

H06.07 Release Version Update Compendium

Abstract

This compendium provides a summary of the products that have major changes in the H06.07 release version update (RVU), including the products' new features, migration issues, and fallback considerations. The compendium is written for system managers or anyone who needs to understand how migrating to H06.07 affects installation, configuration, operations, system management, maintenance, applications, networks, and databases.

Product Version

N.A.

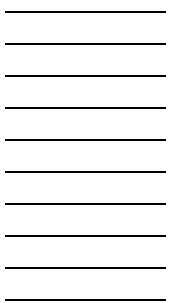
Supported Release Version Updates (RVUs)

This publication supports the H06.07 RVU only.

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Document History

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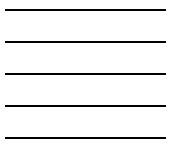
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What's New in This Manual

Manual Information

Abstract

This compendium provides a summary of the products that have major changes in the H06.07 release version update (RVU), including the products' new features, migration issues, and fallback considerations. The compendium is written for system managers or anyone who needs to understand how migrating to H06.07 affects installation, configuration, operations, system management, maintenance, applications, networks, and databases.

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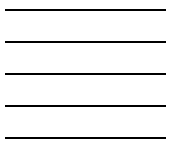
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New and Changed Information

This is a new manual.



About This Manual

This compendium provides categorized information about new features, migration issues, and fallback considerations for H06.07. It also includes references and sources for migration planning.

Who Should Use This Guide?

This compendium is written for system managers or anyone who needs to understand how migrating to H06.07 affects installation, configuration, operations, system management, maintenance, applications, networks, and databases.

Organization

Section	Description
Section 1, H06.07 Overview	An overview listing the products that have major changes
Section 2, Operating System Section 3, Application Development Products Section 4, Database and Transaction Processing Products Section 5, Installation and Configuration Products Section 6, Manageability Products Section 7, Hardware Products Section 8, Networking Products	Categorized product information that summarizes: <ul style="list-style-type: none">● New features● Migration issues (if available)● Fallback considerations (if available)
Appendix A, Sources for Migration Assistance and Information	References and sources for migration planning

Related Manuals

For a list of RVU and migration manuals, see [NonStop Technical Library \(NTL\)](#) on page A-2.

1 H06.07 Overview

This section provides an overview of the H06.07 RVU.

Major New Features

[Table 1-1](#) summarizes the main changes in H06.07. For descriptions of new features, see the appropriate sections.

Table 1-1. Summary of the H06.07 RVU

Sections and Categories	Major New Features	Migration Alerts	Fallback Alerts
Section 2, Operating System	<ul style="list-style-type: none"> ● Kernel Subsystem ● OSS Standard Security APIs 		
Section 3, Application Development Products	<ul style="list-style-type: none"> ● Code Coverage Tool ● Native Inspect 	X	
Section 4, Database and Transaction Processing Products	No new features.		
Section 5, Installation and Configuration Products	<ul style="list-style-type: none"> ● DSM/SCM 		
Section 6, Manageability Products	<ul style="list-style-type: none"> ● Measure ● OSM ● Safeguard ● SPI 	X	
Section 7, Hardware Products	<ul style="list-style-type: none"> ● 300 GB Fibre Channel Disk Drive ● Field Memory Upgrade for Integrity NonStop Servers 		X
Section 8, Networking Products	<ul style="list-style-type: none"> ● SWAN 		X

Products Removed From the Site Update Tape (SUT)

No products are removed from the SUT at H06.07.

For recent product removal information, see the Discontinuation Notices at <http://h20223.www2.hp.com/NonStopComputing/cache/77208-0-0-225-121.aspx>.

