Introduction

About NSDEE
The NonStop Development Environment for Eclipse (NSDEE) is a Windows®-based Integrated Development Environment (IDE) for developers of NonStop applications. It is based on Eclipse, a widely popular open source framework, developed by the Eclipse Foundation (eclipse.org). NSDEE has NonStop platform-specific enhancements to the open source Eclipse environment while preserving the ease of Windows-based software development and the extensibility of the Eclipse IDE. A range of tools from HP, as well as some third-party add-ons, can be used with this rich development environment.

Enhancements to NSDEE 3.0
NSDEE 3.0 provides a number of enhancements over the prior version
- Based on Eclipse 3.7 (Indigo) and C/C++ Development Tooling 8
- Supports Windows 7 x86/x64
- Improved managed build module for greater flexibility
- Provides a new NonStop Development perspective
- Supports LP64 data model
- Improved HP Enterprise Toolkit—NonStop Edition (ETK) migration features
- Enhanced remote file access through Samba interoperability

Key features
- Seamless integration with Eclipse development environment
- Single development environment for
  - Native C/C++, COBOL, pTAL, and Java languages
  - HP Integrity NonStop H-Series and NonStop J-Series Servers
- Supports both Windows-hosted and remote NonStop-hosted build, edit, and debug
- Imports existing projects based on ETK
- Supports application development using HP NonStop SQL/MP and SQL/MX databases
- Secure connectivity to NonStop servers
Benefits of the NonStop Development Environment for Eclipse

Now you can develop software for NonStop using industry standard tools and techniques using the popular Eclipse IDE because NSDEE leverages open source technologies and shares the overall look and feel of Eclipse. This has been brought about through NonStop-specific plug-ins that extend Eclipse and C/C++ Development Tooling (CDT) and by integrating tool bars, buttons, dialog boxes, drop-down menus, pop-up context-sensitive menus, and wizards to incorporate NonStop server application development features into the Eclipse environment. NSDEE offers you a one-stop, state-of-the-art IDE that increases your productivity, reduces your development costs, and streamlines your application development. Your Windows-based compilations run faster, which helps to boost productivity, and greater productivity translates into reduced development costs. The ability for you to use inexpensive PC hardware for development leads to better use of your premium NonStop server resources.

The Eclipse development platform is popular among developers and is fast becoming the dominant IDE in many organizations. With the number of open source initiatives being built on top of the Eclipse IDE, it is an ideal development environment for your Web, client/server, and applications enabled for service-oriented architecture (SOA). If you are familiar with Eclipse, you will easily be able to use NSDEE and become productive quickly. Consequently, you can more easily hire skills in the job market. When your teams work using the leading-edge technology, it increases their job satisfaction and efficiency when developing applications for NonStop servers. As an added benefit, NSDEE offers cross-platform development support similar to its predecessor—the ETK, which makes it easy for your programmers who need to build object code on the NonStop server to do so.

Features

In NSDEE, you will find a truly integrated set of tools and facilities to develop, build, deploy, and debug NonStop applications thereby improving productivity and enhancing your experience with NonStop application development.

HP NSDEE consists of two products:

• HP NSDEE Core
• HP NSDEE Core with Debugging

**NSDEE Core** supports building NonStop applications locally using Windows-hosted cross compilers and tools, or remotely using compilers and tools on a NonStop server. NSDEE core also provides facilities for transferring source files and binaries to and from NonStop servers, as well as facilities for editing remote source files locally.

**NSDEE Core with Debugging** contains NSDEE Core with the addition of a separately installable integrated debugger for debugging NonStop applications. NSDEE Core with Debugging supports the full build, edit, and debug development cycle within its IDE.

Migrating from ETK, EPE and earlier NSDEE versions

If you have an existing project developed using earlier NonStop IDEs such as EPE or ETK, NSDEE provides wizard based tools to import these projects easily and helps you adopt NSDEE as your development environment for the existing projects. Migrating EPE projects to NSDEE is made simple by the Eclipse import mechanism, available in the NSDEE 2.1 perspective. These import features ensure that the existing project configurations and project files are reused as much as possible while transitioning over to NSDEE.

Support for local and remote software builds

You can develop rich and powerful applications using the feature rich NSDEE IDE and build them locally using cross compilers. Alternatively, you can build them remotely on NonStop hosts using host-based compilers. So you have complete flexibility to optimize the usage of NonStop system resources for software development based on your unique setup and resources at your disposal. You can view and edit source files in remote NonStop systems through a GUI based browser. These sources can be a part of your project or outside it.
Launch and debug applications
You can debug your code, written in C, C++ and COBOL, through a GUI based debugger within NSDEE. This powerful feature helps leverage the rich visual and interactive functionality provided by the Eclipse platform. You can launch applications on a remote NonStop host through Eclipse avoiding the need to establish a separate telnet session for simple regular tasks. For example, NonStop applications built locally on your PC can be deployed on NonStop systems using this launch mechanism.

Support for Java and other NonStop native programming languages
You can use NSDEE to write programs in all native languages that are supported on the NonStop platform including:
- Java
- C and C++
- COBOL (Tandem COBOL as well as ANSI COBOL)
- pTAL

Your project can have source files written in different supported languages as long as the appropriate cross compilers have been installed for local builds. NSDEE is upward compatible with future cross compiler releases—that is, NSDEE allows you to install a compiler after NSDEE has been installed. Each language compiler product needs to be ordered separately (see the Ordering information section).

