NonStop Transformation
Product Strategy and Portfolio
NonStop Product Management

April 2016
Forward-looking statements
This is a rolling (up to three year) Roadmap and is subject to change without notice.

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Agenda

• NonStop Hardware Transformation
  • Integrity NonStop X and Integrity NonStop i

• NonStop Software Transformation
  • Operating System
  • Security
  • Data Protection
  • System Manageability
  • Database
  • Middleware and Java
  • NonStop Development Environment
# HPE Integrity NonStop powers the world around you

Providing availability, scalability and performance for industries that never stop

## Financial Services
- $3.6+ trillion credit and debit card charge volume each year
- Multi-channel retail wholesale, and mobile payments processing
- 100% uptime for critical payment services

## Telco
- 450+ million advanced telco network subscribers
- Mobile network mgmt., HLR/HSS data services, and machine-to-machine
- 20% lower operating expense per year

## Retail
- Largest retail payments processors in the world
- Point-of-sale (POS) transactions and online order processing
- 15+ years of continuous availability

## Healthcare
- 300,000 weekly aggregated online lab test samples in Norway
- Real-time patient and laboratory data, and provider info retrieval
- 2-3x more performance with every generation

## Manufacturing
- Top 10 global manufacturers
- Continuous production control processing for multi-channel distribution
- 25 years without production outages

## Transportation
- Over 80,000 daily reservations for global car rental company
- Regional and global reservations, ticketing, and route scheduling
- 97% near-linear scalability for database growth

## Utilities
- 3 of the 4 gasoline acquiring networks in the U.S.
- Customer usage tracking, billing, and call center services
- 100% application availability

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**Hewlett Packard Enterprise**
HPE Integrity NonStop Hardware
Product line technical details
A new family of HPE Integrity NonStop systems
Transforming continuous availability and scalability for x86

100% NonStop

NonStop i
- Intel® Itanium® processor
- Proprietary interconnect
- Massive scalability
- Highest AL4 availability

NonStop X
- Intel® Xeon® processor
- Industry-standard InfiniBand interconnect

NonStop X: The only fully-integrated, fault-tolerant compute on x86
HPE Integrity NonStop X
The always on world now runs on x86

NS7 X1
(Top of the line)
- Intel® Xeon® E5-2600v2 series processors
- 4X FDR InfiniBand system interconnect
- 2, 4, 6 core upgradable options

NS3 X1
(Entry-class servers)
- Limited to 4 processor
- 4X FDR InfiniBand system interconnect
- 1, 2 core upgradable

Available
100% fault-tolerant architecture by design

Efficient
100% fully-virtualized integrated stack

Proven
40 years of continuous business reliability

Running POS for 6000 retail stores each day
- U.S. retailer, 2015

Banking software vendor in the U.S.
- U.S. banking software company, 2015

Up to 1.5x the performance of NB56000c

U.S. retailer, 2015
U.S. banking software company, 2015

Hewlett Packard Enterprise
# HPE Integrity NonStop systems

<table>
<thead>
<tr>
<th>Released in 2015</th>
<th>Future</th>
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</thead>
<tbody>
<tr>
<td><strong>NonStop X - Intel® Xeon®</strong></td>
<td><strong>NonStop X refresh</strong></td>
</tr>
<tr>
<td>NS7 X1</td>
<td>Carrier-grade</td>
</tr>
<tr>
<td>• 2, 4, or 6-core SW licensing</td>
<td>CPU refresh</td>
</tr>
<tr>
<td>NS3 X1 – entry class systems</td>
<td>I/O refresh</td>
</tr>
<tr>
<td>• 1 or 2-core SW licensing</td>
<td></td>
</tr>
<tr>
<td><strong>NonStop i refresh</strong></td>
<td><strong>NonStop i refresh</strong></td>
</tr>
<tr>
<td></td>
<td>I/O refresh</td>
</tr>
<tr>
<td></td>
<td>RoHS lead-free compliance</td>
</tr>
</tbody>
</table>
The NonStop fully integrated software stack

**APPLICATIONS**
- Modern application development environment
- Java and Middleware
- Database and transaction management
- Enterprise Data Protection
- System management and control
- Security
- NonStop Operating System

**HARDWARE**
NonStop fundamentals are designed into the OS from day one

Enable deployed solutions to leverage the NonStop fundamentals
Open industry standard platform services and APIs to enable easy development and application porting
Deliver OS support for new platforms, peripherals and configurations
Leverage advancements in the underlying hardware
Increase system flexibility
HPE NonStop Operating System product portfolio

NonStop OS fundamentals
Products that support fault tolerance, availability, data integrity and scalability

NonStop Operating System
I/O Services
File System
OS Services

NonStop OS environment
Products to interact with and operate the OS, OSS environment.

