



**Hewlett Packard  
Enterprise**

# Protecting and Modernizing HPE NonStop Backup Data and Applications

**Mike Mitsch**  
**Director, Global Business Development**  
**Storage and Management Products**  
**ETI-NET**

May 13, 2025  
Berkley Heights, NJ



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For HPE Partners And HPE CUSTOMERS ONLY

# Forward-looking statements

This is a rolling (*up to one year*) Roadmap and is subject to change without notice

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This document contains forward looking statements regarding future operations, product development, product capabilities and availability dates. This information is subject to substantial uncertainties and is subject to change at any time without prior notification. Statements contained in this document concerning these matters only reflect ETI-NET and Hewlett Packard Enterprise's predictions and / or expectations as of the date of this document and actual results and future plans of Hewlett Packard Enterprise may differ significantly as a result of, among other things, changes in product strategy resulting from technological, internal corporate, market and other changes. This is not a commitment to deliver any material, code or functionality and should not be relied upon in making purchasing decisions.

# ETI-NET Agenda

**ETI-NET Company Update**

**Roadmap: Past Year & Future Product and Technology Partner Updates (2024-2025)**

**Digital Resilience (Ransomware) : HPE Alignment, 3-2-1-X (Immutable) & Support Updates**

**Data Protection VTC: HPE BackBox, Bare Metal Recovery, and New VTC R6 Advanced Features**

**NonStop Management Software: Sentinel, MultiBatch and C-Deep**

**Wrap Up**

# ETI-NET

## ■ Celebrating 35+ years!

-  PartnerOne & **Founder** Operated
- >1K Global Deployments

## ■ Mission Critical Solutions for HPE NonStop

- Backup, Data Protection, Migration & Compliance
- NonStop System & Financial Transaction Monitoring
- Batch & Schedule Optimization, Support & IBM Messaging
- Digital Resilience **Scope of Work (SOW)**
- Pro-Partner Strategy

## ■ HPE Partner

- Catalog
- Service Delivery



# ETI-NET Product & Partnership Roadmap

Calendar Year 2024 & 2025



BackBox/QS
Sentinel
MultiBatch
C-Deep
MQGate
Partnerships

# HPE Digital Resilience Solutions

**ETINET**

## Identify Assets:

- NonStop Tape Catalogs (CatSync)
- BackBox Data Volumes/Locations
  - Data Tiering
- Immutability & Versions

## IDENTIFY

Understand the environment

## PROTECT

Implement safeguards and controls

## Protection:

- Data Encryption @ Rest & In-Transit
- Replication between VTCs (3-2-1) from the VTC
- Compliance & Governance Immutability Locking
- \$SYSTEM Snapshot
- User Role Separation

## DETECT

Discover Cyber Events

## Detection:

- XYPRO VTC Appliance Scans
- QoreStor Anomalies\*

## Recovery:

- BareMetal \$SYSTEM Recovery
- CatSync DSM/TC Restoration
- Alternate Location Restoration

## RECOVER

Maintain resilience and business continuity

## RESPOND

Actions and resources to deal with the event

## Response:

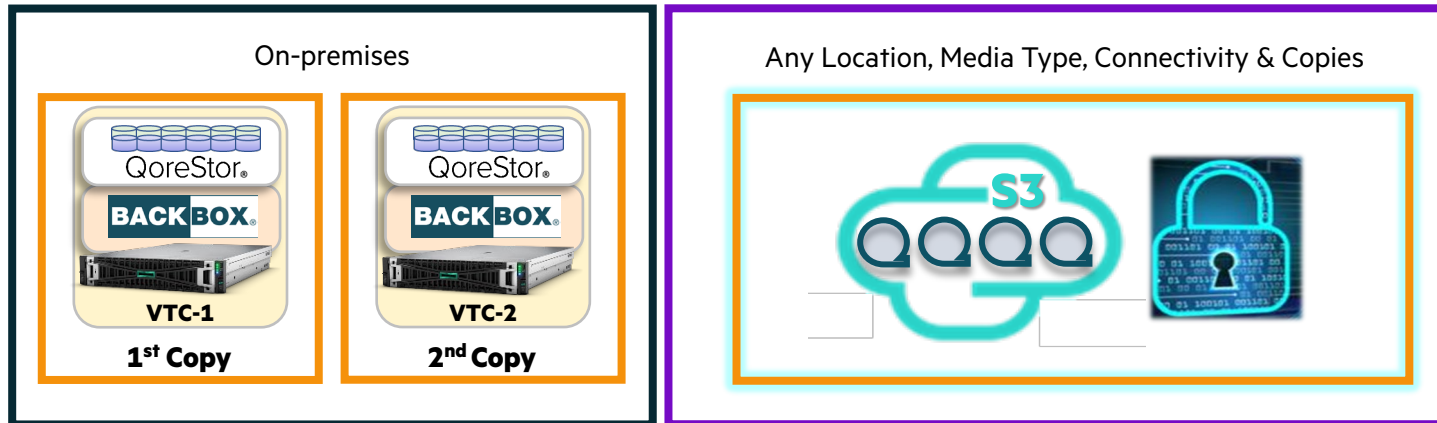
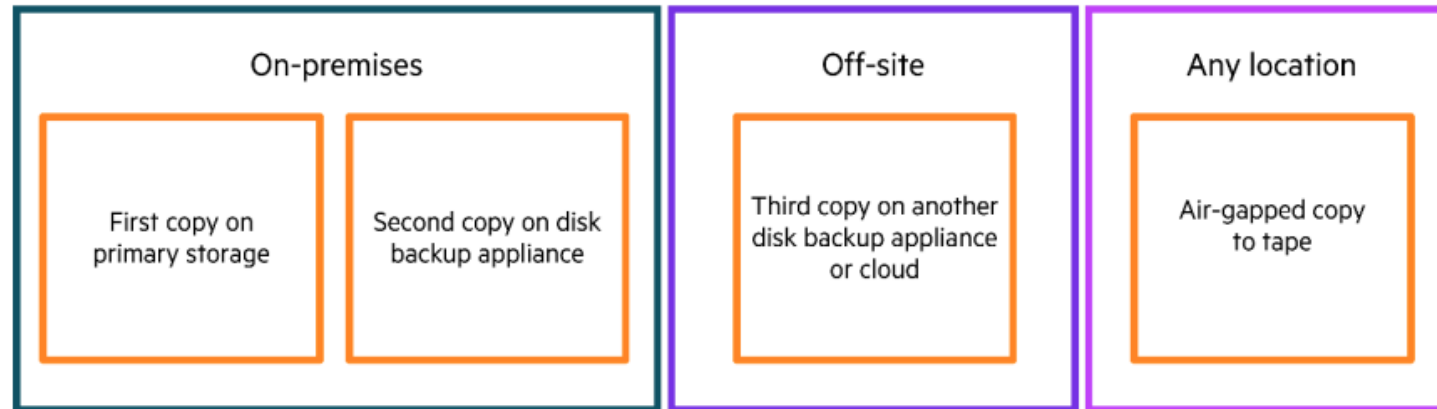
- CatSync (DSMTC/BB Volume)
- Version Metadata
- EMS Event Actions
- Cloud Reader / Forensics / Location
- QoreStor Anomaly Data

