#)

[comForte Lounge](http://comfortelounge.blogspot.com/) at <http://comfortelounge.blogspot.com/>

.... And check out the Group on LinkedIn, [comForte Lounge](#)

[Realtime.ir](http://realtime.ir.com/) at <http://realtime.ir.com/>

.... And check out the Group on LinkedIn, [realtime.ir](#)

[ATMmarketplace](http://www.atmmarketplace.com/blogger.php?id=130763) at  
<http://www.atmmarketplace.com/blogger.php?id=130763>

[Buckle-Up](http://www.buckle-up-travel.blogspot.com/) at <http://www.buckle-up-travel.blogspot.com/>

.... And check out the [SubGroup](#) on LinkedIn, [Pyalla Track Days](#)

## Availability Digest Examines the Recent HP/Oracle Lawsuit Ruling

On August 1, 2012, the Superior Court of the State of California released its decision on the lawsuit brought by HP against Oracle for Oracle's refusal to provide continued support of its products on Itanium servers. The Availability Digest's "Court Decides – HP 1, Oracle 0" examines step-by-step the HP/Oracle interactions that led to the lawsuit and to the recent court decision in HP's favor.

Also in the August 2012 Digest:

[NonStop Boot Camp is Coming in October](#) – The Connect NonStop Advanced Technical Boot Camp will be held this October in San Jose, California, USA, from Sunday the 14th thru Tuesday the 16<sup>th</sup>.

[Software Bug Cripples Knight Capital](#) – On August 1, 2012, the #1 market maker for the New York Stock Exchange was virtually wiped out by a software bug. Within 45 minutes of market open, Knight Capital lost \$440 million USD in unintended trades. 78% of the company's market value was gone within days. Only a takeover deal arranged between Knight and a consortium of financial-services firms saved the company from going out of business.

[Linux Leap-Second Bug Takes Down Data Centers](#) – What a difference a second can make. At the stroke of midnight the evening of Saturday, June 30, 2012, servers all over the world began to crash. The cause? A leap second, which is added every few years to keep the world's clocks in synchronism with the earth's rotation. A bug in thousands of unpatched versions of Linux choked when the leap second was added. The servers had to be rebooted, causing hours of downtime at some of the Internet's most popular sites. Some large data centers experienced a sudden spike in power utilization when their servers started to run at full load.

The Availability Digest offers one-day and multi-day seminars on *High Availability: Concepts and Practices*. Seminars are given both onsite and online and are tailored to an organization's specific needs. We also offer technical and marketing writing services and are adept at a wide variety of content creation.

Published monthly, the Digest is free and lives at [www.availabilitydigest.com](http://www.availabilitydigest.com). Please visit our *Continuous Availability Forum* on LinkedIn. We're at 467 members and counting. Our most recent thread is a lively discussion on "What Advice Would You Give to the NYSE for Avoiding Problems with High-Frequency Trading Software?"

## XYPRO in Your Neck of the Woods

We have a very busy September approaching and we hope to have the chance to see you at the following events:

### HP ArcSight Protect 2012

Nashville, TN

September 9-12, 2012

<http://www.hpenterprisesecurity.com/protect2012>

**Come talk to us about our growing partnership with HP and all the enhanced features of XYGATE for your enterprise security initiatives.**

**InNUG- India NonStop User Group**

Goa, India

September 13-15, 2012

[www.innug.org](http://www.innug.org)

**XYPRO is participating as a key sponsor for this year's flagship NonStop event in the beautiful Goa region of India. Talk to us and see how we will help with all your NonStop server and Payment application security and database management needs.**

**PCI Security Standards Council  
North American Community Meeting**

Orlando, FL

September 13, 2012

<https://www.pcisecuritystandards.org/communitymeeting/2012/>

**As a key sponsor and long time member of the PCI security Standards Council—come see how we will help you achieve compliance with ease for your next audit.**

**GTUG**

Dresden, Germany

September 25-27, 2012

<http://www.gtug.de/>

**Continuing as a pan-European event—join us in Dresden to learn more about our complete line of Identity Management—Authentication—and Database Management solutions.**

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***Join the Pan-European GTUG/CONNECT Event  
in Dresden, Germany***

Join us at this Pan-European NonStop Event from September 25-27 in Dresden, Germany.