Guardian
Open System Services (OSS)

NonStop Open Source Utilities
Utilities and open source products now available on NonStop

GNU - make, patch, bash, tar, troff, gzip, findutils, diffutils, core utils, Grep, prngd, Vim editor, Xinetd, python, perl, php,
SAMBA
FLOSS
# HPE NonStop OS/OSS Product Plans

## L-Series OS
- Support for HPE Integrity NonStop X systems
- 2, 4 and 6-core CPUs for NS7 X1 systems enabled through core licensing
- 1 and 2 core CPUs for NS3 X1 systems enabled through core licensing

## YUMA (limited POC)
- IB Verb Layer API

## DP2 Enhancements
- 2GB Maximum SQL/MX Buffer size
- Cache size increased from 1 GB to 1.4 GB

## TimeSync
- Automatic clock rate adjustment
- Correction for leap second

## YUMA (General Availability)
- Full verb layer API
- rsockets

## NonStop OS
- API return of OSS-related security attributes of Guardian files
- Exact replication of Queue files
- High resolution timer

## OSS
- Owned OSS ACLs
- Support for directory-fd APIs
- Support for Fileset-level chown() control
- Name server directory search performance
- Additional OSS core utilities
- Version update of existing OSS core utilities
- Improved OSS utilities large file support

### 2015 – Released this year

### Future

*This is a rolling (up to three year) Statement of Direction and is subject to change without notice*
NonStop Security Products
Protect mission critical data in your enterprise

Provide capabilities to protect and secure the NonStop system and sensitive data stored or transferred between the system and external entities
Help you monitor and demonstrate compliance
Respond to reported security vulnerabilities
Integrate with HPE Security enterprise products
Enable you to implement industry standard security policies and practices for your NonStop infrastructure
HPE NonStop security product portfolio

On platform
Users must be authenticated
Resource access is controlled

Guardian security
Safeguard
OSS security
iTP WebServer
XYGATE User Authentication
XYGATE Access Control

Network security
Sensitive data is encrypted
Incoming traffic can be filtered

NonStop SSL and add-ons
- cF SSL-LIB
- cF SSL-AT
NonStop SSH and add-ons
- cF SSH-LIB
- SFTP API
- IPSec (IP CLIM)
- Iptables / ip6tables (IP CLIM)

Data Security
Stored data and sensitive customer information is protected on disk or tape

HPE SecureData
XYGATE Data Protection (XDP)
cF Data Security*
Volume Level Encryption (VLE) with Enterprise Secure Key Manager (ESKM)
OSM Data Sanitization
BackBox Virtual Tape Controller (VTC)
cF Secure Tape *
Secure Virtual Tape System (VTS)

Audit /compliance
Security events are audited
Security policies can be verified and compliance proven

XYGATE Compliance PRO
XYGATE Merged Audit and add-ons
- ArcSight Integration
- Plug-in for ACI BASE24
- Plug-in for ACI BASE24 eps
- Plug-in for HP HLR
- Plug-in for AJB-RTS

* Quotable now, available soon

This is a rolling (up to three year) Statement of Direction and is subject to change without notice.
## HPE NonStop Security Product Plans