QoreStor Anomalies\* New w/5.0 Release

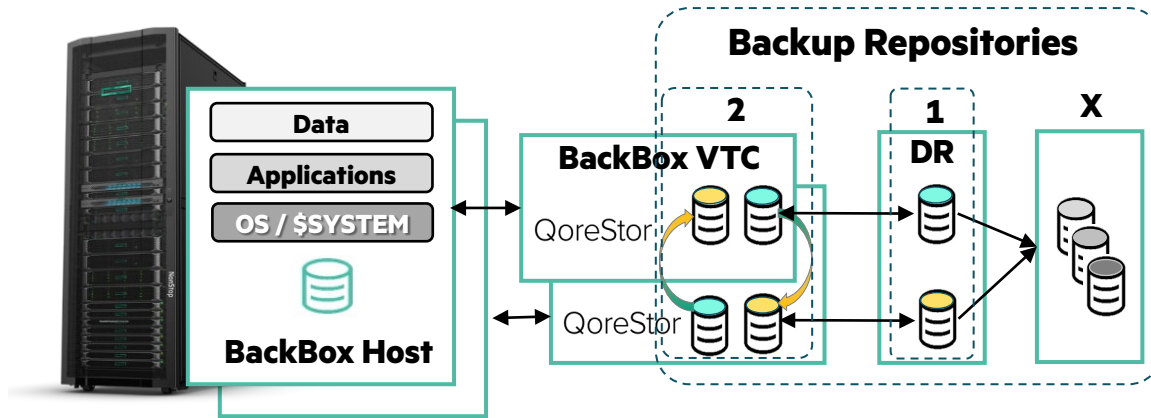
# HPE & ETI-NET 3-2-1-1(x) Data Protection Modernization & Immutability

## Shared Data Protection Strategy

3-2-1-1 best practice: **Three** copies of data, **two** copies on **two** different types of media, **one** copy off-site



# BackBox 3-2-1-X<sup>2</sup> Immutability Definitions



- Minimum of 3 Copies
- 2 Media as Primary Backup
- 3<sup>rd</sup> + Copy for Offsite
- X = Level of Immutability

	<b>3<sup>1</sup></b>		
	<b>1<sup>st</sup> Copy</b>	<b>2<sup>nd</sup> Copy</b>	<b>3<sup>rd</sup> Copy</b>
<b>Reason</b>	Primary Backup Media Failure		Physical
<b>Storage Connection</b>	To NonStop		To Secondary Storage
<b>NonStop DSM/TC</b>	Yes – NonStop Aware		

<sup>1</sup><https://www.techtarget.com/searchdatabackup/definition/3-2-1-Backup-Strategy>

<sup>2</sup>ETI-NET Definition based on <sup>4</sup>Immutability Factors

<sup>3</sup> Immutability implemented by Storage Vendor using “Compliance Lock” Certification



# S3 Storage Validation & Support

## Supported Cloud Tier providers

ETI-NET and HPE test and qualify specific S3 providers to ensure optimal interoperability, security, and support.

### ■ Interoperability

- Supports VTC setup
- Stable connectivity

### ■ Security

- Object Locking: Governance & Compliance Modes
- Retention dates
- Separation of duty

### ■ Support

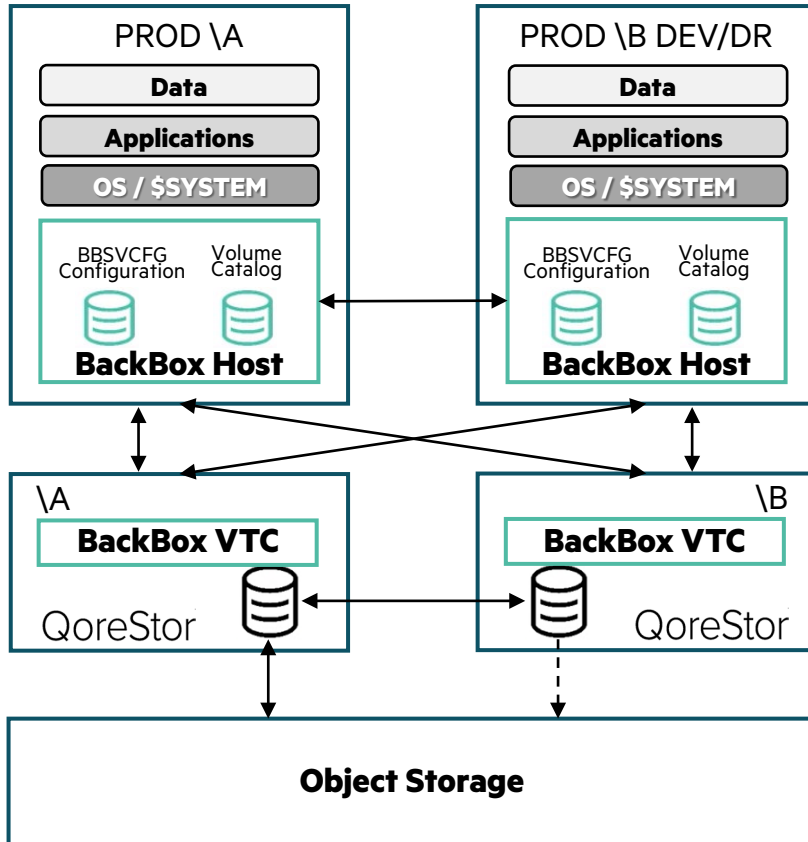
- Adherence to AWS S3 API specification
- On-going testing & issue escalation path

<https://etinet.com/products/backbox-dedupe-software/s3support/>



# HPE BackBox with QoreStor Benefits

## Control, Security, Performance and Savings (Deduplication)



### Control

- Direct access to storage within and across VTCs
- Visibility to backup storage & tier status from NonStop (EMS)
- Management and awareness of replication of data between VTCs
- Ability to choose which data is kept local and tiered to Object Storage

### Security

- Separation of Duty between Operations and Storage
- Deduplication Encryption at Rest & In-Transit
- Compliance Locking and Versioning of Backup Data
- Partner Collaboration: Gravic, Scality & XYPRO

### Performance

- Writing data to the VTC (not through)
- Keeping selected data to restore close to the NonStop

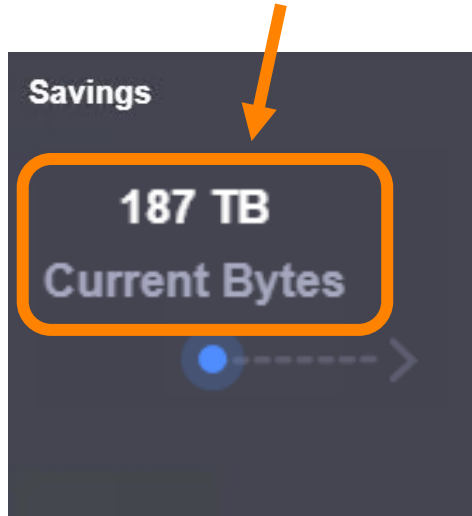
### Savings

- Less primary and secondary storage required (deduplication)
- Ability to tier data by 3x expansion to secondary storage at no charge
- Less data transferred (source and target deduplication)
- Infrastructure (Storage within and outside of the VTC)