This event is the main gathering of the NonStop community in Europe in 2012 providing extensive NonStop content while also offering educational and networking opportunities for users of other HP enterprise platforms.

We are very pleased about the strong support we are receiving from senior HP NonStop management, Connect, and the NonStop vendors which enabled us to put together a strong international agenda featuring a keynote from HP, presentations from several international users, one surprise keynote speaker, and vendor presentations to name but a few.

A number of great social events will provide a relaxed and inspiring environment for networking with your peers in the NonStop community.

For an overview of the event please go to the [Event home page](#).  
To register for the event please go to the [Online Registration](#).

We are looking forward to welcoming you in Dresden.

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***Stanton Systems Makes OPTA2000, FileSync Sales for TANDsoft***

Gary Stanton knows NonStop. His twenty-plus years of immersion in NonStop technology, including career stops at ACI Worldwide and the NonStop Enterprise Division, provided Gary with an in-depth understanding of the platform's many benefits. Now as principal of Stanton Systems, Gary serves as a distributor for a variety of partner solutions. One very satisfied partner is TANDsoft, Inc., for whom Gary has closed impressive sales of TANDsoft's flagship products OPTA2000 and FileSync. Gary sells FileSync through his relationship with Network Technologies International (NTI).

OPTA2000 is a virtual clock and time-zone simulator that uses intercept technology to allow multiple applications operating in a consolidated environment to each have its own virtual system clock or to function in its own virtual time zone with date/time specifications that are different than that of the system clock. No application modifications are required, and a single system can host thousands of applications. OPTA2000 supports all applications (user, HP, and third-party, including BASE24) on the HP BladeSystem as well as on NonStop S-Series and Itanium servers.

FileSync automatically monitors, replicates and synchronizes source files, program environments, application environments, configuration files, programs – anything non-database that needs to be kept current across the network. Use FileSync for disaster recovery, system migrations, upgrades, and backups. Version 2.1 supports qualified expressions and discrepancy reporting as well as the synchronization of SQL/MX catalogues, schemas, tables, partitions, and indices. In addition, Version 2.1 supports the SQL/MX filter and the recently released SQL/MX 3.1.

TANDsoft's "best of breed, best in price" philosophy offers highly competitive value for all TANDsoft solutions. In addition to OPTA2000 and FileSync, they include: Command Stream Replicator, which automatically replicates TMF-audited/unaudited FUP, SQL/MP and SQL/MX DDL structure and other environment changes to target systems; and the Enscribe-2-SQL and TMF-Audit Toolkits, which offer flexible, affordable alternatives to more expensive conversion products or manual conversion techniques. The Enscribe-2-SQL Toolkit supports both SQL/MP and SQL/MX and permits file-by-file or program-by-program incremental migration. The TMF-Audit Toolkit easily converts non-audited TMF files to audited TMF files.

TANDsoft products require no application source-code modifications and are available for all HP NonStop servers. Free trials are available.

TANDsoft welcomes Stanton Systems as the latest distributor of the TANDsoft product suite. Learn more about Gary at [www.stantonsys.com](http://www.stantonsys.com).

For information about TANDsoft solutions, contact Jack Di Giacomo at +1 (514) 695-2234. Please visit us at Table #12 in the Partner Pavilion at the NonStop Advanced Technical Boot Camp, October 14-16 in San Jose, California, USA. Our Enscribe to SQL Migration Forum on LinkedIn is at 134 members and counting. [www.tandsoft.com](http://www.tandsoft.com).

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### ***XYPRO Webinars on Demand***

From compliance to database management to the latest HP NonStop topics, our Webinars offer timely information and insight into the issues that matter most to you.

Click on any of the links below to access our Webinars.