<table>
<thead>
<tr>
<th>Released in 2015-16</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NonStop SecureData</strong></td>
<td><strong>NonStop cF Data Security</strong></td>
</tr>
<tr>
<td>• Supports field level and column level encryption</td>
<td>• Complements HPE SecureData</td>
</tr>
<tr>
<td>• Helps achieve PCI-DSS compliance</td>
<td>• Enables transparent data encryption/tokenization</td>
</tr>
<tr>
<td><strong>XYGATE Data Protection</strong></td>
<td><strong>NonStop cF Secure Tape</strong></td>
</tr>
<tr>
<td>• Complements HPE SecureData</td>
<td>• Data encryption for all NonStop tape drives</td>
</tr>
<tr>
<td>• Enables transparent data encryption/tokenization</td>
<td><strong>CLIM manageability</strong></td>
</tr>
<tr>
<td><strong>NonStop SSL (TLS)</strong></td>
<td>• Allow specified non-SUPER-group users to configure CLIMs</td>
</tr>
<tr>
<td>• cF SSL-Lib and cF SSL-AT</td>
<td><strong>NonStop SSL (TLS)</strong></td>
</tr>
<tr>
<td>• OpenSSL updates</td>
<td>• Improved L-series performance</td>
</tr>
<tr>
<td>• Support for PEM format certificates and keys</td>
<td><strong>NonStop SSH</strong></td>
</tr>
<tr>
<td>• Configurable client/server cipher list preference</td>
<td>• Support for INFO, OBEYFORM command</td>
</tr>
<tr>
<td><strong>NonStop SSH</strong></td>
<td>OSS owned ACLs</td>
</tr>
<tr>
<td>• cF SSH-Lib</td>
<td><strong>Safeguard updates</strong></td>
</tr>
<tr>
<td>• Allow restriction of CPU usage</td>
<td>• SEEP response time logging, CLIM manageability group support</td>
</tr>
<tr>
<td><strong>XYGATE Merged Audit (XMA)</strong></td>
<td><strong>SCF for storage</strong></td>
</tr>
<tr>
<td>• Movers for ACI BASE24-eps and AJB-RTS</td>
<td>• Lower-impact disk volume encryption status check command</td>
</tr>
<tr>
<td>• Persistent mover support</td>
<td><strong>XYGATE Merged Audit (XMA)</strong></td>
</tr>
<tr>
<td><strong>XYGATE User Authentication (XUA)</strong></td>
<td>• Support for additional application logs and SIEMs, RFEs</td>
</tr>
<tr>
<td>• RSA Upgrades</td>
<td><strong>XYGATE User Authentication (XUA)</strong></td>
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<tr>
<td>• OpenSSL updates</td>
<td>• Additional authentication mechanisms, RFEs</td>
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Hewlett Packard
Enterprise

Future

Released in 2015-16
NonStop Manageability Products
Efficient management of NonStop systems in your enterprise

Make it easy to manage your NonStop systems with the products you like and want to use.
Support new NonStop platforms and new capabilities
Minimize training required to operate your NonStop server
Support and maintain the original NonStop management products you depend on
Future: Integrate NonStop servers into more enterprise environments
NonStop Manageability Product Portfolio

Serviceability
Products that enable the servicing of NonStop servers
- HPE Insight Remote Support (IRS)
- HPE Integrated Lights Out (iLO)
- Onboard Administrator (OA)
- OSM Suite of Tools

Enhanced Management
Products that don’t require detailed knowledge of NonStop syntax to use
- ATM Transaction Analyzer
- NonStop Software Essentials
- NonStop Cluster Essentials
- NonStop I/O Essentials
- NonStop Perf Essentials
- Operations Management Bundle
- Operations Orchestration
- OVNPM (Operations Agent for NonStop)
- Pocket ViewPoint
- POS Transaction Analyzer
- Tivoli Adapter
- SST Operations Bridge
- Web ViewPoint Plus

Expert Management
Products for experienced NonStop IT organizations
- ASAP (Availability, Statistics and Performance)
- EFO (Enform Optimizer)
- EMS Analyzer
- RPM (Real-Time Process Monitor)
- TCM (The Capacity Manager)
- TRA (The Reload Analyzer)

Performance Analysis
Products to manage system and application performance
- Measure
- NS SPAM (System Performance Mgr)
- OVNPM (Perf Agent for NonStop)
- Perf. Management Host Bundle
- Perf. Management Client Bundle
# HPE NonStop Manageability Product Plans

