



Neil Barnes has stepped down from the BITUG Committee after 20 years - with half of those spent as Chair/Vice Chair. We wish him all the very best for his retirement.



CHAIR CHAT

Welcome to the Spring 2021 BITUG Newsletter

It's nice to finally get to speak with you all as chairman although sadly only in writing for now as we hopefully work through the end of our respective lockdowns and controls begin to ease.

I guess since the last newsletter the highlights would be both ourselves and Connect have run virtual sessions. Certainly in our space although a stop gap hopefully for face-to-face sessions soon these did have some success with great support from you as always combined with insightful sessions provided by HPE respective parties.

Looking ahead for our year as a User Group we plan to have a virtual session for our Mid-Year usual 'Big Sig' slot, with hopes to save a slot in December diaries for a Face-to-Face and hopefully a toast to a whirlwind two years. From a personal perspective this would be great to not only run an event alongside the Committee as Chairman but to see you all again, too.

Some Committee news from our side

since our last release John Bycroft has agreed to be my Vice-Chairman, this is great news as being young in the industry it allows me to lean on both John's and the rest of the Committees experience as I navigate through my Chairmanship.

Finally I'd like to end with mentioning again what was announced in the Little Sig end of last year and that is Neil Barnes leaving the Committee. Neil was great to have as both a colleague and committee member during my 6 years in NonStop and I'm sure many will say the same for the 25 plus years he completed before I started. I would like to wish him all the best in retirement.

Stay safe, hopefully enjoy some loosened lockdown measures soon and hope to see you all at some point this year. Thanks,

Paul Brown
Lloyds Banking Group
BITUG Chair 2021
Email: chair @ bitug.com

NONSTOP DIARY DATES

BITUG Virtual SIG

www.bitug.com
22nd June 2021

Connect NonStop Technical Boot Camp

5-7th Oct 2021
www.nonstopbc.com
Denver, USA



GRAVIC NEWS

IS YOUR ATTUNITY NONSTOP SOLUTION FOR SHARING DATA ACROSS PLATFORMS OR APPLICATIONS GOING END-OF-SERVICE-LIFE (EOSL)?

HPE Shadowbase software uses a data replication/data integration architecture for replacing Attunity to provide for remote data access and connection requirements. The software has powerful utilities to aid in the data format/schema conversions, for data cleansing, transformation, and filtering. Implementation is straight-forward for replicating NonStop/NonStop, NonStop/another platform, or other configurations. It replicates Enscribe data on-platform into an SQL/MP or an SQL/MX database, or Enscribe, SQL/MP, or SQL/MX data off-platform to another platform/database. Remote applications can then use ODBC and JDBC to access the NonStop or other platform-based SQL data. Watch our presentation (<https://bit.ly/39Xq21K>), or read our case study (<https://bit.ly/3uIOzpl>)

GRAVIC PUBLISHES NEW ARTICLE ON DEBUNKING NONSTOP TMF DATA PROTECTION MYTHS

Are you still relying on a non-audited database to protect your mission-critical NonStop data? Perceptions remain that the use of TMF is superfluous, costly, or performs poorly; however, this is incorrect. TMF offers data integrity protection benefits, and improves overall system performance and capacity utilization. The migration from a non-audited to an audited application is a straight-forward process that does not require any code modifications using the facilities provided by AutoTMF. The myths and other objections raised against TMF auditing and AutoTMF are proven false.

Read more: bit.ly/3nZaYVE

CSP NEWS

MINIMISE SECURITY GAPS WITH MULTI-FACTOR AUTHENTICATION

Fraudsters and cyber-criminals are opportunists. COVID-19 has proven that there is no circumstance that hackers will not seek to exploit. They know that the confusion caused by this worldwide pandemic can be used to try to steal sensitive information from individuals and organizations alike. Cyber-attacks already made headlines on an almost daily basis. Now, hackers are tapping into the wealth of insecurely protected data, and hiding behind the confusion caused by a global pandemic, while reaping the rewards.