# HPE VTC w/QoreStor Value Example:

Using the VTC Processing Power to **Reduce Storage & Data Transfer Amounts**

**NonStop  
Backup Data  
Written**

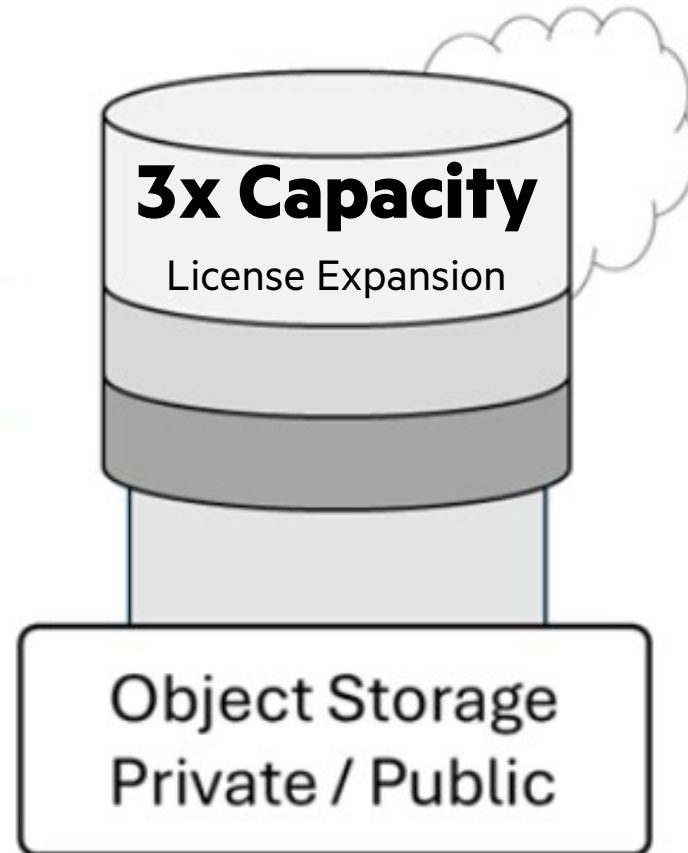
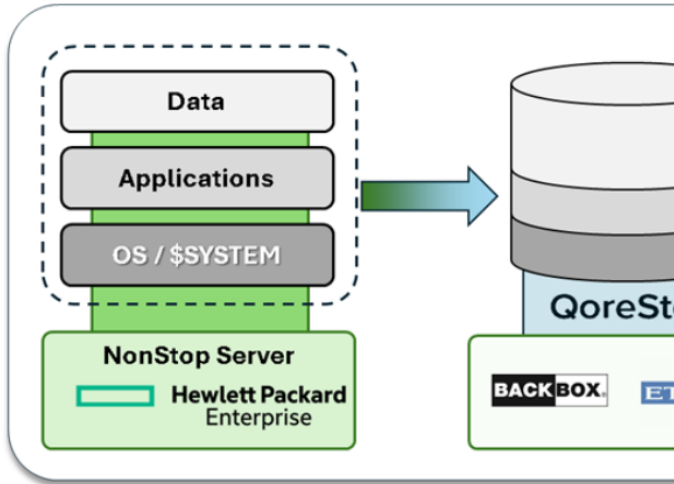


**Storage & Data  
Transfer Savings**

**Actual NonStop  
Backup Data  
Consumed on  
VTC**

# HPE BackBox QoreStor Data Storage Tiering

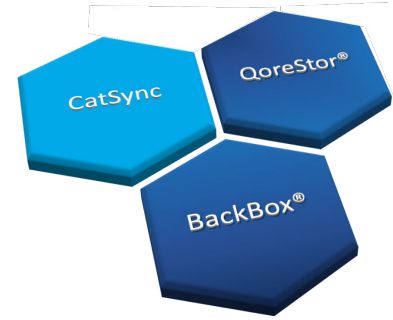
## The Importance of Integrating Storage Tiering into your HPE NonStop Backup Strategy



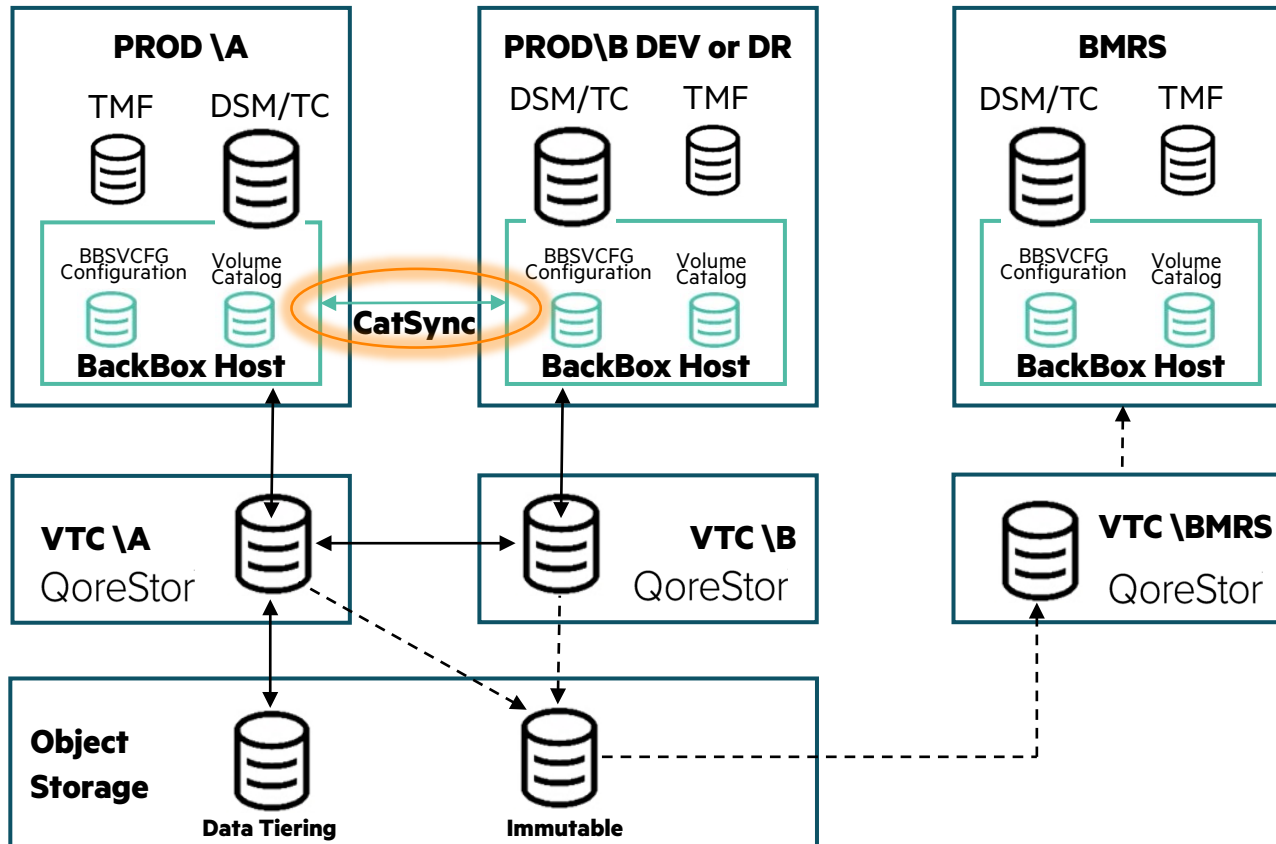
### Advantages

- Data Protection (3<sup>rd</sup> + Copy)
- Only deduplicated and encrypted NonStop data is tiered
- Data Expansion (3x base license)
- Simplifies Data Migration
- Cloud Reader (restoration)

# HPE BackBox w/QoreStor for Bare Metal Recovery (BMRS)



Supporting various RPO, RTO Recovery Requirements (BMRS)



## ■ BackBox & QoreStor

- Management over **external Object Storage** for **data tiering**

## ■ BackBox Object Storage

- Management over **external Object Storage** for **Immutability**

## ■ CatSync (DSM/TC & BackBox)

- Synchronization
- Backup restoration for BMRS system

# New HPE BackBox VTC R6 with “Advanced License” (equivalent to R5)



## Announcing the general availability of BackBox VTC R6 with the Advanced license

**To:** HPE NonStop Personnel Worldwide

**From:** Ozen Ercevik, HPE NonStop Product Management

**Date:** February 2025

**Security Level:** HPE Unrestricted: This information is for HPE customers, partners, and employee use

HPE is pleased to announce the general availability of BackBox Virtual Tape Controller (VTC) R6 with the BackBox Advanced license for HPE NonStop systems. This model is built on the HPE ProLiant DL380 Gen11 server and runs Microsoft Windows Server 2022, along with BackBox Software. The Advanced license offers capabilities equivalent to BackBox VTC R5.