## 2016 – Available now

**NS Software Essentials 5.0:** No HPE SIM dependency, Java 8  
**NS I/O Essentials 2.0:** No HPE SIM dependency, Java 8  
**Insight R.S. 7.6:** Enhanced security event and error logging, enhanced communication security from the hosting device to the HPE data center  
**NSC:** Gen9 technology refresh (based on MS Windows Server 2012 R2)  
**OSM:**
- **L-series:** Support for the entry-class NonStop X and IB cluster, monitoring of internal IB switches, iLO power regulator check  
- **J-series:** SSD sanitization, support for enabling/disabling *Write Cache Enable* when Site UPS in use, removal of the SeeView dependency, CLIM Management Tool support for software and INS update, SSOCLIM/SSONSC to put the key files under SAFEGUARD control, Java 8 support

## Future

**NS Software Essentials Refresh:** Standard browser support  
**OSM Refresh:** Support for new products  
**NSC:** Security hardening  
**EMS Analyzer Refresh:** Support for display, input of GMT timestamps  
**Measure Refresh:** New performance counters, and data export to XML, JSON, and CSV format  
**TPDC Refresh:** SSL support, UWS file size reduction, and on-going measure collection scheduling  
**Data Browser Refresh:** New user interface for improved usability  
**PMC:** Move from MySSQL to MySQL  
**Web ViewPoint Refresh:** No Java dependency in Lite port  
**Web ViewPoint Plus Refresh:** No Java dependency in Lite port

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This is a rolling (up to three year) Statement of Direction and is subject to change without notice.
NonStop Enterprise Protection

Protect your business from outages and unforeseen events

- Provide products that help you protect and retrieve critical business data
- Offer sophisticated heterogeneous data replication and integration in real-time
- Enable very fast recovery times (very low RTO)
- Enable zero data loss where required (lowest RPO)
- Facilitate system migration and upgrade without downtime
NonStop enterprise protection portfolio

Basic backup
Protect and recover data stored on the latest physical tape technology

Protect and recover
Use the most sophisticated solution on the market to protect and recover data with Virtual Tape

Data replication and tools
Avoid downtime and outages for your Mission Critical business with replication between multiple platforms

Data and application integration
Integrate and synchronize heterogeneous islands of data in real-time. Integrate applications to deliver new business services and operational intelligence

NS LTO-6 Tape Drives
HPE NonStop Virtual Tape Controller (VTC)
HPE NonStop Virtual Tape Repository (VTR)

HPE NonStop Shadowbase Data Replication
HPE Shadowbase for other servers
HPE NonStop Shadowbase Compare
HPE NonStop RDF
AutoSync
AutoTMF
SDR

HPE NonStop Shadowbase Data and Application Integration
HPE Shadowbase Data and Application Integration for other servers
HPE NonStop Shadowbase Data Management Utilities
NonStop virtual tape offerings

HPE NonStop BackBox VTC
- Virtual tape offering for large data centers
- Designed for fault tolerance, scalability, and security
- Enables NonStop to backup data to virtually any data storage solution including HPE StoreOnce
- Supports up to 16 HPE Integrity NonStop X and NonStop i systems

HPE NonStop VTR
- Great option for replacing physical tape or low-end aging VTS systems
- Consists of an HPE ProLiant server and VTR software
- Comes in 12TB or 24TB models
- Supports up to two HPE Integrity NonStop X and NonStop i systems
## NonStop Enterprise Protection Product Plans

<table>
<thead>
<tr>
<th>2016 – Available Now</th>
<th>Future</th>
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<tbody>
<tr>
<td><strong>NonStop BackBox Virtual Tape Controller (VTC)</strong></td>
<td><strong>BackBox VTC Refresh</strong></td>
</tr>
<tr>
<td>Entry-level VTC (Gen9)</td>
<td>Maintenance and enhancements</td>
</tr>
<tr>
<td>27TB External Storage</td>
<td></td>
</tr>
<tr>
<td>Enterprise-level VTC (Gen9)</td>
<td></td>
</tr>
<tr>
<td><strong>NonStop Virtual Tape Repository (VTR)</strong></td>
<td><strong>VTR Refresh</strong></td>
</tr>
<tr>
<td>12TB model</td>
<td>Maintenance and enhancements</td>
</tr>
<tr>
<td>24TB model</td>
<td></td>
</tr>
</tbody>
</table>
### HPE Shadowbase latest features and futures

**Released in 2015-16**

**HPE NonStop Shadowbase**
- Oracle Log Source enhancements
- Enscribe key sequenced file support for 32k rows and 2k indices
- SQL/MX support for 32k rows and 4k indices
- Exact SYSKEY replication for SQL/MX rows
- New features for BASE24 environments

