BITUG Autumn 2015 NEWSLETTER

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The Little SIG was held on board one of London's most famous land-marks: HMS Belfast. The Water theme continues for the Big SIG on December 4th (registration now open?) which is being held at Trinity House, home of the General Lighthouse Authority

NONSTOP DIARY DATES

NonStop Technical Boot Camp

16-18th Nov

Fairmont Hotel, San Jose, CA, USA

BITUG Big SIG Education Day

3rd Dec, HP Offices, Wood Street, London

BITUG Big SIG

4th Dec

Trinity House, London

CHAIRMAN'S CHAT

Welcome to the Autumn 2015 BITUG Newsletter

Looking at the recent announcements from both HP and BITUG reminded me of a dialog between the Red Queen and Alice in Lewis Carrol's novel, Through the Looking Glass....
... "Well, in our country," said Alice, still panting a little, "you'd generally get to somewhere else — if you run very fast for a long time, as we've been doing."
"A slow sort of country!" said the Queen. "Now, here, you see, it takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!"

HP has been running on the NonStop platform for years making sure their competitors don't catch up, this year they have made two announcements which means they are now running twice as fast. The first that they are splitting into two companies, the PC and Printing is separating from the Enterprise part of the company. Those who can remember when Tandem was merged with Compaq, the PC business and Mainframe business needed to be handled differently and the issues that occurred. HP has been good at their management of these diverged entities but the split will help even more. Not just one new range of computers have been announced by HP for the NonStop but two have been announced by HP, the HP Integrity NonStop X NS7 X1 and the HP Integrity entry level NonStop X.

BITUG have also not been jogging along. In the last year we have tried two new venues, one Great George Street and HMS Belfast, from comments received both were a success. Next year we plan to move the BigSIG to May and the little SIG to December, this will allow us in 2017 to host the European NonStop regional user group meeting. Continuing with the metaphor, we are your user group and we do need to know if we are running in the right direction for you.

We are hoping to have one of the new HP Integrity NonStop Xs at Trinity House; this is under discussion as it will be at HP Discover on the Tuesday to Thursday 1st- 3rd December. For the latest information about BITUG and its community see www.BITUG.com.

Hope to see you on the 3rd or 4th December.

Neil Barnes
Chairman,
BITUG

BITUG BIG SIG

Education Day
3rd December 2015

This year's Big SIG Education Day will be given by HP's Vince Cooper and Keith Charters who will be taking an in-depth look at NB to NSX Migration.

It will be held at HP's Wood Street offices in London. To register for a ticket please visit www.bitug.com.

Big SIG Main Day
4th December 2015

The Big SIG is free to attend for all BITUG members. This year's Big SIG will be held at Trinity House, Tower Hill, London.

To register for a ticket you need to visit www.bitug.com and follow the link on the Big SIG page.

Presentation Previews

More detailed presentation previews are available at www.bitug.com

The Future of NonStop: bringing application performance and scalability to new heights

At the start of 2015, HP introduced a whole new family of NonStop systems called the HP Integrity NonStop X, based upon the Intel® Xeon® x86 architecture. The high-end products that began shipping in March of 2015 will soon be joined by the HP Integrity NonStop X entry-class systems along with some exciting enhancements you've been asking for on the high-end platforms. See what's new in latest NonStop technology and learn about HP's strategy for the future of NonStop.

Mark Pollans, HP

Mark is a product manager for HP's NonStop Enterprise Division. He is responsible for the NonStop server platforms and storage solutions. He was the product manager that orchestrated the release of the HP Integrity i NonStop BladeSystems and the HP Integrity NonStop NS2x00 family of entry class servers. In 2007 he introduced the NS16200 and other NonStop platforms and storage solutions since. Previously, Mark managed the HP e3000 Transition Program Office which enabled customers to migrate onto current HP platforms. He has more than 30 years of experience at HP, largely in enterprise computing and networking. During his HP tenure he has held various management and engineering positions in R&D and marketing for hardware and software projects.

GoldenGate – An upgrade or a new install?

A presentation on how we upgraded from GG V10.0.0 to V11.1.1, whilst upgrading the NonStops from S78006 to NS2104, so did we upgrade or did we have a new install? To find out, you'll just have to watch my presentation!