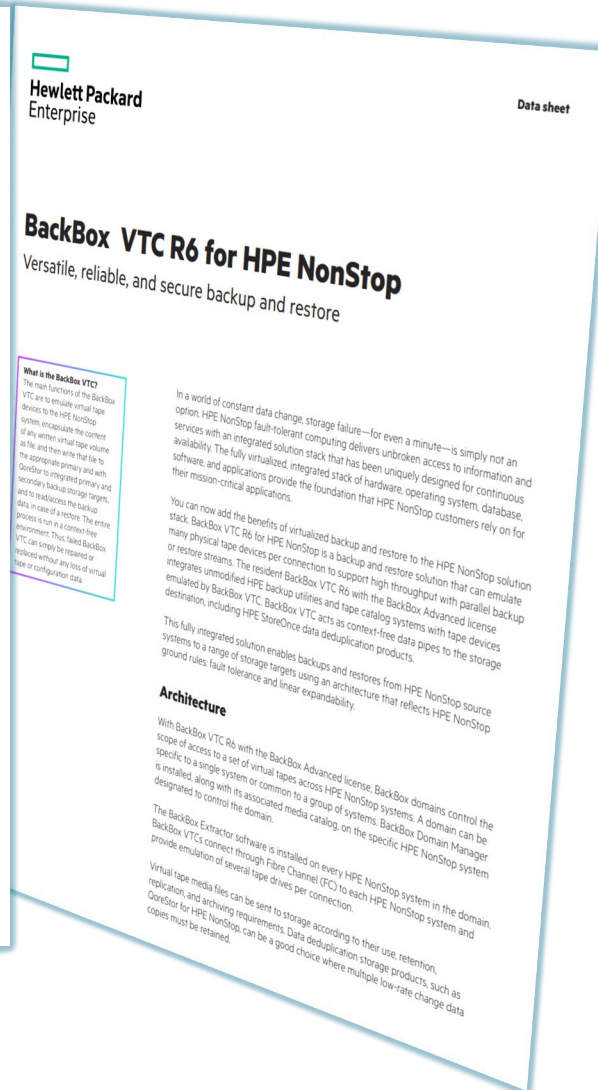
For more information on BackBox VTC R6, please refer to [the data sheet](#).

Questions regarding this announcement may be directed to Ozen Ercevik at [ozen.ercevik@hpe.com](mailto:ozen.ercevik@hpe.com).

Regards,

*Ozen Ercevik*

Ozen Ercevik  
Senior Product Manager



## New H5.0 Software Features

### QoreStor (T1137)

- Anomaly Detection
- Expanded Data Tiering
- Enhanced Backup **Data Migration** flexibility & options (available as a professional service)



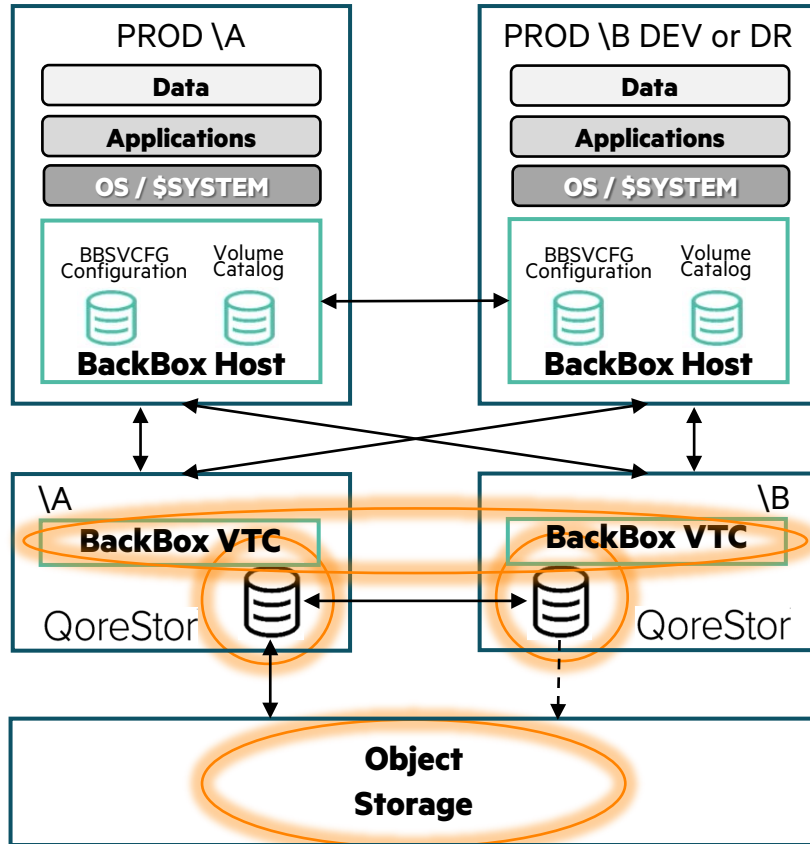
# New HPE BackBox VTC R6 License Options

Feature	BackBox Essentials license	BackBox Advanced license
NonStop system connectivity	Up to two NonStop systems	Up to six NonStop systems
Number of domains	One BackBox domain	Each NonStop system can be a domain
Max number of units configured as peers	Two VTC R6	No limitation
DSM/TC catalog synchronization	Not supported	Supported
QoreStor	Not supported	Supported
External storage (Dedup, NAS, SAN)	Not supported	Supported
Encryption with VLE	Not supported	Supported
License upgrade/downgrade	Upgrade to the Advanced licensing supported	Downgrade to the Essentials licensing <u>not supported</u>
Internal storage ( <b>Raw</b> ) for customer data	24TB (fixed)	24TB, 48TB, 80TB, 160TB
Physical tape connectivity	FC and SAS tape drives	FC and SAS tape drives
Number of Ethernet ports	Min: 2/ Max: 2	Min: 2/ Max: 6

# HPE BackBox H5.0 QoreStor Enhancement: Anomaly Detection



## Advanced AI Ransomware Detection Functionality in QoreStor 7.4



- System-level log in authentication failures/anomalies
- OS Audit process stopped/paused logging audit files
- Excessive IO operations executed local and remote storage
- Excessive wait time of local and remote storage

Filter Anomalies By

System Anomalies: OS Auth x UI Auth x Protocol Auth x Load Average x Disk IO x

Storage Group: All Storage Groups

Container: All Containers

Date Range: 2/14/2025, 3:17 PM ~ 2/21/2025, 3:17 PM

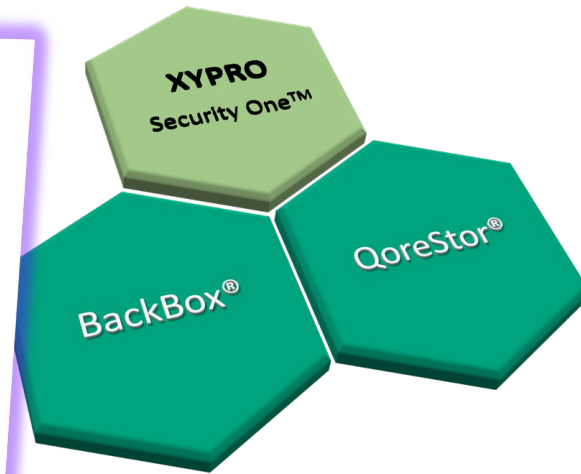
Apply Reset CSV

Anomaly Type	Anomaly Date Range	Container	Storage Group	Anomaly Information
Delete	2025-02-17 00:38:17 - 2025-02-17 01:08:17	CDPBackups	N/A	Bytes Deleted: 149.92 GiB Files Deleted: 488
Delete	2025-02-16 20:38:12 - 2025-02-16 21:08:12	CDPBackups	N/A	Bytes Deleted: 14.41 TiB Files Deleted: 288
Overwrite	2025-02-16 20:08:11 - 2025-02-16 20:38:11	CDPBackups	N/A	Bytes Overwritten: 954.31 MiB
Ingest	2025-02-16 20:08:11 - 2025-02-16 20:38:11	CDPBackups	N/A	Bytes ingested: 264.67 GiB Savings(%): 98 Description: Unexpected ingested bytes or