**HPE NonStop AutoTMF**
- Monitor can be configured as a “persistent” process
- AutoCommit set by referencing TMF AutoAbort
- SysType OSS now recognized by PREPARE and UNPREPARE

**HPE NonStop AutoSync**
- OSS file sync now refers to the files size in addition to the modification timestamp for the sync status
- Enhanced INFO, STATUS and REPORT commands
- Simplified PRIV setup

**Future**

**HPE NonStop Shadowbase**
- Zero Data Loss (ZDL)
  - Uni-directional synchronous replication
  - Bi-directional synchronous replication
- QMGR enhancements
- Data at rest encryption
- Platform and database refresh

**HPE Shadowbase for Other Servers**
- IBM DB2 Log Source
- SAP Sybase IQ as a target - enhancements
- Teradata as a target - enhancements

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NonStop Database
Mission Critical database that’s online all the time

Actively support existing SQL/MX customers by investing in security, performance, database management and other enhancements.
Enable low risk economical ports from other clustered database platforms for use by new applications and customers
Continued support for SQL/MP and ENSCRIBE going forward
Invest in NonStop for Big Data and DBS solutions for mission critical deployments
Only authorized users can access the system. Access to data and resources are controlled.

**SQL/MX**
**SQL/MP**
**Enscribe**

**NonStop fundamentals**
World-class transactional database engine which implicitly benefits of the NonStop foundation for fault tolerance, availability, data integrity and scalability.

**Connectivity**
Products enabling access to the database using common standards and integration with modern applications and Open source.

- JDBC/MX type 2 and type 4 drivers.
- ODBC/MX (Windows, Linux, HP-UX, OSS)
- JDBC/MP
- ODBC/MP

**Productivity tools**
Products to facilitate administration.

- MXDM
- NSM/Web
- RMXCI
- VQP
HPE NonStop Database Product Plans

2015 – Available Now

SQL/MX

- Online mxci help
- MXDM support for create/alter database objects, manage data sources
- Safeguard Delete User protection and respect Volume ACLs and Display Object permissions
- BR2 enhancements – schema and table names could differ, no need to pre-create Catalogs for a Restore operation
- Query Plan Quality Improvements
- Executor performance enhancements – 64 bit EID

Future

SQL/MX

- Configurable placement and footprint for SQL/MX processes
- Oracle Migration features: TO_TIMESTAMP, LAST_DAY, MONTHS_BETWEEN, External Sequence in Triggers
- Runtime interoperability from SQL/MX R3.3 to R3.4
- Improved MDAM selection
- Optimizer hints and inline CQDs
- Update statistics on existing columns (Reduces update statistics time)
- PAK2/UNPAK2 support allowing backup of SQL/MX objects to/from a disk file.
- MODIFY REORG, REPARTITION or RECLAIM additions.
- MXDM – close the gap with NSM/Web
- MFC for Linux and OSS ODBC/MX drivers
- Statement caching for Linux drivers
- Capability to associate specific DataSources to specific MXCS services

This is a rolling (up to three year) Statement of Direction and is subject to change without notice.
NonStop Developer Tools
Design Mission Critical apps for one of the most available systems in the world

Develop mission critical applications on NonStop using industry standard languages and tools
Reduce the cost of developing software for NonStop systems by developing on commodity PCs, hiring developers with common skillsets and leveraging open source technologies.
Use one IDE to build your software for multiple target platforms
Protect investment in NonStop legacy software
HPE NonStop Developer Tools Portfolio

On platform languages and tools

- Languages
  - Native - C/C++, COBOL, pTAL
  - Non-native - C/C++, COBOL, TAL, FORTRAN
  - Java, Python, PHP, Perl
- SQL preprocessors
- Debuggers - Inspect, eInspect
- Other Tools – enoft/xnoft, rld/xld

Off platform languages and tools

- Languages
  - Native - C/C++, COBOL, pTAL
  - SQL preprocessors
  - Debuggers - Inspect, eInspect
  - Other Tools – code coverage

Development Environments

- NonStop Development Environment for Eclipse (NSDEE)
- Visual Inspect (VI)
HPE NonStop Development Product Plans