Organizations are aware of these attacks, but many still don't seem to realize just how dangerous and sophisticated hackers have become. Many organizations are still not taking the necessary steps to protect their critical data.

Some companies continue to rely on simple password security and spend their money on implementing security practices that do not address the latest hacking techniques.

Minimize security gaps with Multi-Factor Authentication

Modern authentication methods represent a more robust security structure, and also provide a better user experience when logging into applications.

Read the full news article at: <https://bit.ly/3fVmA56>

CSP Authenticator+[®] Multi-Factor Authentication for NonStop Systems



CSP
COMPUTER SECURITY PRODUCTS, INC.



XYPRO NEWS

MEETING YOUR SECURITY INTEGRATION OBJECTIVES - CYBERARK, SERVICENOW, SPLUNK AND MORE...

COVID-19 and its security ramifications continue in 2021. Threats brought to the fore when we were sent to work from home got added to the growing set of risks we were already trying to mitigate.

XYPRO's 2021 product roadmap includes updates to meet your enterprise data protection goals and cybersecurity objectives.

New features and functionality maximize your HPE NonStop investment via XYPRO's latest security advances in (PCI-DSS required) Multi-Factor Authentication (MFA), Compliance and Anomaly Detection, HPE NonStop integrations with Splunk, SailPoint, CyberArk, Servicenow and more.

Our 2021 product direction is simple. Continuing to provide innovative security solutions to address real world business challenges. We partner with our customers and HPE to ensure the functionality not only maximizes your HPE NonStop investment but addresses your security and integration needs.

ServiceNow Integration for HPE NonStop Servers

Enforcing proper change management in an expanding IT ecosystem can be a daunting task. Inadequate change control leaves you exposed to cybersecurity risk and compliance issues. In many environments, ServiceNow IT Service Management (ITSM) is the primary solution for IT change management. ServiceNow ensures that all activity has an approved change ticket for tracking and visibility. Integrating your mission critical systems and applications with ServiceNow is literally "critical".

ServiceNow and XYPRO

The ServiceNow add-on for XYGATE Access Control (XAC) integrates your HPE NonStop servers with ServiceNow ITSM. Using the XYGATE Web Service Connector (XWS) framework, XAC sessions validate privileged commands

against Problem, Change and Incident Tickets, granting or denying execution based on the response from ServiceNow. This integration eliminates the complex, after-the-fact, manual effort otherwise required to match NonStop-executed commands with individual ServiceNow tickets.

Flexible Ticket Validation

The ServiceNow add-on for XAC validates privileged commands with ServiceNow based on any combination of the following factors:

- Ticket Number
- User
- System
- Date/Time Window
- Command Syntax
- And more...

If the appropriate values cannot be validated with ServiceNow, privileged command execution is denied, even if the user has the proper permissions on the system. This enforces tighter security controls for privileged sessions and prevents user error.

Lightweight and Secure

The ServiceNow module is a lightweight service that attaches to your existing XAC environment and sets up in minutes. Requests for ticket validation/verification are sent to predefined web service endpoints through secure REST API calls using a secure transport framework (SSL/TLS enabled). A TACL user interface prompts the user for ServiceNow ticket information and prepares the REST API request. The module includes a request template that you can easily extend to support new APIs or update to remove deprecated APIs as your requirements change. The module's user interface processes the response from the ServiceNow and either grants or denies access to the requested resource.

Full article: <https://bit.ly/3thq4t7>



Enterprise Identity & Access Management

HPE NonStop Enterprise Integration!

- ✓ Automated Provisioning
- ✓ Detects Risks & Entitlements
- ✓ Account Compliance
- ✓ SailPoint Certified
- ✓ CyberArk Certified
- ✓ ServiceNow Ready



servicenow

XYPRO
Mission Critical Security

Contact Us...





4TECH NEWS

NEW ENHANCEMENTS FOR INTEGRITY DETECTIVE

Integrity Detective™ (ID) is the most feature-rich, continuous (real time), file and subsystem integrity monitoring solution available today on the HPE NonStop server. It offers a comprehensive set of standard features, all hosted and protected by your NonStop server, while having the enterprise connectivity and view that your business requires.