Rick Stather, Senior Systems Consultant, TCM. Rick has been involved in the Non-Stop world since February 1984, where he

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first began with the Armed Forces on a Tandem Non-Stop 1. He has a wealth of experience which encompasses Payments, Cards, Finance, Fuel and communications, and stradles both Application and Infrastructure disciplines. He is currently supporting AIB's Cards & Payments Infrastructure in Ireland.

Love your data? So do the fraudsters…
This will focus on why and how leading organisations are embracing the need to render their data of no value to fraudsters, using tokenisation and encryption techniques.
Rob Lesan, Security Architect, XYPRO
A leading XYGATE Security Professional since the mid 1990s, Rob brings over 20 years of NonStop experience ranging from operations and database management through security management and systems programming. Prior to XYPRO, Rob worked for AOL where he was responsible for maintaining their worldwide authentication complex.

Winning the battle against internet banking fraud by leveraging HP Shadowbase Streams real-time data & app. integration
This case study demonstrates what can be achieved by combining clever application design, coupled with an HP Shadowbase Streams configuration, to prevent expensive internet banking fraud and yet still facilitate prosecuting the perpetrators.
William Holenstein, Shadowbase
Mr. Holenstein manages the Product Delivery department for the Shadowbase product line, which includes Support, QA, and Training/ Documentation. He joined our organization as a software developer in the late 1980s. During his time with the company, Mr. Holenstein worked at many professional services sites, performing a wide array of software tasks ranging from data acquisition, heterogeneous connectivity and high level application software on a variety of platforms.

HP Voltage Tokenisation and FPE
An overview of encryption capabilities to mask key fields and data across a heterogeneous server and storage environment including HP NonStop. The session will identify how the field formatting is preserved but customer service representatives can still use the data. This session will be valuable for organisations who need to comply with PCI-DSS 3.0 or want to secure any critical data.
Brendan Rizzo, HP
Brendan Rizzo is the EMEA Technical Director for Voltage Security, has 17 years in the security industry with technical experience ranging from penetration testing and security software development, to global security programme design and implementation.

FSS Card Management Suite - Switching and payment processing in a NonStop world
HP NonStop and the FSS Card Management Suite on HP NonStop (CMS) offers a feature-rich card issuance and card transaction authorisation platform. FSS CMS is a comprehensive card management solution for operation of open loop cards (MasterCard, VISA, and other major card issuers), closed loop cards (debit, physical, and virtual pre-paid), magstripe, EMV chip, and

Agenda

This agenda is subject to change. For the latest updates and event news please visit www.bitug.com

Start	Duration	End	Court room (80)	Pepys (45)	Luncheon Room (30)
09:00	00:30	09:30	Registration, Welcome and Coffee - Library		
09:30	01:00	10:30	HP Keynote Mark Pollans The future of NonStop: Bringing application performance and scalability to new heights		
10:30	00:45	11:15	FSS Sandy Sancaster (FSS) & Moore Ewing (HP) FSS Card Management Suite Switching and payment processing in a NonStop world		
11:15	00:20	11:35	Coffee & Vendor Fair - Library		
11:35	00:30	12:05	NTI Jim McFadden DRNet is now running on the Xbox	NuWave David Ross Modernization through Integration	XYPRO Rob Lesan Love your data? So do the fraudsters…
12:05	00:30	12:35	HP Vince Cooper Migrating from NB to NSX	Barclays Tony Bennett Breathing new life into our Non-Stop application investment	Vocalink Damian Ward Using APIs to access real time NonStop data from Minecraft
12:35	01:00	13:35	Coffee & Vendor Fair - Library		
13:35	00:30	14:05	ComForte Speaker - TBA - see www.BITUG.com Subject - TBA - see www.BITUG.com		
14:05	00:30	14:35	HP Brendan Rizzo HP Voltage Tokenisation and FPE	Allied Irish Bank Rick Stather GoldenGate–Is it an upgrade or new install	SCB Matt Whiteman NS to NB Migration
14:35	00:30	15:05	IBM David Ward IBM WMQ Update	CSP Callum Barclay Got Hard?	Gravic William G. Holenstein Winning the Battle Against Internet Banking Fraud
15:05	00:20	15:25	Coffee & Vendor Fair - Library		
15:25	00:30	15:55	HP Moore Ewing Modern Application Architectures	Bank Of England Brian Sealey You think you have an easy project – Think again!	Danish Rail Lars-Evald Jensen Application Modernisation
15:55	00:20	16:15	Roundup and Prize giving - Neil Barnes		