Preparation, Planning, and Migration

- If you are migrating from G-series to H-series, before you begin migrating applications, contact your HP representative to analyze your applications and identify specific modules and program components that require changes for migration to an H-series TNS/E system.
- For the physical, electrical, and environmental specifications used by HP professional service providers for site preparation, see the *NonStop NS-Series Site Preparation Guide* in the HP NonStop Technical Library (NTL).
- For an H-series overview, see Section 1 of the *H06.03 Release Version Update Compendium*, which includes these topics:
 - NonStop advanced architecture
 - Operational differences between systems running H-series and G-series RVUs
 - Application differences between the H-series and G-series RVUs
 - Networking differences between the H-series and G-series RVUs
 - SUT-based products migrating to H-series RVUs
 - Independent Products (IPs) that become SUT products on H-series RVUs
- For descriptions of Integrity NonStop NS-series hardware and the ServerNet SAN and how to plan and configure the site in preparation for installation of the system, see the *NonStop NS-Series Planning Guide*.
- For changes in H-series installation, see the *H06.07 Software Installation and Upgrade Guide*.
- For the changes that are required to migrate a program from a G-series system to an H-series system, see the *H-Series Application Migration Guide*, which covers these migration paths:
 - Migrating G-series TNS programs to the TNS environment on an H-series system
 - Migrating G-series (TNS/R) native programs to the TNS/E native environment on an H-series system
- For compatibility and interoperability between the Integrity NonStop NS-series server and the NonStop S-series server, specific software product revisions (SPRs) are required. See the H-series overview page in the Interactive Upgrade Guide 2.

- For interoperability of SQL/MX releases between systems running G-series and those running H-series RVUs, see the *NonStop SQL/MX Database and Application Migration Guide*.

2 Operating System

The H06.07 RVU contains these operating system changes:

- [Kernel Subsystem](#)
- [OSS Standard Security APIs](#)

Kernel Subsystem

A new feature is added to the existing functionality of configuring and managing generic processes through Subsystem Control Facility (SCF). SCF now supports ASSIGN, PARAM, and DEFINE values.

You can use the SCF ADD PROCESS command to add ASSIGN, PARAM, and DEFINE values to a generic process. Also, you can use SCF commands such as ALTER PROCESS, INFO PROCESS, and DELETE PROCESS, respectively, to alter, view, and delete the ASSIGN, PARAM, and DEFINE values for a generic process. This feature is similar to the existing ASSIGN, PARAM, and DEFINE functionality in TACL.

For details, see the *SCF Reference Manual for the Kernel Subsystem*.

OSS Standard Security APIs

The NonStop Open System Services (OSS) environment now supports these functions:

- `getsid()` — Obtain the session ID of a process
- `setpgrp()` — Set the process group

For detailed information about these functions, see the *Open System Services System Calls Reference Manual*.

Application Development Products

The H06.07 RVU contains new features for these application development products:

- [Code Coverage Tool](#)
- [Native Inspect](#)

Code Coverage Tool

The code generator used by COBOL, pTAL, and C/C++ compilers on Integrity NonStop NS-series servers now has the capability to create instrumented object files. Such object files contain extra code that records which functions and basic blocks are executed, and how many times each is executed. The Code Coverage Tool uses this information to produce a report indicating what code in a program file or dynamic-link library (DLL) was actually executed during one or more invocations.

No source code changes are needed to instrument an application. The only required changes are in the commands used to compile and link the application.

Compilation can occur on the Guardian, OSS, or Windows platform. Execution must occur on either the Guardian or the OSS platform.

The Code Coverage Tool runs only on PCs with the Windows XP operating system. The code coverage report is a set of HTML files that are viewable with any standard HTML browser.

The Code Coverage Tool is an optional tool consisting of two products:

- T0746, Code Coverage Tool (codecov)
- T0747, Code Profiling Utilities (profmrg)

Starting with H06.07, T0747 is included on the SUT.

Also starting with H06.07, T0746 is packaged with each of these compiler products and is available only if you purchase one of these compiler products:

- HSB01, COBOL Compiler TNS/E
- HSB03, TNS/E C/C++ Compiler
- HSB04, PTAL Compiler For TNS/E

If you use any of the cross compilers listed below, contact your HP Representative for details on how to obtain T0746 (Code Coverage Tool, codecov):

- HSB11, COBOL Cross Compiler
- HSB13, C/C++ Cross Compiler

- HSB14, PTAL Cross Compiler

△ **Caution.** The Code Coverage Tool is intended for data generation and collection in a test environment only. The use of cover enabled code is not recommended for production environments. Applications compiled with the code coverage instrumentation will suffer greatly reduced performance.