[Database Management](#)

[Compliance Assessment](#)

[Identity Forge - Identity Management](#)

[Witham Laboratories - PCI DSS Lessons from the Field](#)

[HP NonStop PCI Compliance -The Solution](#)

[Simplify and Automate Database Reloads for your HP NonStop Servers](#)

[Centricity Enterprise Users: Simplify Database Management](#)

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### ***Ban Bottlenecks: Proactive Capacity Planning***

System management in today's complex world is challenging. With thousands of systems and multiple tiers of systems handling critical applications, management by real-time screens is the norm. But in some cases it's not good enough.

For those financial systems handling thousands of dollars a second, more proactive management is required. Reacting to an event may be too late. It's mandatory to develop detailed understanding how a transaction traverses tiers of computers, how it



uses those tiers, where there may be potential problems within the tiers, and when those problems will affect the transaction flow. A minute's downtime can cost tens of thousands of dollars or more.

No-sweat capacity management: For over 20 years our Ban Bottlenecks service has helped clients discover where the *potential* problems hide within their financial systems. We are extremely successful in saving our clients money by *anticipating* disruptive bottlenecks or operational problems.

Ban Bottlenecks gives you:

- o Experienced and focused performance professionals who advise and guide with a monthly report and conference
- o Free software which collects and reports on all applicable performance-capacity-utilization statistics 7x24x365
- o Application data integration
- o Daily on-system reports
- o Weekly peak/problem reports
- o The hand-crafted monthly Ban Bottlenecks report which is a forward-looking evaluation of your systems, integrating a 24-month perspective covering your application traffic, performance, and utilization
- o The monthly Ban Bottlenecks conference for an active dialogue between your business, your technical teams, and our performance experts

Visit us at the **NonStop Technical Boot Camp in San Jose in October!**

Contact us for a free evaluation!

[assist@banbottlenecks.com](mailto:assist@banbottlenecks.com)

1.415.256.8369

[www.banbottlenecks.com](http://www.banbottlenecks.com)

### **Discover the future with Java on NonStop at the "Connect Germany GTUG GO International" in Dresden**

CommitWork invites you to visit the presentation „300 on a blow!“ on September 26 at 4:30 pm (Session Room 3).

Abstract:

This presentation shows the modernization project history of a 300 dialogues NonStop Application. It presents how to start such a project, which modernization steps are done and how it can be modernized further.

Visit us at our booth.

For your traditional development like COBOL, ScreenCOBOL or TAL, you'll get a demonstration of the well known CommitWork Developer Suite (CDS). If you are interested, take a free demo license and discover how comfortable development can be.

If you are interested in Java topics you can meet our experts at the booth.



**NonStop-BrainPool (NBP)**

Do you know the **NonStop-BrainPool (NBP)**?

**No? Then visit our booth and talk with us!**

It is a consortium of companies, offering products and services for NonStop servers, formerly known as Tandem systems.

Available services are:

- System management, performance and tuning
- Java and PHP programming
- System modernization, e.g. COBOL -> JAVA or PHP; SCREEN COBOL -> Browser
- epTAL and system software programming
- Securing the system, performing in-depth security reviews

Products are:

- Development tools
- Security products
- System management products
  
- Free- and ShareWare products

For more details please contact us at: [info@NonStopBrainPool.com](mailto:info@NonStopBrainPool.com)

For any further Information please visit us at <http://www.commitwork.com/>

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## ***NonStop gets Noticed !!***

**Cheaper than a Linux cluster – and less hassle**

By **Timothy Prickett Morgan**

Hewlett-Packard's NonStop servers tolerate faults even though new CEO Meg Whitman and Wall Street, which is breathing down her neck, can't. And now, in a hope to offset declines on its HP-UX Itanium server business and get its NonStop Integrity machines into emerging markets, HP has trimmed down the configurations and prices on the NonStops so they are within economic reach of more customers.

Unlike the HP Integrity and Superdome servers that run HP-UX and the OpenVMS variants of the Integrity machines, the NonStop platform that started out as Tandem and came to HP through its acquisition of Compaq more than a decade ago is one that HP absolutely controls and that Oracle can't really do much to. As is the case on AIX and Solaris, Oracle's 10g and 11g databases are by far the preferred databases on HP-UX and a fair amount of HP-UX business is driven by Oracle's myriad application suites. Oracle also controls the RDB relational database for OpenVMS, too. And clustering technology from Tru64 Unix is the underpinning of Oracle's Real Application Clusters thanks to a licensing deal with Compaq that predates the HP takeover of Compaq.