combo cards. Sandy Sancaster (FSS) and Moore Ewing (HP) will present this session.
Sandy Sancaster, Business Dev. Manager, FSS
With over 30 years of Operational and Technology Management, both in the UK and Internationally, Sandy has a broad range of business experience; electronics, IT/ infrastructure, real time integrated systems, logistics and financial services.

Breathing new life into our nonstop application investment
Tony will explain Barclay's strategy for complimenting their existing Tandem NonStop GBS application with modern open technologies to provide a dramatic increase in business value as well reduce development costs.
Tony Bennett, Barclays
38 years working in the Finance and IT industry. Long association with Tandem NonStop systems starting from the installation of the first production Tandem in the UK in the 1970's continuing with many years working with the Atlas/GBS banking application. Various roles including Architect, Developer, Sales, Project Management and Outsourcer. Currently Head of Architecture and Development Manager for Cash Settlements of Barclays Investment Bank

Modernisation through Integration
On HP NonStop, most mission-critical applications remain in production 24x7x365, without downtime. This presentation is aimed at NonStop users who continue to depend on this platform and would like to modernise their NonStop applications by integrating with other platforms, applications and web services. Also learn how to drive down costs, improve operating efficiency, and spur breakthrough improvements in total user experience.
David Ross, NuWave
David joined Tandem UK in 1998 and has been working in the NonStop space ever since. Chairman of BITUG in 2010 and current committee member, David is the EMEA regional sales director of NonStop middleware company, NuWave Technologies.

Using APIs to access real time NonStop data from Minecraft
Damian will be discussing the business data visualisation capabilities of the Minecraft engine and will fly through some of his static and dynamic creations. Damian, has developed multiple plugins for Minecraft and was the first

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BIG SIG 2015

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person to run Minecraft on the HP NonStop server platform. He will be running an updated demonstration of the Minecraft on NonStop demonstration. This demonstration will be available to explore and play at Big SIG with the backend running on a NonStop/X server located in the HP demo centre Germany.
Damian Ward, Vocalink
Damian has over 20 years' experience with the HP NonStop platform and has been a long term BITUG committee member. Damian is a professional IT Architect with a wide range of skills and interests including IT modernisation, emerging technology, Java, robotics and API's. Damian is currently the NonStop Architect at VocaLink and vice Chairman of BITUG.

IBM WMQ Update
This session will provide an overview of the latest beta release of MQ v8 Server for HP NonStop. Topics covered include, feature overview, installation, relationship with MQ 5.3 and the outlook for forthcoming beta releases.
David Ward, IBM
David has worked in IT for 30 years in systems design and development roles on IBM mainframes and distributed systems. He has been with IBM for 11 years in MQ development and is the architect and development lead for MQ on HP NonStop.

Application Modernisation
Lars will be presenting the DSB/NSB case in a general way to show how to enhance legacy applications on NonStop and prolong their lifespan into the future without needing to do a complete and costly re-write. The presentation will start with the challenge, (i.e. the business case) to the application and proceed to describe the process that led to the new design and finish by showing the new possibilities that opened up.
Lars Evald Jensen, Danish Railway.
Lars has been working in the IT industry since 1985 in varying roles: Starting out as a software developer through to project management roles. He has been handling an application management project for the Danish and Norwegian Railway Operators since 1998. He has been with his current employer, Capgemini Sogeti, since 1990.

Got Hard?
In this presentation, CSP will unveil its revolutionary new security hardening solutions for NonStop systems. Using leading edge technologies, CSP has undertaken the largest development project in its 28 year history to produce something very unique for the NonStop security community.
Callum Barclay, fouder, CSP
As the original founder of CSP in 1987, Callum Barclay leads the technical direction of the company from its headquarters outside Toronto, Canada. Originally from Edinburgh, Scotland, Callum is now heavily involved in bringing pioneering security and compliance solutions to HP NonStop customers.