Migration and Installation

To use the Code Coverage Tool (codecov, T0746) and the Code Profiling Tool (profmrg, T0747), you must compile your applications using these minimum compiler versions:

Compiler	Minimum SPR Level
TNS/E COBOL	T0356H01^AAI
TNS/E C/C++	T0549H01^AAD
TNS/E pTAL	T0561H01^AAC
Native c89 utility	T8164H01^ABE

These compiler versions provide the required command line options for running the Code Coverage utilities.

Native Inspect

Native Inspect has several improvements for H06.07:

- When debugging C/C++ programs, it is no longer necessary to enter Native Inspect commands to advance execution to the main program. This now happens automatically.
- You can now use the map-source-name command to substitute prefixes in fully qualified source file names.
- A new unmap-file-name command is supported. This command deletes a previously set source file name mapping.
- You can now specify OSS pathnames in these commands:
 - add-symbol-file
 - cd/volume
 - log
 - ls/files
 - snapshot
 - source
 - symbol/syumbol-file
 - save
- You can now repeat these commands by pressing the Enter key:

- step, stepi
 - next, nexti
 - finish
 - list
 - print
 - x
- The catch command now has an option to suspend execution on the loading or unloading of a DLL.
 - The COBOL concatenation operator (&) is supported.
 - Aggregate assignment (using braces) for COBOL tables is supported.

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Database and Transaction Processing Products

The H06.07 RVU contains no new features for database and transaction processing products.

5

Installation and Configuration Products

The H06.07 RVU contains a new feature for this installation and configuration product:

- [DSM/SCM](#)

DSM/SCM

DSM/SCM now supports cloning to simplify the use of DSM/SCM for installation and management of multiple NonStop systems with identical hardware and software configurations.

In DSM/SCM, you can create a clone group, consisting of a master system and one or more clone systems. Any software configuration applied to the master is also applied to all the clones in that master's clone group. You can configure multiple clone groups, each of which is maintained independent of the other groups.

For more details, see the *DSM/SCM User's Guide*.

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Manageability Products

The H06.07 RVU contains new features for these manageability products:

- [Measure](#)
- [OSM](#)
- [Safeguard](#)
- [SPI](#)

Measure

Measure introduces the MEASFT utility, which splits a measurement data file into multiple data files, according to user-specified criteria such as entity type or CPU. Measurement configuration, start/stop records, and any applicable journal data are written to each of the resultant files. The ability to split the measurement data into multiple files allows the user to configure measurements that, in earlier product versions, might have produced data files too large for the MEASCOM utility to process.

MEASFT defines three commands:

- The SPLIT command splits a measurement data file according to specified criteria. It can also create a new data file with selected records from the original data file.
- The INFO command provides data about how much space in an existing data file is associated with each entity type and with each CPU. This information can be used to determine what the split criteria should be.
- The HELP command displays the correct syntax for the specified MEASFT command.

OSM

The new version of the NonStop Open System Management (OSM) Interface module redundant power-scrub test provides independent battery testing and an extended load test for the bulk power supplies. With this new version of the power-scrub test, the redundant power scrub action can take up to 25 minutes to complete.

The ability of the new battery scrub to detect weak or failed batteries is significantly enhanced. For systems with many old batteries (over 5 years old), the battery scrub might call out multiple batteries for replacement.

Installation and Configuration

- To use the power-scrub feature, you must install T0682H02^AAU (delivered with the H06.07 RVU) or later for OSM.
- To select the new power-scrub version, add this line in \$SYSTEM.ZSERVICE.OSMCONF:

```
PowerScrubVersion = 2.
```

Select this new version only if all enclosures have been updated with a new PIB-to-PIB crossover cable (FCO 44440).