The NonStop machines use fast networking and clustering technology to make a parallel database look like a single database to applications; the software has fault tolerance, which means if you lose a server node in the network, processing continues on the remaining nodes without crashing the application.

With the NonStop line, financial services, payment processing, stock exchanges, healthcare, and telecom firms (who are often legally mandated to keep their systems up and running) generally write their own applications and are well acquainted with the NonStop Kernel operating system and the NonStop SQL database and these days are apt to be coding apps in Java, often from within Microsoft's Visual Studio app dev tool. Larry Ellison can compete with NonStop with Oracle RAC on Solaris or Linux, but he has no app or database or middleware levers to play here as he does with HP-UX and to a much smaller extent with OpenVMS.

It is a wonder that HP hasn't figured out that the one operating system and database it needs to port to Xeons isn't HP-UX, but rather NonStop. Then HP could use cheaper Xeon iron and integrate the ServerNet network clustering into the machine. It might even be able to pull a Cray and put a Linux emulation environment atop the hypothetical ServerNet infrastructure and then allow applications already compiled for X86 iron to run unchanged on ServerNet, thinking they are on a standalone Linux box with an Ethernet stack. (This is part of the [Cray Linux Environment](#), which masks the underlying "SeaStar" and "Gemini" interconnects from supercomputer applications.) I'll go one further and say that maybe HP needs to buy Cray specifically for this Linux layer and build an entirely new server business from Cray and Tandem. This ported NonStop environment would, for instance, go very nicely with the future "Project Odyssey" Xeon-based servers that the company is working on.

But, alas, that is not what HP is doing today. The company is offering a geared-down NS2100 server, a follow-on to the previously smallest NonStop system in the lineup, the NS2200, which HP started selling in February and which it did not publicly announce. (I know, this makes no sense.)

The NonStop 2100 is based on the rx2800 i2 rack-mounted server, which [debuted back in April 2010](#) with the rest of the Integrity and Superdome servers sporting Intel's "Tukwila" quad-core Itanium 9300 processors. This is a two-socket server, just like the blade servers that other Integrity machines are, but HP only puts one processor in the system and, depending on the model, only activates one, two, or four cores in that single socket. This may sound strange, but it means HP only has to buy one chip from Intel to make a diverse line of machines – in the case of the entry NonStop machines, that would be the 1.33GHz Itanium 9320 processor, which has 16MB of L3 cache and costs half as much as the top-bin 1.73GHz part.



NonStop NS2100 fault tolerant server

By the way, according to Randy Meyer, director of product management for the NonStop line within HP's Business Critical Systems division, you can't activate those latent cores in an NS2100 or NS2200 node. So don't bother trying. (You need at least two nodes to be fault tolerant.) Rather than using the high-end ServerNet clustering that is at the heart of the larger NonStop machines, HP has cooked up a variant cluster technology called Expand-over-IP that allows regular Gigabit Ethernet links and outboard switches for linking I/O, storage, and telecom switching systems.

The NonStop machines create a logical processor, which can have from two to four cores and therefore from two to four nodes. These logical processors can have from 8GB to 32GB of logical memory, and they are then linked with the Expand-over-IP network stack into a larger cluster over the Gigabit Ethernet backbone implemented by the IP Cluster I/O module, or I/O CLIM for short. Up to 1,020 logical processors can be linked together into a single fault tolerant cluster with a maximum of 32TB of memory and up to 4,080 Itanium cores across that cluster. There are Storage CLIMs to link to storage – in this case, arrays with up to 200 disk drives – and if you are in the telco racket, the Telco CLIM to link into switching systems. The NS2100 can have up to six of these CLIMs in its networks. At the moment, the NS2100 ships in a 42U rack, but Meyer says a more compact 36U system is coming within a few months.

You might be thinking, how can a NonStop cluster run over Gigabit Ethernet? Well, the kinds of applications that customers tend to run on NonStop machines typically have lots of tiny transactions. "It's not like you are moving around pictures of your dog," says Meyer with a chuckle.