Migrating from NB to NSX
Summary: This session will provide an overview of the differences between J series "NB" to L series "NSX" systems and the infrastructure and high level application considerations to be made when moving from a J series TNS/E to an L series TNS/X environment.
Vince Cooper and Keith Charters, HP
Vince and Keith are highly experienced HP NonStop Technical Consultants with many years of delivering professional services into the NonStop Server arena. These include deployment and configuration of servers, communications setup, management tools, virtual tape server deployment and evolution migration services.

Modern Application Architectures
This session will provide an overview of NonStop application containers, tools and architectures available to HP NonStop that will be familiar to architects using tiered and hybrid solutions as well as defacto development languages and application environments.
Moore Ewing, HP
Moore is well known in the HP NonStop community for his expertise in application and database. Moore has been involved in customer education, transaction processing architectures and business intelligence as well as assisting customer and ISV application ports.

LITTLE SIG 2015

Post event review

Little SIG 2015 Summary – An eyewitness account kindly provided by an attendee.

What an impressive turn-out for the NonStop SIG event held in May 2015. I had fully expected to see all the familiar (carefully avoiding use of the word 'old') faces but it was also refreshing to see so many younger delegates amongst the attendees. Maybe the unusual venue (the warship, HMS Belfast) had some bearing but I'd like to think the newly announced release of the NonStop X server had drawn-in some excitement.

This was a 1-track event (which avoided separation of the delegation) which was held in the Ship's Company Dining Room (essentially a large steel compartment, but with 'port holes' offering a magnificent view of the London Skyline). Due to the general public rattling around the metal ship there was quite some noise from above but once a working microphone had been acquired this was no longer an issue.

The event was heartily kicked-off by the Chairman, Neil Barnes delivering the Welcome Note and speedily chairing the legalities required for the company AGM. The Treasurer, Matt Whiteman, delivered the Accounts. We also learned of forthcoming plans for 2016 and beyond, such as next year's BIG SIG arriving first in Q2 with the Little SIG in Q4 and just maybe the potential for a European SIG in London for 2017. Watch this space!

The first presentation was delivered professionally by Clive Freeman, HP, entitled 'The New IT and Futures'. Clive is a Chief Technologist for HP Enterprise Group in U.K. and Ireland. An interesting presentation on the evolution of IT and what we can expect. Very much a move towards Flash memory and Solid State Drives.

Next up was, I'm sure, a topic of significant interest to the majority of the congregation. 'IBM MQ Update' by David Ward, IBM. Quite a stir hadpreviously arisen within the NonStop community surrounding IBM's direction with regard to supporting a Queue Manager on the NonStop host. Although there is no official commitment from IBM to deliver MQSeries (V8) for NonStop (GA Release), there was encouragement for user involvement in the ongoing Betaworks programme. It was repeatedly mentioned that the intention is to release an updated beta every 4-6 weeks, but problems with the 2nd beta was causing delay. The 2nd beta was expected to be released within the next 2 weeks and finally arrived on 28th May. Beta3 has since emerged on 18th August and customer feedback is encouraged.

This was followed by 'Shadowbase Vs. RDF' by David Sly, HP. In my opinion a presentation focused on the additional features offered by Shadowbase over those of RDF. In that Shadowbase provides the same functionality as RDF plus more. Not only does Shadowbase provide replication to/from other platforms and/or database structures over TCP/IP it will also support Active-Active configurations thereby reducing RPO/RTOs. Though I'm yet to be convinced on the detail surrounding any ZLT comparison and synchronisation.

Before lunch was a user presentation, 'NonStop Samba' by Dave Smith, B.P.
An interesting presentation on why and how B.P. opted to utilise Samba on NonStop to provide a 'greener' online reporting facility for their worldwide user-base. The Business Requirements were primarily to remove the physical printing of reports. Reports were often mislaid, requiring reprint and of course there are the added security implications with hard-copy reports. The future had to be online reports in an open format with an option to print locally. Various 3rd-party products were considered as potential solutions. Samba has been around for years and is a well-established, open organization. NonStop Samba is bundled for free with the NonStop OS. The most complex part appeared to be OSS security on the file-sharing and its own User security (recommended NOT to use Active Directory and NOT to use existing Windows aliases). Certainly something I shall be looking into.