Integrity Detective continuously monitors (aka real-time), your HPE NonStop server and alerts when unauthorised changes are made. Authorised changes are logged and can be reported on.

ID Can Monitor:

- FILES – full SHA2 fingerprinting for both Guardian and OSS files
- PATHWAY – Server configurations
- NETBATCH – Jobs and Attachment Sets
- PERSISTENT PROCESSES – All kernel managed process configurations
- SSH – HPE NonStop SSH Configuration
- SAFEGUARD – All Global parameters

- THIRD PARTY SYSTEMS - see below

Key Features

- AUDITING: full auditing of all actions
- DATABASE: stored on your NonStop
- ALERTING: instantly sends alerts to SIEM (via syslog), EMS or both
- REPORTING: comprehensive reports that can be generated automatically to interface with enterprise tools such as Tripwire
- MANY MORE: see our website for more information.

New Features

Integrity Detective V2.1 breaks new ground with its innovative new features:

- COM programs. ID can now monitor any standard NonStop or third party subsystem configurations that have a command line interface.
- Watched sub volumes and sub directories: as well as checking that files and configurations are not tampered with, ID will alert if additional files are introduced into or deleted from monitored locations.
- Extensive reporting updates: Scheduled or instant reports are generated on the host and can be sent to: a Spooler location, an

Edit file, or back to the initiating GUI.

Further information on the new ID V2.1 features are available on the 4tech website: <https://www.4tech.software/integrity-detective-v21>

Online demos and evaluation software are available on request.

www.4tech.software



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vNS NEWS

4TECH SOFTWARE SUCCESSFULLY AND RAPIDLY IMPLEMENTS COST-EFFECTIVE vNS DEVELOPMENT SYSTEM

A matter of weeks. That's all it took to go from idea, to getting our ProLiant DL380-based Virtualised NonStop system up and running.

And if you think the speed and ease with which it was achieved is impressive, wait until you hear what it cost!

We look forward to sharing the story in print and via presentation over the coming months.



TANDSOFT NEWS

CONQUER YOUR FEAR OF CORRUPTED FILES WITH TANDSOFT'S BLOCK TECHNOLOGY

Who is the victim of the dreaded Error 59. You attempt to open a file to read or write a record only to be denied access. Staring back at you from your screen are the terrible words, "An unexpected error has occurred." Scared? You should be. A corrupted file may take hours to rebuild and additional hours to synchronize. Even if only a part of the file has been corrupted, record mode requires a whole file rebuild, a record at a time. You start from zero. In the meantime, applications that must access the file cannot proceed.

Block technology, on the other hand, compares source and target files via chunks of a file, or blocks. It is not cognizant of the need for sequential order or internal structure. Block technology compares source and target hash block signatures to determine if the corresponding blocks are equal.

If, for instance, only two of 1,000 blocks are out-of-sync between the source and target databases, block technology allows a user to open a file that has been deemed corrupted,

identify the blocks that are broken, repair them, and resynchronize newly repaired blocks with the source database. Instead of whole file rebuild, you have block resynchronization. Hours to fix are reduced to seconds. Fast.

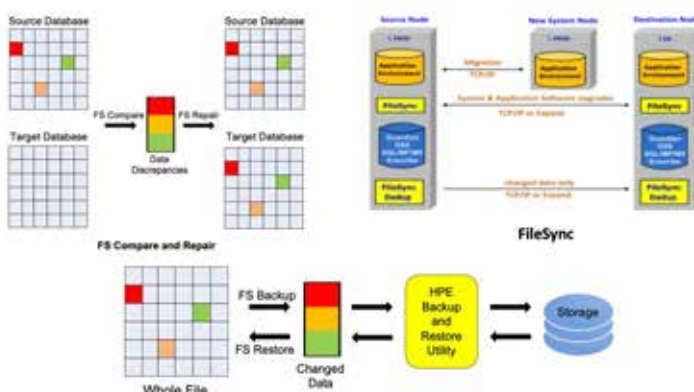
Three TANDsoft software solutions are based on block technology. They repair all file types, work with all HPE NonStop replication vendors, and require only seconds to repair a corrupted file, not hours. They are FileSync, FS Compare and Repair, and FS Backup and Restore.