- The default test interval for the new power-scrub version is 7 days instead of 24 hours. To change the test interval, add this line in `$SYSTEM.ZSERVICE.OSMCONF`:

```
DailyScrubTestingInterval = n,
```

where `n` is the number of days between power-scrub tests, up to a maximum value of 30 days.

HP recommends leaving the default as 7 days unless an event requires a reduced time between scrubs.

Safeguard

Safeguard supports multiple owners for user and alias records. This feature allows user and alias records to have more than one owner. Previously, only one owner, called the *primary owner*, was allowed. The additional owners are called *secondary owners*. Secondary owners now have all the same privileges for managing user and alias records as the primary owner.

SPI

The Subsystem Programmatic Interface (SPI) is enhanced to support:

- XA Broker subsystem (ZXA)
- Constellation IP (CIP)
- Fibre Channel Storage Monitor (FSM)
- HP NonStop Operating System - Complex Manager Auxiliary Process (CMP)
- Java Logging subsystem (L4J)
- Matrix SMLC CBB 4.2 subsystem (CPS)
- Deadlock Detector subsystem (DLD)

For details, see the *SPI Programming Manual* and the *SPI Reference Summary*.

7 Hardware Products

The H06.07 RVU contains new features for these hardware products:

- [300 GB Fibre Channel Disk Drive](#)
- [Field Memory Upgrade for Integrity NonStop Servers](#)

300 GB Fibre Channel Disk Drive

The H06.07 RVU supports the 300 GB 15K RPM Fibre Channel disk drive (model M8400-30) in the Fibre Channel disk module. This disk drive is available only after H06.07 is shipped.

Fallback

Falling back to a previous RVU causes data stored on the 300 GB Fibre Channel disk drive to become inaccessible.

Field Memory Upgrade for Integrity NonStop Servers

Starting with H06.07, the Integrity NonStop NS1000 server, the Integrity NonStop NS5000T server, and the Integrity NonStop NS5000CG server support field memory upgrade. For more information, see the *NonStop NS1000 Planning Guide* or the *NonStop NS-Series Carrier Grade Server Manual*.

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Networking Products

The H06.07 RVU contains new features for this networking product:

- [SWAN](#)

SWAN

The WAN Line Check (WANLNCK) program enables you to check the quality of the communication link between a SWAN or SWAN2 concentrator and a modem.

WANLNCK supports the external loopback test for the SWAN and SWAN 2 concentrators. The external loopback test checks the WAN port pins of a SWAN or SWAN 2 concentrator and the connection between the SWAN or SWAN 2 concentrator and a local or a remote modem.

You must explicitly invoke the external loopback test by using this command:

```
WANLNCK {HELP | TRACKID trackid ,CLIP clip-number  
,LINENUM line-number [ ,TIMES Number of tests ]  
[ ,DIAG diag-task-filename ] [ ,FILE out-put-filename ]}
```

For more information, see the *SWAN Concentrator and WAN Subsystem Troubleshooting Guide*.

Fallback

If the communication link check fails abruptly or does not reflect the correct status of the link, fall back to the previous SPR. The new feature for WANLNCK is no longer available after the fallback. To verify the fallback, run the WANLNCK command:

```
wanlnck clip <clip number>, Trackid "<trackid>", Linenum  
<portnum>, Diag <diagfilename>
```

WANLNCK should return an error indicating invalid parameters.

A

Sources for Migration Assistance and Information

This appendix describes the assistance HP provides when problems arise during the migration and testing process. HP also provides services that can help you develop a migration plan and implement migration tasks. Most migration and release documentation is available through the HP NonStop Technical Library (NTL).

This appendix includes information about these sources for migration assistance and information:

- [ExpressNotice](#)
- [Information on the Site Update Tape \(SUT\)](#)
- [Scout for NonStop Servers](#)
- [Global Customer Support Center \(GCSC\)](#)
- [NonStop Technical Library \(NTL\)](#)

ExpressNotice

ExpressNotice is an automated information delivery system that proactively sends information pertinent to your installed products and software release whenever there are any issues or changes. (ExpressNotice generates notices only for supported RVUs.) Use ExpressNotice to customize your information notification needs interactively online. You can access ExpressNotice through the HP NonStop eServices Portal at <https://onepoint.nonstop.compaq.com/buildpage.asp>.