A buffet-style lunch generously sponsored by HP was consumed whilst simultaneously attempting to re-acquaint oneself with those familiar faces of old and indeed some new.

Following this welcome Networking Break, we reconvened for customary 'HP Update' delivered by Iain Liston-Brown, HP. Usual Roadmaps. 2-core and 6-core NonStop X to be released in the summer. NonStop X Clustering via InfiniBand also about to be released. Cannot mix NonStop X with NS-series or NB(Bladesystem) in the same Cluster. Itanium chip-based servers are known collectively as NonStop i. S-series support ending this year.

Next was a user presentation, 'Web Services' by Damian Ward, Vocalink.

Another interesting presentation, this time on RESTful and STATEful APIs and Web Services. Talked about ISO 8583 as albeit an API pre-internet and how the larger internet companies are dropping XML in favour of APIs like JSON. On a lighter note, there was a demonstration of Minecraft running a NonStop server in Germany – a straight Java port!

Then we had explained 'NB -> NX differences' by Vince Cooper, HP.
The official name for the new NonStop server – HP Integrity NonStop X, NS7-X1.

As we know the first GA RVU was L15.02, the next generation RVU is expected to be L15.08 in August, 2015. What was news to me is that the RVU now relates to a timestamp, Year.Month – Lyy.mm (no longer single numeric increments). There will be 2x L-series RVUs per annum (only 1x H-series RVU per annum).

Finally, to conclude the proceedings, we had 'Round-up and Prizes' facilitated by committee officials, Neil Barnes and David Ross. Dave Shields, Insider Technologies scooped 1st prize in the draw – an Airfix model of H.M.S. Belfast (plus other gift-shop goodies). That'll teach him!

The sun setting after this year's Little SIG onboard HMS Belfast

About HMS Belfast

Built Harland & Wolff of Belfast in 1936, HMS Belfast was immediately called into service patrolling the northern waters in efforts to impose a maritime blockade on Germany. After only two months at sea she hit a mine, putting her out of action for three years. On rejoining the home fleet in 1942 she was still the largest and most powerful cruiser in the Royal Navy and most importantly she was equipped with the most advanced radar systems. HMS Belfast played a crucial role in protecting the arctic convoys until 1944 when she spent five weeks supporting the D-Day landings and reportedly fired one of the first shots on D-Day itself.

After the Second World War HMS Belfast played an active role in the Korean War from 1950-1952 working with other Allied Forces to support the retreating American and South Korean troops. Her final years were spent performing peace-keeping duties until she was retired from service in 1963. As early as 1967 the Imperial War Museum had been investigating the possibility of preserving a Second World War cruiser. This led to the formation of a trust, headed up by one of HMS Belfast's former captains Rear-Admiral Sir Morgan Morgan-Giles. After some years HMS Belfast was brought to London opening to the public on Trafalgar Day, 21 October 1971. Today she is the last remaining vessel of her type.

HOW LONG HAVE WE GOT?

BY RICHARD BUCKLE

I don't think anyone of us needs to be reminded about the journeys we have taken with our children when we have heard them asking the most important question of all; are we there yet? Perhaps in our youth we were party to such a grilling of those behind the wheel. No matter the circumstance, knowing we were close to journey's end always seemed important even as those in charge grew agitated as the question was repeated. For me, as a child, it was always our annual vacation on the north coast of New South Wales, Australia, where each year we drove 450+ miles to our vacation spot and all I was interested in was hitting the beach.

For the NonStop community, this plaintive cry can still be heard, although at times as irritating as it too may sound, there is an element of earnestness to be heard in the request. After more than four decades in the marketplace the fundamental architecture of NonStop has changed little from what was the first Tandem Computer as it rolled out. Sure, there have been multiple chip set changes, the supporting middleware, utilities and tools have increased significantly with time and writing an application for NonStop is a lot easier to do, but are the days of NonStop coming to an end any time soon? How long do we really expect NonStop to be around? In this context, are we there yet, takes on a whole different meaning for the NonStop community.