# PARTNERSHIP: XYPRO VTC Scanning

## Protecting NonStop Backup System & Data as part of the SECURITYONE Estate.



**XYPRO** DASHBOARD ASSETS MONITORS INCIDENTS **APPLIANCE SENTRY** COMPLIANCE ACTIVITIES

**NONSTOP SERVER**  
VCGNAC2  
VDEMO  
V GALAXY  
**CONSOLE**  
VTCGEN10  
VTRGEN10

### NonStop Appliances

CLIM Console

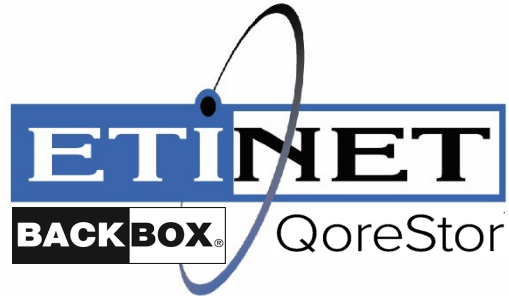
**VTCGEN10**  
Microsoft Windows Server 2019 Standard

Last Scan: 2023-12-06 00:44:56.503 UTC

Console	Logons	Firewall	Firewall Rules	Antivirus	Windows Updates
Online <a href="#">Show Details</a>	(last 7 days) 2 Failed   1429 Successful	Enabled Domain Enabled Private Enabled Public	209 Inbound   155 Outbound	Enabled Updated 2023-12-04 06:46:55.000 UTC	Enabled, Manual 4 Missing   15 Installed

# NEW: ETI-NET & Gravic Collaboration

## Bring NonStop Backup Immutability to Shadowbase



*"ETI-NET is proud to partner with Gravic to enhance BackBox support for Shadowbase. This collaboration provides NonStop clients with a standardized, fully supported solution to meet immutability compliance requirements more effectively."*

Benoit Charon, COO of ETI-NET



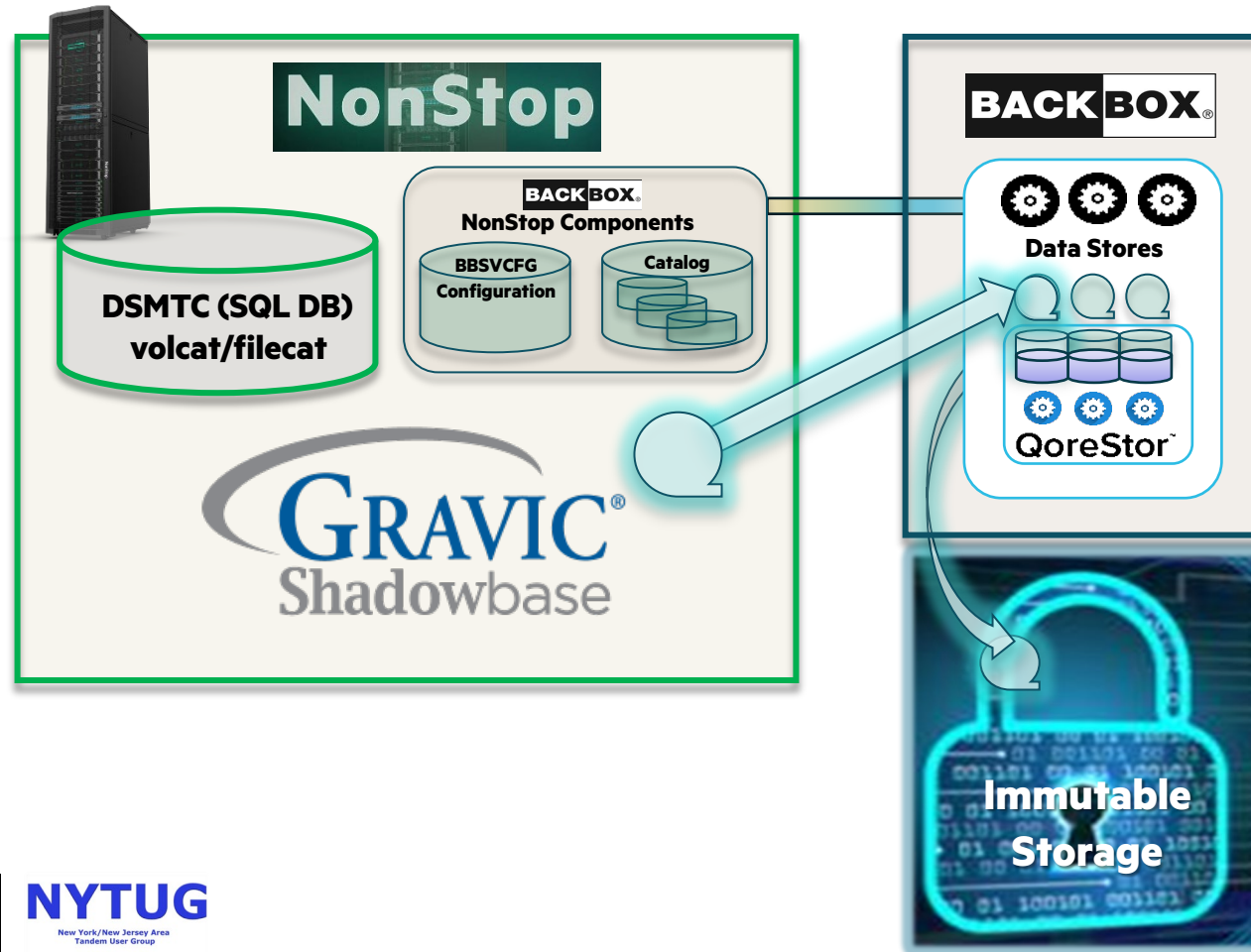
*"The Gravic Shadowbase Product Group is excited to collaborate with ETI-NET on this crucial innovation. Immutable storage is a cornerstone of any robust digital resilience strategy, and ETI-NET's BackBox and QoreStor have set the standard for secure data tiering and immutability,"*

Paul J. Holenstein, Chief Technologist  
Gravic

# Partnership: Immutability for



**Enabling NonStop Clients to backup Shadowbase logs to Immutable Storage to meet audit requirements and close the RPO with confidence.**



# BackBox Software Update Resource & Consultation



BackBox<sup>®</sup> Security

Abstract  
This Security Implementation

Published: June 2024

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# Sentinel & C-Deep NonStop System and Financial Monitoring



Data sheet

## Sentinel for HPE NonStop

World-class system monitoring for mission-critical operations

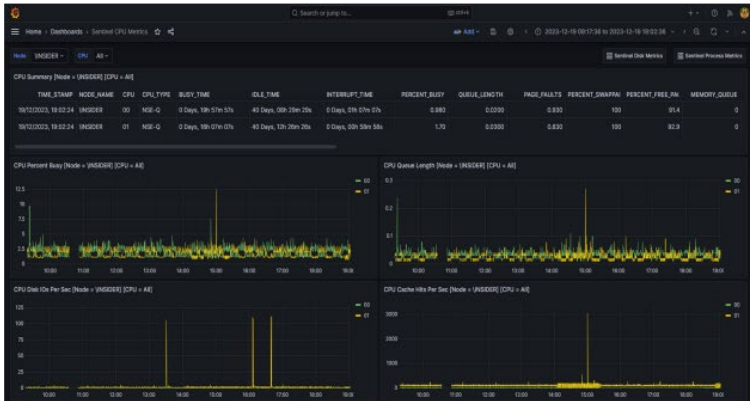


### What is Sentinel?


Sentinel for HPE NonStop is dynamic operations and service management software for HPE NonStop systems.

It is built on a highly advanced object-based architecture and monitors systems, networks, hardware, subsystems, processes, files, events and even third-party applications. Sentinel's unique design lies in its ability to pull massive active data into a single set of screen objects, providing the means to diagnose a problem in more detail, and in real-time, via context-sensitive drill-down screens.