With the NonStop NS2200 entry system that debuted in February, all the feeds and speeds are the same except that each rx2800 i2 server has two of its four cores activated, and therefore you can bring roughly twice the computing capacity to bear across those 1,020 logical processors and 32TB of main memory.

With the NonStop BladeSystem NB54000c machines [that were announced in March 2011](#), the nodes are clustered together with proper ServerNet switches and use the IP, Storage, and Telco CLIMs to talk to the outside world. The NB54000c has a logical node comprised of two blade servers and it can expand up to 16 blade servers. Each blade is actually a two-socket on the Integrity BL860c i2 blade server, and again there is only one physical processor installed on the blade. Customers can have two or four cores on the Itanium 9340 activated; they spin at 1.6GHz. The high-end bladed NonStop uses the same c7000 chassis as ProLiant and Integrity blade servers, and it can scale up to 255 logical processors to a total of 4,080 physical blades with up to 16,320 Itanium cores in a single cluster. The bigger box can support 48 CLIMs and 2,400 SAS disks or 60 I/O Modular Enclosure adapters (from the old-style NonStops) with 3,248 Fibre Channel disks for storage.

The NS2100 and NS2200 run the same NonStop J-Series operating system, which was tweaked to run on multicore Itanium processors, as the larger NonStop BladeSystem machines. (The current supported release on the NS2100 is J06-14.)

A base configuration of the NS2100 system comes with two logical processors in two nodes, 8GB of memory in each node, six system disks (with three mirrored volumes) and six data disks (again in three mirrored volumes). The machine comes with the NonStop Kernel operating system, but not the NonStop SQL database (not all customers use the database, according to Meyer) and costs \$75,000 with a one-year license to NonStop Kernel. If you want to add NonStop SQL, an annual license will run you around \$13,000, depending on features.

This is considerably less expensive than the NS2000 rack-based machine that HP [announced back in March 2009](#) using the dual-core Itanium 9100 processors. A base NS2000 with two logical processors (four cores, not two mind you) and 16GB of memory across those two nodes ran about \$125,000 for the hardware, and the NonStop software stack added another \$100,000 to \$125,000 on top of that. Call it \$225,000 at the midpoint. The NS2100 has about 35 per cent less oomph, but at \$88,000 costs about 60 per cent less. That's a big improvement in bang for the buck. (I think HP could do better with Xeon iron, but it would require software investment to get Itanium and MIPS emulation to work on Xeons.)

That NS2100 also costs a lot less than an NB54000c setup, and this is what is important for small and midrange customers as well as companies and government organizations in emerging markets that don't need the full processing and I/O capability of the NonStop BladeSystem but who want fault tolerance just the same. Depending on hardware and software configuration, an entry NB54000c machine can cost as much as \$500,000 according to Meyer, with a typical base configuration running around \$325,000 for two logical processors.

Pricing for the NS2200 starts at under \$150,000 for a base machine with a one-year license for NonStop Kernel.

### NonStop biz is growing

HP does not break out sales of the NonStop products from other systems in the Business Critical Systems unit, and therefore Meyer cannot get specific about how this line is doing.

"We are growing customers, growing market share, and growing our ISV partner base – and we're not losing customers," Meyer tells *El Reg*>, adding that the cost of clustering up Linux systems for high availability is no cheaper than these new NS2100 machines and that is why HP has been able to grow the NonStop installed base. "Customers love their NonStop machines and they run them forever and ever."

HP is not yet ready to talk about its plans for the impending [eight-core "Poulson" Itanium 9500 processors](#) from Intel, which will scale from 1.73GHz to 2.53GHz. If HP goes with the eight-core Itanium 9550 part running at 2.4GHz, it could drop these into the NS2100 and NS2200 machines and boost performance by around 50 per cent – even after turning off seven of the eight cores, as crazy as that sounds. Meyer says that HP will roll the Poulson chips into the NonStop BladeSystem machines first and then cascade it down the line at some later date. So if you want an entry NonStop machine, there's no point in waiting. The Tukwila variants are the only ones that will be available until maybe the middle of next year, we guess. ®

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