**NSDEE 5.0**
- Support Integrity NonStop X
- Support for Eclipse 4.3 (Kepler)
- Support program-initiated debug launches (e.g. rund, runv)
- Provides simplified installation
- Support for TS/MP application launch
- Examine Open Files and Memory Segments
- Examine NonStop-specific load module attributes
- Display variables as NonStop OS types (e.g. process handle)
- Debug privileged code
- Parsing of NonStop keywords in header files

**Language Compilers**
- x86 AES Intrinsics – set 1
- Support for strlcpy, strlcat, strndup function

**NSDEE**
- Rebase the Eclipse 2015 Release (Mars)
- Linux platform support for remote project
- Support connectivity to NSK over IPv6
- Debugging native frames in mixed mode TNS/TNSX snapshots
- Breakpoints synchronization for toggling session with Native Inspect
- Debugging public DLLs
- Debug launch for TS/MP servers

**Language Compilers**
- C++11/C11 language standard
- Boost C++ library support
- X86 AES Intrinsics – set 2
NonStop Server for Java and Middleware
Speed development and enhancement of Mission Critical applications

Bring new applications to NonStop by offering a strong middleware suite of products based on industry standards to ease development efforts

Invest in Java environment to bring latest paradigms and frameworks to NonStop
Enable Mission Critical applications to take full advantage of NonStop fundamentals.
Only authorized users can access the system. Access to data and resources are controlled.

NonStop fundamentals
Products that form the foundation for fault tolerance, availability, data integrity and scalability

NonStop TS/MP
NonStop TMF

Web related products
Products that support the development and deployment of standards-based web applications

iTP Secure WebServer
NonStop SOAP 4
NonStop XML Parser
NonStop CORBA

Java based products
Open source products now available on NonStop

NonStop Server for Java (NSJ)
NonStop Application Server for Java (NSASJ)
NonStop Servlets for JavaServer Pages (NSJSP)
NonStop Message Queue (NSMQ)
Open Source Java Frameworks (SASH)
Continuous availability and near linear scalability – NSASJ is a TS/MP Serverclass

EJB 3.0/3.1 - Stateless, Stateful and Message Driven Beans

Servlet 3.0, JSP 2.2 Specifications - Asynchronous request processing, Web Fragments, Annotations

On and Off Platform Clients – Via JBoss Remoting 3 interface for off platform client access to EJB container; HTTP(S) protocol to access the NSASJ Web Container, Web Services & REST

Web Services (JAX-WS) and REST (JAX-RS) - SOAP based Web Services as per W3C WS-* specifications and RESTful services

Security – SSL 3.0 and TLS 1.0/1.1/1.2 for communication; Java Authentication & Authorization Subsystem to guard access

Java Persistent API (JPA) - Standard JPA for sessions persistence (using Hibernate); No need to know the specifics of NonStop T2 & T4 connectors

Java Transaction API (JTA) – Pure Java APIs; NSASJ is integrated with NonStop TMF; one global transaction context spanning across both Java and non-Java NonStop modules

Temporary session context storage is built into NSASJ using Infinispan cluster

Integration tested with NSMQ

Integration tested with NSJSP

CLI, CLI-based-GUI and full GUI based management of the container

Application Deployment – CLI based; ADEs using Maven can be integrated with NSASJ similar to how it is done with JBoss AS
# HPE NonStop Middleware Product Plans – Part 1

## Released in 2015

### NonStop Server for Java

**Java 7 Update 2**
- Thread preemption feature
- Helps distribute CPU bandwidth to multiple user threads
- Security and other defect repairs

### NonStop Servlets for JavaServer Pages

**NSJSP 7.1**
- Enscribe based session objects store
- Load balancing enhancements
- Scalability enhancements
- Performance improvements
- Security and other defect repairs

## Future

### Java 8 Support

- All standard headless JDK APIs and the JVM
- Oracle Java 8 U45 is the baseline
- Serial GC, Parallel GC, CMS GC and Garbage First GC (beta)
- Apps on NSJ 7 are expected to run on NSJ 8 without changes
- HPjmeter version will also be refreshed

### NSJSP Update

- Apache Tomcat™ Refresh
- Java Servlets refresh
- Java Server Pages (JSP) refresh
- Expression Language (EL) refresh
- WebSocket refresh
- Security and other defect repairs