Sentinel Data Storage (SDS) stores historical metrics including CPU, processes, and disk metrics, which operators can call upon via the Grafana powered dashboards and deliver by exporting to CSV format and through customized reports. CPU metrics can be polled up to every 5 seconds, enabling users to continuously improve digital resilience.



**Figure 1.** Sentinel Data Storage polling historic CPU information.



Data sheet

## C-Deep for HPE NonStop

Real-time transaction monitoring and querying

### What is C-Deep?

C-Deep for HPE NonStop enables payment processors to get instant information on any transaction processed through a payment switch on HPE NonStop—past or present. It's a powerful stand-alone transaction monitoring product or a high-performance add-on to your current BASE24™ solution. It stores and instantly queries historic transactions for 10 years and beyond to help ensure regulatory compliance. A highly configurable alerting engine delivers concise charts, bringing clarity to your data flow. C-Deep gives instant and full visibility into all fields of data and provides an unmatched advantage to understand trends, predict patterns, help ensure [fault tolerance](#), and avoid outages.

### C-Deep for HPE NonStop provides real-time monitoring and comprehensive querying of the transaction flow information created by primary payment engines. As C-Deep is hosted on a Windows Server, there is minimal impact on your HPE NonStop performance.

C-Deep provides a real-time solution to help visualize, monitor, and query your payment transactions. Products such as BASE24 from ACI provide its users with a range of facilities that allow the customers and account holders of a financial institution to submit card-based transactions from an ATM or POS terminal. The BASE24 application can route these transactions to other members of the ATM/POS service provider community, provide authorization for funds for its customers, and link them into payment systems for accounting purposes.

### C-Deep architecture

C-Deep reads transaction data from the HPE NonStop based Transaction Log File/POS Transaction Log File (TLF/PTLF). The HPE NonStop extraction clients pass this data to the C-Deep collector on the Windows Server. All data processing and analysis takes place on the Windows Server to minimize resource usage on the HPE NonStop.

Processed transaction data is stored in a SQL Server database for a configurable period to allow querying and reporting. The database also supports the following capabilities:

- Complex, rule-based analysis over multiple rows, columns, or systems—with the option to send alerts to multiple channels and user levels
- Graphical representation for real-time metrics and alerts, with drilldowns and root-cause analysis feature—Known as C-Deep Console and accessible via a browser
- Wealth of intraday or longer-term management reporting using standard SQL reporting tools such as Microsoft SQL Reporting Services. The product has built-in standard reports, but users can also customize using the Open Database Connectivity (ODBC) application

# HPE Sentinel



Feature Rich and **Affordable** NonStop Operations & Service Management

- Enhanced management of HPE BackBox & QoreStor
- Comprehensive: Files, Events and **3rd Party Applications**
- Multiple Geographically dispersed NonStop Systems, Networks, Hardware and Subsystems
- NonStop Metrics Sentinel Data Storage (SDS)
- Grafana time-based analytics history GUI

*"Sentinel enables our clients to react faster, to streamline NonStop operations, and avoid potential deadlock situations."*

Max Yang Executive Director & Allen Wang Engineering Director



# HPE Sentinel Monitoring w/BackBox & QoreStor

Network Monitor

NODE

MONTREAL

UK

Status Monitor -

BAT

\$BMON

MULTIBATCH

NETBATCH

CPU

CPU EVENT

CPUS

APP

BACKBOX

\\INSIDX.\$SLIVE

Group Monitor - MONTREAL BACKBOX

BACKBOX

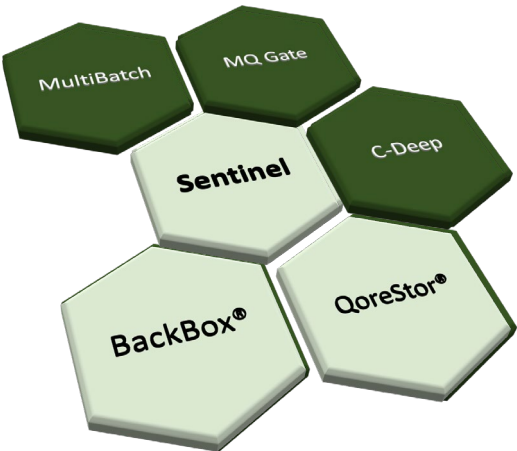
ALERTS

DOWN EVENTS

WARNING EVENTS

PROCESS

\$BBEXT



Object History - \\INSIDX

Object History - \\INSIDX - DOWN EVENTS

Log Entry Details

Timestamp : 09/07/2023 at 13:57:21

Node : \\INSIDX

Object : DOWN EVENTS

SSID : ETINET.100.100

Event No. : 3162

State : Down

Message Text

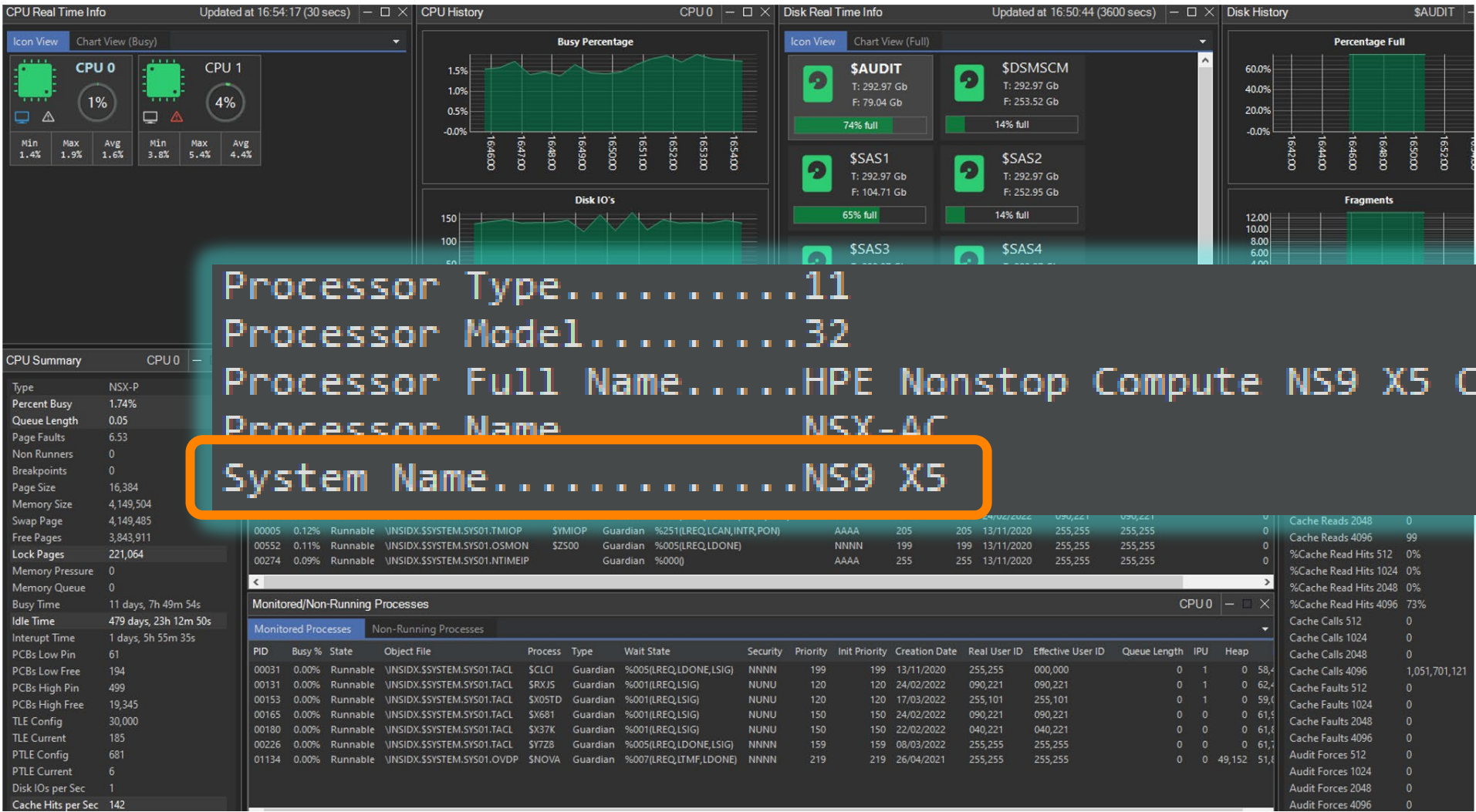
ETISSLT-W3162 Domain license will expire on 2023-09-08.