The argument about NonStop being legacy has become a moot point of late – after all, you can now purchase a NonStop system that is based on the Intel x86 architecture and port an application written in Java and open up the application for interaction with mobile users connected via the internet. The entry price of models within this family of servers has dropped to where they are now price competitive with alternate clustered solutions from HP or any other manufacturer. As a result, there's little to be gained from debating whether Nonstop systems today are modern as such discussions are akin to debating just how many angels can dance on the head of a pin. It's borderline ridiculous to those of us with lengthy associations with NonStop.

Yet, for many in the NonStop community the changes taking place inside of the new HP Enterprise (HPE) don't necessarily seem to apply to NonStop systems, and yet, the influence of these changes will have direct bearing on the NonStop product families. In my last article I wrote of hybrid computing and where I asked the question, but will this fly? Will this attract advocates and champions? However, there's another part of this question that needs to be discussed – if HP is so committed to going down this path, will NonStop (as we know it) survive? Is the answer to the question, how long have we got, going to be not long at all?

About fifteen months ago, HP EVP and CTO, Martin Fink, took the wraps off The Machine – a new approach to computing unlike anything ever previously proposed. So dramatic was the announcement that to the audience of the 2014 HP Discover event it was hard to connect the dots, let alone imagine the impact on all current product lines then in the HP portfolio. Yet during the lead up to that event we had been presented with information about a number of HP initiatives and projects, among them were Converged Infrastructure as well as Project Odyssey.

Take a look back at what HP provided in a press release of November 22, 2011, as it announced Odyssey. "HP's new development roadmap includes ongoing innovations to HP Integrity servers, HP NonStop systems and the HP-UX and OpenVMS operating systems. The roadmap also includes delivering blades with Intel® Xeon® processors for the HP Superdome 2 enclosure (code name "DragonHawk") and the scalable c-Class blade enclosures (code named "HydraLynx"), while fortifying Windows® and Linux environments with innovations from HP-UX within the next two years." Surprised to take in the server landscape as it now exists?

Before asking any more questions, we know that HP-UX running on x86 isn't sitting well with the Unix community and that OpenVMS has been "licensed back" to a small, dedicated team of private developers along Boston's famous Route 128 (and the home of Digital Equipment). Blades with x86 Xeon processors have been delivered, as has a c-Class blade enclosure supporting blades with InifinBand (IB) interconnects (via a Mellanox Technologies IB Switch), and the biggest beneficiaries have been enterprise Windows, Linux and NonStop. Who could have guessed?

As for CI, this too has gathered momentum of late. In response to CIOs of larger enterprises wanting to have greater control over what resources are being applied to the running of which application, in a very short period of time anticipate seeing the total disaggregation of processors, storage and networking with tools to provision for whatever demands may arise. Software defined Everything? Virtualization on steroids? Sure, thing with what I have seen to date – with more to come? As fellow Pyalla Technologies Cofounder and COO, Margo Holen, wrote in the post of Juy 19, 2015, to the NonStop community blog, Real Time View, Vibrant Composition, "But here's the bigger question – will NonStop always look the way it does today?"

Holen then went on to ask, "Could there even be more than one NonStop solution? Just as important for many within the NonStop community, might NonStop be given a new name, from Tandem to NonStop to something else?" Many decades ago I learnt never to discount any changes in product direction taken by any vendor. However, where NonStop is deployed today may mitigate anything dramatic happening in the short term. Looking at how we may transition to The Machine (and it will need to be able to provide enough hooks to at least get current solutions up and running, with little change, to make a difference), and perhaps the intermediate steps to The Machine that will likely come via the CI program, what we have in the two NonStop families of servers will be with us for quite a while yet.