Repair Corrupted Files in Seconds with TANDsoft's FS Compare and Repair

All it took was a comment and a question from a potential TANDsoft customer. Comment: "I have a serious database issue." Question: "Can your product FS Compare and Repair fix corrupted files?" The answer is "yes." Regardless of the cause - bad disk file, mismatch in the internal File Control Block, inconsistent structure in a structured file - FS Compare and Repair incorporates block technology in general and Block Hash Compare specifically to repair corrupted files - no matter the size - in seconds.

Visit <https://bit.ly/3cPMMRR> for more information, or visit www.tandsoft.com.

TANDsoft Solutions Use Block Technology



Secure Database Management

SQLXPress & MARS

Productivity - Performance - Security



SQLXPress

Comprehensive management of HPE NonStop SQL databases with a modern user experience.

MARS

An automated, safe and productive way to application performance.

- ✓ Reduce risk.
- ✓ Reduce errors.
- ✓ Reduce costs.
- ✓ Recover unused disk space.
- ✓ Application performance boost!



XYPRO.com



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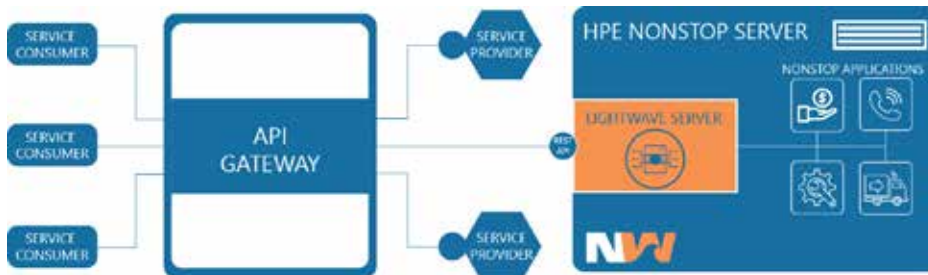


NUWAVE NEWS

NUWAVE'S TOP 5 TRENDS IN REST SERVICES

1) Work With, or Act as an API Gateway

API gateways, such as Mulesoft Anypoint, IBM Datapower and Amazon AWS, are a very popular REST services use case. A number of LightWave product users utilize the LightWave solutions to access, or even serve as an API gateway. API gateways usually act as the central repository within an enterprise to document and control access to all authorized APIs within that enterprise, so application developers know exactly what they can safely use to build their applications.



In the case where an API gateway needs to access transactions or functions available on the HPE NonStop server, LightWave Server™ can facilitate that

access. API gateways can easily consume REST services, but may struggle to deal with legacy message formats common to NonStop, such as “bitmapped” ISO8583 payments messages, or binary Pathsend buffers. By presenting these transactions and functions as JSON REST services, LightWave Server™ allows for immediate integration with any API gateway solution.

When a NonStop application wishes to interact with an API gateway to access or consume a service made available through that gateway, it needs to communicate with the gateway in a supported manner. Mostly likely this will involve consuming REST services from the gateway, as JSON REST is the most common API format amongst API

gateway solutions.

LightWave Client™ supports this type of service consumption between the NonStop application and the API gateway.

The NonStop application sends a standard Pathsend message to LightWave Client™, which reformats the message as an HTTP-based REST request, usually in JSON format, but also possibly XML, depending on the API gateway's preference. When a REST response is returned, LightWave Client™ translates that back into a Pathsend response and returns it to the calling application. In this way, the NonStop application can consume the services of the API gateway, or even push data to those services.

In a follow up article, we'll go into more detail on typical use cases involving API gateways and the LightWave solution set.