ExpressNotice message types include:

- Software Revision Notifications summarize the content and impact of newly released, generally available time-critical fix software product revisions (SPRs).
- Hotstuff messages alert you to product problems that might have particularly serious consequences. The three types of Hotstuff messages are general, Outage Prevention Notifications (OPNs), and Software Recall/Withdrawal.
- Support Notes (SUPNOTES) provide information of a more routine nature than that provided in Hotstuff messages.

ExpressNotice messages are also available through Scout for NonStop Servers (see page [A-2](#)) and through NTL.

You can ask the Global Customer Support Center (GCSC) for the *ExpressNotice User's Guide*. You can also contact the ExpressNotice Help Desk by e-mail at express.notice@hp.com.

Information on the Site Update Tape (SUT)

- Content file
Contains a list of the product versions and software product revisions (SPRs) that are included on the site update tape (SUT).
- README
Contains information that was not yet available when the manuals or softdocs were published.

Scout for NonStop Servers

Scout for NonStop Servers is a Web-based SPR analysis and delivery tool available through Electronic Support Services. You can access Scout through the HP NonStop eServices Portal at <https://onepoint.nonstop.compaq.com/buildpage.asp>. Online help for using Scout is available on the Scout Web site.

By providing access to a data warehouse with SPR information for many different RVUs, Scout makes SPR analysis fast, easy, and accurate. Through the Scout main menu, you can display detailed information about:

- Release version updates (RVUs)
- Product versions (PVs) and software product revisions (SPRs)
- Outage Prevention Notifications, Hotstuff messages, and Support Notes
- Prerequisites for an SPR
- Available SUTs and Independent Products

After researching available SPRs, you can download those you consider appropriate for your systems directly to your workstation, or you can request tape delivery.

Global Customer Support Center (GCSC)

If you have questions or problems while implementing your migration plan or testing a new system, contact the Global Customer Support Center (GCSC) at 1-800-255-5010.

You can also access information on products and services at <http://support.nonstop.compaq.com/>.

NonStop Technical Library (NTL)

In addition to this compendium, RVU and migration information is available in several other documents and manuals that you can access through NTL, at

<http://www.hp.com/go/ntl>.

Information is provided about planning your site for a new NonStop server, product installation and configuration, product availability in a particular RVU, and performance information for a specific RVU.

- *H06.07 Software Installation and Upgrade Guide*

Provides procedures for upgrading to the H06.07 RVU. Instructions include installing the H06.07 SUT and other related installation tasks.
- *The Interactive Upgrade Guide 2*

A browser-based tool that is accessed through NTL, this guide provides customized migration planning information and highlights new features.
- *NonStop NS-Series Planning Guide*

Describes the Integrity NonStop NS-series system hardware and provides examples of system configurations to assist in planning for installation of a new system. It also provides a guide to other Integrity NonStop NS-series manuals.
- *NonStop NS-Series Operations Guide*

Describes how to perform routine system hardware operations for Integrity NonStop NS-series servers. These tasks include monitoring the system, performing common operations tasks, and performing routine hardware maintenance. This guide is written for system operators.
- *The NonStop System Console Installer Guide*

Provides information about upgrading a system console to the latest versions of the applications delivered on the NonStop System Console Installer CD.
- *Managing Software Changes*

Serves as an introduction and reference to TRM2000, the system migration and installation process, SPR analysis, and HP resources for evaluating new RVUs and SPRs.
- *Hotstuff Messages*

If you do not enroll to receive ExpressNotice messages, you can view Hotstuff messages, SPR Notes, and other ExpressNotice messages in the NTL Support and Service library. For more information, see [ExpressNotice](#) on page A-1.

Note. SPR Notes are discontinued as of June 2006. Previously published SPR Notes continue to be available in NTL.