Checking the HP web site and looking at the pages dedicated to NonStop, it's interesting to see that the last two entries under Featured Resources happen to be papers by Gartner and IDC. After hearing so many times about major industry analyst firms overlooking NonStop, it's good to see some changes (in attitude) taking place and it's no coincidence that this is all happening post x86. For more, take a look at the web site and check out these two links:
http://www8.hp.com/h20195/v2/GetDocument.aspx?docname=4AA5-8631ENW
http://www.gartner.com/technology/reprints.do?id=1-2K4ZA8H&ct=150729&st=sb%2520

The Gartner paper, "A New Era Dawns for HP Integrity NonStop Users as x86 Support Replaces Ailing Itanium" includes some good observations for anyone who is a student of NonStop. As part of the observations by author, Andrew Butler, addressing both Itanium and x86 families of NonStop systems, notes that "Integrity NonStop servers typically have a longer operational life (10 to 12 year lifespans are not unusual). As such, NonStop users on modern hardware need not make any dramatic, immediate changes." I have to admit I like the acknowledgment by Garter about NonStop users on modern hardware – that's a big change from previous writings by Garter.

However, Butler then adds, "In addition, Gartner estimates that standard support for Itanium-based Integrity NonStop servers will come to an end by 2025, assuming the last release of the Itanium chipset comes in 2016." As for the NonStop X family, Butler concludes that, " While the requirement to migrate to x86 may provide an opportunity for I&O (infrastructure and operations)leaders to

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NEWS

HP Integrity Nonstop X Family enhancements

HP has added to the Integrity NonStop X server line such that a family of offerings are now available.

Core licensing for the Integrity NonStop NS7 X1

The Integrity NonStop X NS7 X1 now has core licensing options available supporting CPUs with dual and 6 core in addition to the original quad core capability. A NonStop NS7 X1 CPU with 6 cores has more than twice the performance of an Integrity NonStop i NB56000c CPU with quad cores. Core licensing demands a license file for each system. Additional cores can be enabled on-line but the number of cores cannot be downgraded.

Infiniband Clustering for the Integrity NonStop NS7 X1

The HP NonStop X Cluster Solutions (NSXCS) enables InfiniBand Clustering for the NS7 X1 systems. Up to 24 nodes per cluster are supported which can be configured over up to 3 zones enabling larger environments with up to 384 NS7 X1 CPUs operating as a single system.

Entry level HP Integrity NonStop X NS3 X1

HP has introduced an entry level Integrity NonStop X NS3 X1 system. This is available with core licensing as single or dual core CPUs. Like the NS7 X1 additional cores can be added on-line via a license file but the number of core cannot be downgraded. The NS3 X1 can support 2 or 4 CPUs per system with either 32GB or 64GB memory per CPU. It uses a Blade System architecture with InfiniBand interconnect and can support 8 CLIMs. It runs the L series RVU NonStop OS like the NS7 X1. NSXCS InfiniBand Clustering is not available on the NS3 X1.

Education

New Integrity NonStop X Application Migration, NSDEE 5.0, NonStop Administration I & II and Java API programming courses are being added to the training portfolio. These are relevant for customers moving to NonStop X and also to customers who are maintaining a NonStop X and NonStop i development environment. For more information about course details and availability contact Ron Meijer at rmeijer@hp.com

Product Status Changes

Time Synchronisation

All NonStop X systems and NonStop i systems from the J06.19 RVU onwards will have TimeSync included on the SUTs. NonStop X and NonStop i NB56000c systems include TimeSync with the OS license bundle, all other J series systems need to license TimeSync separately to receive a license key.

NonStop Server for Java Message Service v4

NSJMS (HSE53V4 & QSE53V4) will enter Limited Support status from 1st January 2016. HP recommends customers consider moving to NonStop NonStop Message Queue 1.1 as an alternative JMS product (HNSMQ01V1 & QNSMQ01V1) which is based upon Apache ActiveMQ version 5.9.1.

XMA plugin for Base24 EPS and AJB RTS

The ability to track and review all activities on the HP NonStop systems is a requirement for quickly identifying and acting on any suspicious activity. To help customers meet these security standards, HP bundles XYGATE Merged Audit (XMA) with the L-Series OS and with the NonStop Security Bundle (QSN52) for the J-Series systems. XMA is an easy to use product that collects and filters data from various audit logs into a single, normalized SQL database on the NonStop, from which you can generate reports. A XMA plugin into the HP Arcsight SIEM device comes as standard.