2) Facilitate Simple Access to a Relational Database

Using REST to access a relational database (such as Oracle or MS SQL Server) is an emerging use case. In the NonStop world, accessing a relational database on another platform usually requires a JDBC driver, only available with OSS. But what if you don't use Java or OSS? REST provides a totally language- and platform-agnostic way to access most modern relational databases, with all the simplicity and performance inherent to any REST solution.

Read the full article: <https://bit.ly/3wUrCev>



It's Migration Season!



TCM is a proud partner of the

HPE NonStop Migration Services Program

Speak to HPE or TCM today. Together we will ensure you are provided with all the support you need to complete your migration to NonStop NSX



HPE NONSTOP NEWS

**THERE WERE
ANNOUNCEMENTS
THICK AND FAST
AS PART OF THE
TECHNICAL BOOT CAMP
IN NOVEMBER 2020
AND THOSE PRODUCTS
ANNOUNCED HAVE NOW
STARTED TO SHIP**

NonStop X Next Generation

The Intel x86 and InfiniBand based L series HPE NonStop systems have been around since the summer of 2015. These systems use standard HPE storage, compute and networking building blocks and have seen X1 (Gen8 compute), X2 (Gen9 compute) and X3 (Gen10 compute) generations since the original introduction.

The X4 generation of NonStop X systems started shipping in February 2021. Although still using the L series operating system (minimum RVU L20.10) the latest HPE NonStop X systems have departed from being a bladed architecture and now use 1U rack mounted servers for each logical CPU. This are independent in terms of power, cooling and electrical isolation and represent a very granular module for serviceability. Although the HPE building blocks are still based upon Gen10 compute technology, the use of the latest Cascade Lake Intel x86 processors mitigates some of the

Intel vulnerabilities in silicon, reducing the potential performance impact of enabling mitigation. In addition the bandwidth of the InfiniBand interconnect has been increased from 56Gbs to 100Gbs with the X4 generation.

There are two offerings in the X4 generations of HPE NonStop X systems, the entry level NS4X4 and the high end NS8X4 servers.

The NS4X4 starts with two CPUs each with 64GB memory. Two IP CLIMs with five 1Gbs copper ports and two storage CLIMs with two 12G SAS enclosures come as standard as does 3 mirrored pairs of 400GB SSDs. An additional 2 CPUs, 2 IP CLIMs, two Storage CLIMs and SAS enclosures can be added to the base bundle. Additional storage can be chosen from 400GB SSDs or 300K rpm HDDs in any mix. NS4X4 comes with core licensing meaning with a suitable license key the hardware can be run as single of dual cores per CPU. Expand over IP interconnect with other nodes is supported.

Initially the NS8X4 can support two to eight CPUs each with 64GB, 128GB or 26GB memory. Up to 56 CLIMs can be attached to the NS8X4 with a minimum of two IP CLIM, two storage CLIMs and two 12G SAS enclosures.

IP CLIMs have four 10GbE and one 1GbE port and can have the 10GbE ports as all copper or all fibre. Disks can be all 400GB SSDs all 300GB 15K rpm HDDs or a mix. NS8X4 comes with core licensing meaning with a suitable license key the hardware can be run as dual, quad or six cores per CPU. In addition temporary “bursting for 2 to 4 cores or 4 to six cores per CPU can be achieved using the optional NSDC license. Initially Expand over IP interconnect with other nodes is supported. At a future date up to 16 CPUs per node and clustering nodes using Expand over InfiniBand will also be supported.

LTO Tape Drives

HPE is pleased to announce availability of the new tape drives based on Linear Tape-Open (LTO)-7 and LTO-8 technologies for L and J series systems. Drives include an LTO-7 or LTO-8 table top SAS manual single cartridge drive and an LTO-7 or LTO-8 ACL (automated cartridge loader) rack mounted fibre channel drive. LTO-7 tape drives are read and write compatible with LTO-6 Ultrium media and read compatible with LTO-5 Ultrium media. LTO-8 tape drives are read and write compatible with LTO-7 Ultrium media.