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## HPE NonStop Middleware Product Plans – Part 2

### Released in 2015

**NonStop Application Server for Java (based on JBoss AS)**

**NSASJ 1.3**
- Transaction propagation among NSASJ container instances
- Transaction propagation between JTA Manager and NonStop TMF
- Global transaction propagation across NonStop subsystems
- Certified Web Services container
- Certified REST Services container

**NSASJ Update**
- Request retry (enhanced availability)
- Transaction retry (enhanced data integrity)
- Enhanced performance
- Wildfly Refresh
- JCA
- JavaMail

### Future

**NonStop TS/MP 2.5 update**
- Establish links to a serverclass which resides on the same CPU as the requesting Pathsend client
  - Improves message transmission latency

**TS/MP Update**
- Establish links to a process before transaction requests arrive
  - Improves process response time; hence TPS
- Support for 5 character system generated process names
- Enhancements to stop command
- Improved load balancing/link selection algorithms
- Dynamic increase of static instances
- Change priority of a process on the fly

**NonStop XML Parser**
- Recent versions of Xerces C++ parser
- Supports both IEEE and Tandem float
- Included by default in the SUT from H06.27/J06.16

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ITUGLIB
Open source community on NonStop
http://www.connect-community.org/

- Provided by NonStop community for the NonStop community at no charge
- 280 open source libraries contributed and maintained
- Popular packages are ported to NonStop X and are available for download!

Thank You
Partner AllianceONE
HPE NonStop World Wide Solutions Center

– What’s provided
  – Remote access to the latest release of NonStop platforms for the purpose of product development, migration and porting
  – Two support access models: short term 4 month free access or long term fee based annual access
  – Shared system resources – CPU, disk, and network
  – Technical and Operations support
  – Key – ISV must be an active AllianceONE member to use services

– How to engage – use link
  – AllianceONE Global page (http://h21007.www2.hpe.com/portal/site/dspp)
  – Click to “Benefits and Services”, “Technical > Technical Assistance”
  – Review HPE NonStop World Wide Solutions Center
Accessing NonStop manuals quickly
Shortcuts to manuals online, make your own DVD snapshot, learn more:

Manuals online
hpe.com/info/nonstop-docs*
This landing page has a direct link to each NonStop documentation collection on the HPSC

Make your own DVD
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Under top featured products:
1. Click HPE NonStop
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hpe.com/info/nonstop-hpsc-tips*
Has detailed information on
1. Navigating a collection
2. Search techniques
3. Finding the IUG2 and OMM DVDs
4. Using Adobe Reader features
5. Tips, tricks, known problems, workarounds, and more

*Note: These links must be typed or copied into your browser. PowerPoint won’t open them.
Thank you
Prashanth Kamath U (p.kamath@hpe.com)
Other Middleware products

2015 – Available Now

iTP Secure Web Server 7.5
- Full featured web servers
- HTTP 1.1 compliance
- TLS 1.2, SHA256 support
- Diffie_Hellman key exchange algorithm
- X.509 version 3 certificates and Unicode support
- Secure export of private keys
- Support for CGI & NCSA/CERN formatted image maps
- Online update of individual serverclass

NonStop SOAP 4
- Enables the exposure of Pathway applications in C/COBOL via standard Web Services I/F while adhering to SOA principles
- Enables out-of-the-box WSDL creation & development
  - Contract first and service first methods
- Complies to SOAP 1.2
- Supports WS-Policy 1.1 specifications
- Supports Symmetric and Asymmetric encryptions of SOAP messages
- Supports SOAP message signature to validate the sender’s identity
- Includes Application development tools: WSDL2C, WSDL2PWY, SoapAdminCL
- Multiple DDL definitions part of a single SOAP request/ response
- Hot deployment of new Web services – no App downtime

NonStop Message Queue (NSMQ) 1.1
- Port of Apache Active MQ 5.9.1
- Compliance to JMS 1.1 specifications
- Queues & topics, JCA compliant resource adaptor (RA)
- Near-continuous availability & near-linear scalability – Active MQ Cluster
- Participation in XA transactions
- Message persistence via SQL/MX
- Web GUI based Management Interface

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