HP also provides optional plug-ins that help you integrate logs from ACI BASE24 “Classic” and HP CMS HLR applications on NonStop. HP is now pleased to expand that portfolio of XMA plug-ins with the introduction of two new plug-ins to integrate logs from ACI BASE24-eps and AJB RTS applications.

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consider competing, mission-critical server products, the ability of NonStop to support a more modern architecture means I&O leaders can also stay the course on a familiar product.”

Speculating on dates a decade out even as assurances are being provided that staying the course will be fine suggests that even with all that’s happening within HP, the future of NonStop as we now know it is assured. Certainly, we may see NonStop appearing on unfamiliar ground but our ability to continue ordering modern NonStop systems will continue for a long time to come. How long have we got may actually lessen in importance as we start asking another question – what more can we do (with NonStop)? As for me, with what I have seen, modern NonStop systems will hold sway inside many companies for a very long time!

HOW DOES FAILOVER AFFECT YOUR SLA?

DR. BILL HIGHLEYMAN

You are currently running your critical applications on a NonStop server. You are confident that your applications will exhibit high availability – after all, NonStop servers are fault-tolerant. They will survive any single fault in the system. Your experience is that your NonStop server will fail about once every five years and will take about four hours to return to service. This represents an average downtime of 0.8 hours, or 48 minutes, per year or four 9s of availability.

Your company is launching some new mission-critical applications, the SLAs for which call for an availability of six 9s. This represents 30 seconds of downtime per year. Will a backup system provide the availability required by the new SLA? Adding a backup doubles the 9s. Thus, the redundant system has an availability of eight 9s, easily meeting your new SLA. Right? Think again. You can achieve eight 9s only if the backup node can take over instantly. But it can't!

It requires a while for a backup node to take over processing. What must be accomplished to bring up the backup node? Let's assume that the backup database has been kept up-to-date via data replication (tape backup can take hours to days to restore the database). The first step is to decide whether or not to fail over. Is it better to wait for the production node to get repaired, or will it be faster to bring the backup node online? If the decision is made to fail over, the application processes must be loaded, the database mounted, and the system tested. By automating these processes, recovery time typically can be reduced to anywhere from ten minutes to one hour.

However, one other factor that affects the availability of an active/backup system is failover faults. A failover fault occurs if the backup node cannot be brought online. In this case, we have a dual-node failure. Failover faults can be minimized by periodic testing. However, many companies consider this to be a risky and expensive procedure; and failover testing is often not thoroughly performed. Some companies never test failover – they depend upon faith and hope. Without periodic testing, failover faults are all too likely to occur and represent a serious impediment to high availability.

Let us consider a recovery time of thirty minutes. Your NonStop system will be down thirty minutes every five years (our assumed MTBF) while applications are recovering to the backup node. Let us also assume that one out of ten failovers will fail. This means that there will be a failover fault every ten failures on the average, each requiring a recovery time of thirty minutes, for an average of three minutes per failure.

Thus, every five years we will have thirty minutes of downtime due to production node failures and an average of three minutes of downtime due to failover faults for a total average downtime of 33 minutes every five years (6.6 minutes per year). This is an availability of 0.999987, or almost five 9s.

We have reduced our average downtime from four hours every five years to 33 minutes every five years (good!). We have increased our availability from four 9s to almost five 9s (good!). We have missed our new SLA of six 9s (bad!).

So what can we do to meet our new SLA? The answer is an active/active system.

An active/active system has two or more nodes actively processing transactions. If a node fails, all transactions are routed to the surviving node (or nodes). Recovery time can be as little as several seconds. Furthermore, all nodes are known to be operational; after all, they are actively processing transactions. Therefore, there will be no failover faults. Let us assume that our recovery time to a surviving node is fifteen seconds. Then the application will be down fifteen seconds every five years for an availability of seven 9s. We meet our SLA requirement for an availability of six 9s.

Active/active systems provide true continuous availability. If a node fails, no one notices. If a data center blows up, no one notices.

About Bill

Bill is Managing Editor of the Availability Digest and Chairman of Sombers Associates. He has been responsible for implementing dozens of real-time mission-critical systems for companies such as Amtrak, Dow Jones, Time, Tandem, FedEx, SIAC, Smith Kline, G. E. Credit, Southeast Bank, Harris Satellite and more.

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