Hewlett Packard
Enterprise

HPE NONSTOP NEWS

NonStop SQL Cloud Edition

This is a software bundle that brings the agility of a public cloud experience to on premise for database. NS SQL Cloud Edition abstracts clustering and distributed SQL reducing complexity and cost whilst supporting the highest levels of scalability availability and data integrity out of the box. The database is multi-tenant with rapid and simple deployment through database services. The bundle has parallelism, compatibility features such as procedural language, workload analytics and advanced secure management making this ideal for cloud native or Linux applications as well as for NonStop. The bundle includes the latest versions of SQL/MX as well as SQLXpress database management and NonStop Database Analyzer. NS SQL Cloud Edition can be deployed on a converged or virtual system to suit requirements.

NonStop X Development Tools

NonStop **C++11** now supports the Thread Local Storage (TLS) feature.

Native inspect is enhanced to display the addresses and values of the multiple instances of TLS variables. Memory leak detection/ debugging functionality now scans all the thread stacks of a multi-threaded program. Stack traces for Java applications can now be displayed by Native Inspect.

From L20.10, the **TNS/X cross compilers** also support SSH key and SSL certificate based authentication mechanisms to establish secure communication with the NonStop host.

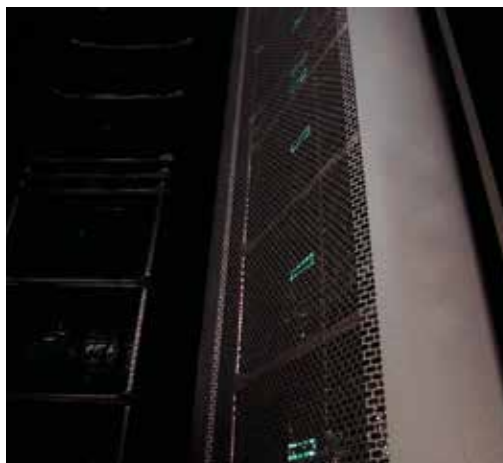
The **Code Coverage** tool on Windows has also been enhanced to use the SSH key based password-less authentication mechanism while transferring source files between the remote NonStop host and the Windows PC.

HPE **NSDEE** (NonStop Development Environment for Eclipse) 10.0 is now available for HPE Virtualized NonStop, Virtualized Converged NonStop, NonStop X and NonStop i Systems. SDEE 10.0 is a plug-in to Eclipse 2020-03 (4.15) and is shipped with C/C++ Development Tooling 9.11 (CDT 9.11) and Xtext 2.21.0. New COBOL directives SETTOG, RESETTOG, IF and IFNOT have been added to the COBOL Editor++. TS/MP Serverclass debugging now supports memory debugging and heap analysis. A warning is raised about changes to Serverclass parameter values when

the debug is launched and the Serverclass program is restarted. Values are reset to the original when the debug completes. Event breakpoints are now supported in NSDEE. With this all NonStop supported breakpoints are now available to be set from NSDEE debugging window. The debug view has been enhanced to display the process ids of both the application under test as well as the debugger's own id. This will help the user to directly interact/work with the processes running on the remote NonStop host.

Product Lifecycle Updates

The HPE NonStop eServices Portal has new Software Product Maintenance List (SPML) and Hardware Product Maintenance List (HPML) available dated January 2021 and February 2021 respectively in the lifecycle section. It is important to not just look at the high level system type dates in the HPML but look at individual component inventory within each system since NonStop servers often have had partial upgrades (disks, CLIMs or CPUs) during their deployment life. The top level date in the HPML is based upon new systems with latest components built from the HPE factory and may not capture all the potential components end of support dates which could impact service contracts. An example from the J series family might be an original NB5000c system with G5 CLIMs and C7000 R1 chassis that had Gen8 CLIMs and SSDs added later and then the Bladed CPUs upgraded from NB5000c to NB5600c. Looking at the top level HPML dates for NB5600c does not give a true picture of when components go out of support.



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