Log History

Timestamp	Node	Object	Owner	Value	Version	Number	State	Message
09/07/2023 13:12:24	\\INSIDX	DOWN EVENTS	ETINET	100	100	3162	Down	NGH412-W3162 Domain license will expire on 2023-09-20.
09/07/2023 13:16:56	\\INSIDX	DOWN EVENTS	ETINET	100	100	3162	Down	ETISSLT-W3162 Domain license will expire on 2023-09-08.
09/07/2023 13:22:59	\\INSIDX	DOWN EVENTS	ETINET	100	100	3162	Down	NGH412-W3162 Domain license will expire on 2023-09-20.
09/07/2023 13:27:02	\\INSIDX	DOWN EVENTS	ETINET	100	100	3162	Down	ETISSLT-W3162 Domain license will expire on 2023-09-08.
09/07/2023 13:33:34	\\INSIDX	DOWN EVENTS	ETINET	100	100	3162	Down	NGH412-W3162 Domain license will expire on 2023-09-20.
09/07/2023 13:37:08	\\INSIDX	DOWN EVENTS	ETINET	100	100	3162	Down	ETISSLT-W3162 Domain license will expire on 2023-09-08.



# HPE Sentinel Dashboard (Real-time)





# Sentinel Historical Analytics

File

View

Configuration

Help

Pathw

CPU

Disk

Real Time Info

Updated at 15:50:39 (5 secs)

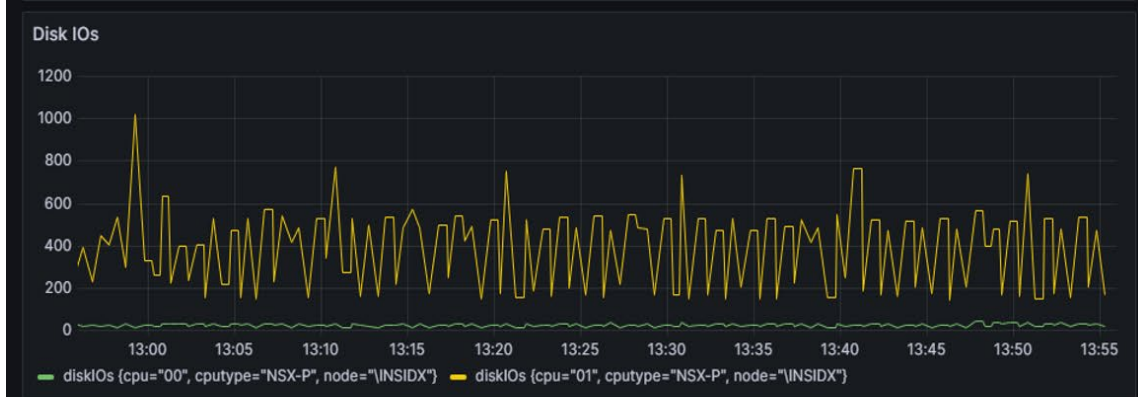
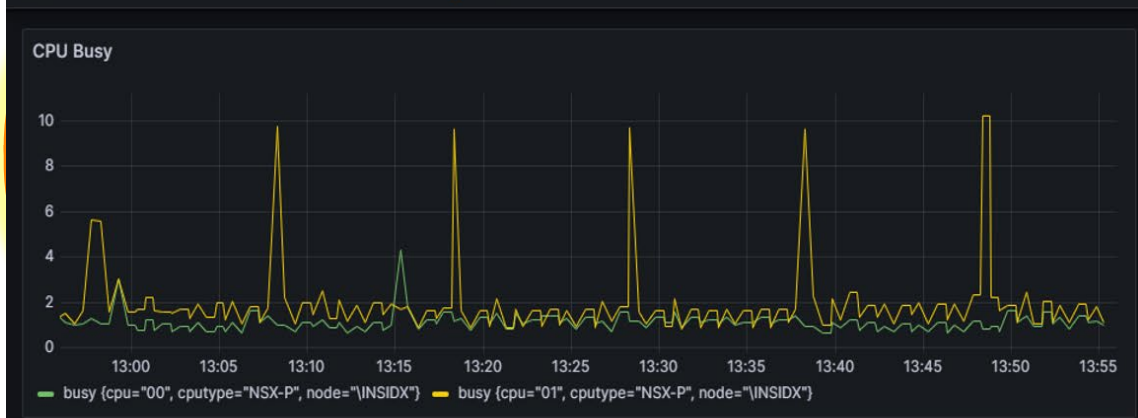
— □ ×

Q Search or jump to...

Home > Dashboards > Sentinel Dashboard

★

🔗



Yesterday 1m

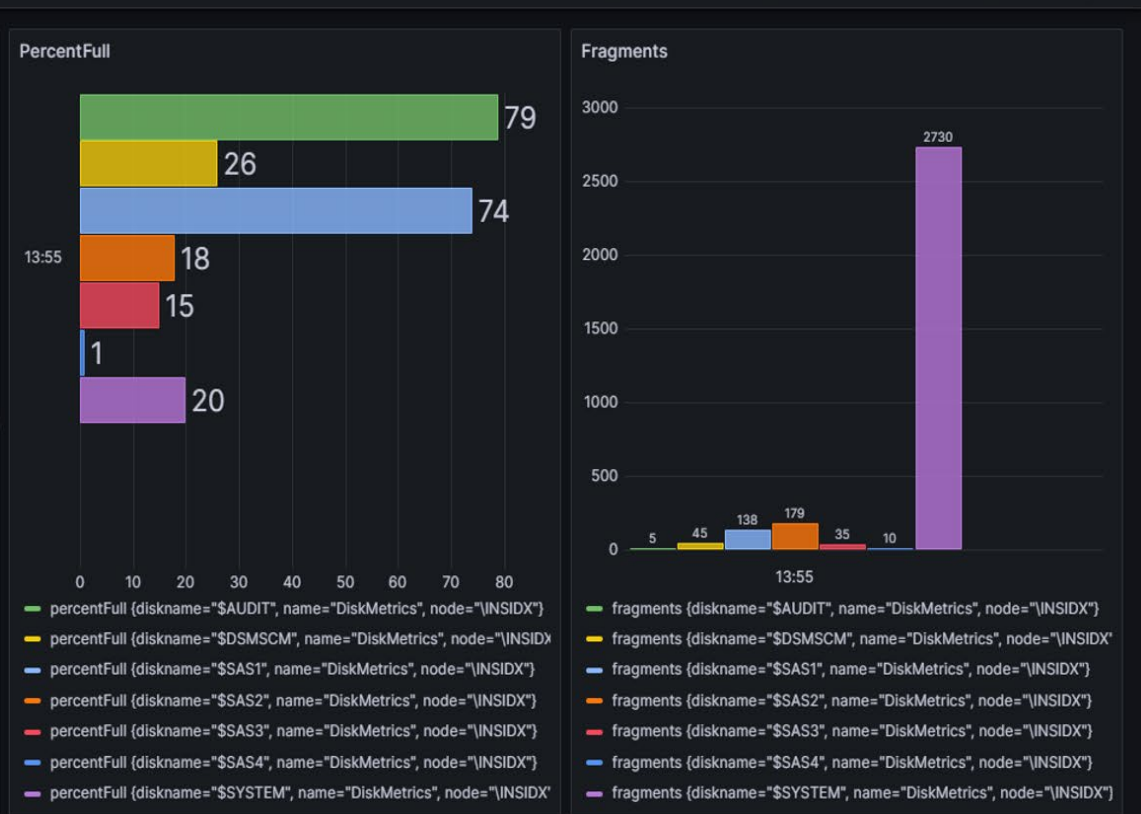
Non-R

2024-05-12 00:00:00 to 2024-05-12 23:59:59

Local browser time

Process Snapshot

Add Last 1 hour 5m



# Sentinel Real-time & Historical Analytics



# C-Deep for HPE NonStop

Powerful transaction flow monitoring tool allowing query of every field and token created by primary payment engines.

- Built for payment processors operating POS | ATM environments.
- Operators get immediate information on delays in their payment infrastructure.
- Monitoring transactions by:
  - Volume
  - Card Type
  - Retailer
  - Response Code
  - Station Group
- Customized rules can be applied against **any and multiple data sources** to alert to payment vulnerabilities *to get ahead of the local regulator* and proactively inform of any outages affecting customers.



# Hewlett Packard Enterprise



## MultiBatch



Data sheet



## MultiBatch from ETI-NET

Digital Resilience and Modernization for  
HPE NonStop Workload Scheduling

Fully utilize and protect your HPE NonStop investment. MultiBatch provides comprehensive, streamlined, and effective user role management of your mission critical processing. MultiBatch can schedule anything from a regular file transfer through automating a site swap to controlling a complex multi-node batch run.

### What is MultiBatch?

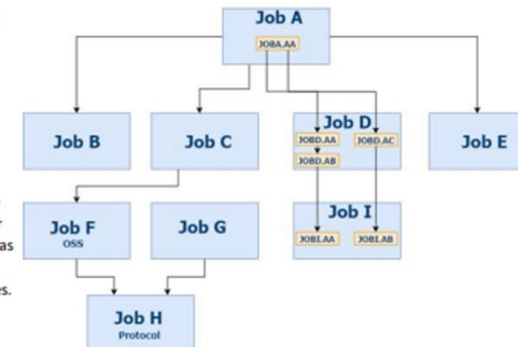
MultiBatch is a workload automation manager designed specifically for HPE NonStop, making best use of the fault tolerance and scalability features. It delivers best-in-class functionality for the demanding workload requirements of mission-critical systems by combining high-performance and parallel processing with enhanced operational control across your HPE NonStop nodes from a single interface.

In a world of continuous availability, protecting and streamlining HPE NonStop workload scheduling is paramount to maintaining continuous availability.

The MultiBatch Security System provides an integrated environment within which users, System Managers, Support personnel and System Operators can configure a multi-node and multi-schedule environment based on specified rights. MultiBatch provides the ability to model jobs and schedules so that they can be pre-configured, cloned and then run on demand.

Key programs run as process pairs and the schedule status is written to a TMF audited file as it progresses. The audit file can be replicated to another site where disaster recovery (DR) can be achieved with just a few commands.

MultiBatch configures and controls both Guardian and OSS processes. The deep functionality is equally applicable to both, with specific job setup screens provided for input of the parameters that apply to either operating environment. Key programs run as process pairs and the schedule status is written to a TMF audited file as it progresses. The audit file can be replicated to another site where disaster recovery (DR) can be achieved with just a few commands.






# MultiBatch




## Modernized, Compliant and Supported NonStop Batch Management

- Digital Resiliency
  - Separation of Admin & Operational Roles
  - Coordination of Guardian & OSS
  - Restoration & Backup Schedule Security & Reporting
- Modernization
  - Graphical User Interfaces
  - Advanced Schedule Optimization
  - Simulation
  - Supported Roadmap



Data sheet



### MultiBatch from ETI-NET

Digital Resilience and Modernization for HPE NonStop Workload Scheduling

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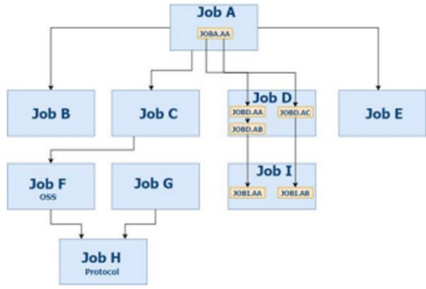
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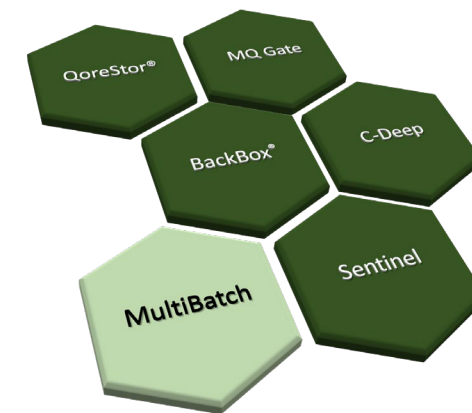
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# HPE MultiBatch SDI Migration Template



**4.1 HPE PROFESSIONAL SERVICES**

HPE will deliver ETI-NET MultiBatch software to FNBO. HPE will also assess and document NetBatch jobs, install ETI-NET MultiBatch, migrate NetBatch jobs on the NonStop Development system, test and remediate any issues, and promote environment to Production and DR in support of modernization of NonStop Batch processing.

**Schedule**

Step	Activity Description
1.	<b>NetBatch Job Assessment and Prioritize 50 MultiBatch Jobs for Development</b> Upon receipt of the complete NetBatch schedule, ETI-NET will engage with staff to prioritize top 50 NetBatch jobs. Job dependencies and calendars for migration. The NetBatch jobs will be recreated in an ETI-NET MultiBatch environment for simulation testing to verify operation. This assessment will enable ETI-NET to provide a detailed specification to deliver up to 50 x NetBatch jobs in MultiBatch. <b>A.) Deliverable: ETI-NET MultiBatch Specification of 50 NetBatch Jobs</b> Note: 20 Days have been assigned for this task. Based on the number of NetBatch jobs, scope can be adjusted through the change management process.
2.	<b>MultiBatch Installation and Job Scheduling on DR system</b> Install MultiBatch software on the NonStop NSX4 DR system with 2 Cores, 4 CPUs. Test and verify successful installation system and running of the schedule. Using MultiBatch GUI, configure the promote Batch Jobs defined in step 1 and: a.) Recreate jobs and configure dependencies. b.) Schedule based on calendar and event triggers. c.) Perform comprehensive testing of jobs in accordance with the applicable job specification and secure approval from staff on operation. <b>B.) Deliverable: Configuration Document Report, Test Result Document, Demonstration, and Customer Approval form</b>
3.	<b>MultiBatch Installation and Job Scheduling on Production</b> Install MultiBatch software on the NonStop NSX4 Production system with 2 Cores, 4 CPUs. Test and verify successful installation system and running of the schedule. Using MultiBatch GUI, configure the promote Batch Jobs defined in step 1 and: a.) Recreate jobs and configure dependencies. b.) Schedule based on calendar and event triggers. c.) Perform comprehensive testing of jobs in accordance with the applicable job specification and secure approval from staff on operation. <b>C.) Deliverable: Configuration Document Report, Test Result Document, Demonstration, and Customer Approval form</b>
4.	<b>Train</b> Train staff how MultiBatch functions in the following areas: a.) Job Setup, Dependencies, workload administration b.) Troubleshooting c.) Operational Monitoring and Corrective Action d.) Disaster Recovery Failover <b>D.) Deliverable: ETI-NET MultiBatch Gold Standard Training Certificate</b>

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## ■ Schedule Assessment

- Optimization / Redundancy
- Landscape
- Schedule Prioritization

## ■ Installation & Simulation

- Development System
- Training

## ■ Production Migration

## ■ On-going Testing



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**Thank You!**

Mike Mitsch  
Global Business Development Director