Using NSDEE, you can build executables, Dynamic Link Libraries (DLLs), linkfiles, archive libraries, and user libraries. The project-creation wizards provided by NSDEE offer options using which you can select the appropriate object files build.

Support for writing database applications
You can easily create database applications using NSDEE. The project-creation wizard for managed build guides you through the database settings that can be configured for an application such as catalog name, embedded file settings, and preprocessor setup. NonStop SQL/MP code can be embedded in C and COBOL programs, whereas NonStop SQL/MX code can be embedded into C, C++ and COBOL programs (see System Requirements section).

Integrated help system
Understanding the features and facilities available in NSDEE is made easy with access to documentation online through the Eclipse help system integrated into NSDEE. It provides a comprehensive context sensitive help and dynamic help relevant for the currently active view.

Major enhancements in NSDEE 3.0
NSDEE 3.0 is built on Eclipse 3.7.2 (Indigo) and CDT 8.0.2. For information on these releases, refer Eclipse online documentation available at http://help.eclipse.org/indigo/index.jsp. In addition to these, the following sections provide a brief overview of the new features or enhancements in release 3.0.

Support for LP64 data model
With NSDEE 3.0, you can use the LP64 data model with cross compilers supported from NonStop RVUs H06.24 and J06.13 onwards.

CDT based C/C++ project environment
The CDT based C/C++ project environment provides powerful navigational features and development aides. Some of the features you will find very useful include ease of navigation through data type and function definitions and references, call/type hierarchy views, online error detection, easy search within the code base, code completion options and per project preference settings. With these features you can easily perform common developer tasks such as cross referencing programming constructs and elements, auto complete structure/class member references and write error free code with ease with greater focus on application logic.
Enhanced configuration options
With NSDEE 3.0, you have several enhancements to configure your project settings such as,

• Creating a project with an existing source base outside of your workspace.
• Flexibility in defining compiler options by command line rather than using multiple property pages. If you are familiar with the command line options and their syntax, you will find this feature a much faster way to complete your configuration.

Project builds
With NSDEE 3.0, you have the option of having NSDEE create the makefile for your project or creating your own makefile and having NSDEE use it to build your project. You can toggle this managed build attribute of a project on or off, giving you more flexibility in developing your application. You also can create custom makefile targets and modify build behavior while still having NSDEE manage builds and create makefiles for you. In addition, you can have greater flexibility for your builds by using smaller and more concise makefiles and by using makefile includes.

Other feature additions for local projects with Windows-hosted builds include support for:
• Build targets for OSS or Guardian for a single project
• Initiating builds, deploying, and changing build configurations using tool bar icons
• Automatic detection of cross compiler and preprocessor locations if they are available at standard folders
• Creating multiple build configurations for a single project using project property pages
• Transferring project files from Windows to NonStop systems using a new, more flexible file transfer wizard

New NonStop Development perspective
NSDEE 3.0 comes with enhancements for some of the GUI features with an aim of providing improved navigational features
• A new “NonStop Development” perspective replaces the earlier “NonStop” perspective
• A “NonStop Project Explorer” view is available in place of “NonStop Projects”
• Configuration tool bar icons for Manage and Deploy are added for easy access
• A new and improved project creation wizard is available
• New and improved file and folder wizards which are in line with Eclipse standards

All these and other GUI features help you develop more software with less effort and lower errors for the NonStop environment.

Complementary products
NSDEE works seamlessly with other HP NonStop products to deliver a complete application development environment. These products include a) cross compilers that build your project locally b) host-based compilers installed on NonStop hosts that build your project on the host c) Visual Inspect debugger d) database software to build a program with embedded SQL instructions (see the System Requirements section). To provide outstanding flexibility to new and existing users, each of these products is packaged separately, has a separate product ID, and can be ordered separately.

Three separate cross compiler/host-based compiler packages are available:
• Native C/C++ cross compiler/host-based compiler package
• Native COBOL cross compiler/host-based compiler package
• pTAL cross compiler/host-based compiler package

A cross compiler/host-based package for a specific language contains all the software needed to compile and link a native program written in that language. Each package contains multiple versions of the compiler, each corresponding to an RVU such as RVU (H06.24, J06.13, etc.).
# System requirements

**HP NonStop Development Environment Version 3.0 for Eclipse**

NSDEE 3.0 must be used with compilers that belong to the product family, as explained in the package description.

## Operating system

- Windows® XP Service Pack 3+ (x86)
- Windows Vista® x86/x64
- Windows 7 x86/x64

All English and Japanese language versions of the above operating system that support Eclipse Version 3.7.2 and CDT Version 8.0.2

- NonStop H-Series OS (with RVU H06.22 or later) and J-Series OS (with RVU J06.11 or later)

## Software

### HP NonStop SQL

NonStop SQL software on a NonStop server: Connectivity and access to the server is required to compile programs with embedded NonStop SQL software.

NonStop SQL/MX software on a desktop: To compile programs with embedded NonStop SQL/MX software, Version 3.0 (IPM AAE or later) of a Windows-hosted NonStop SQL/MX preprocessor is required; Version 3.0 or later of preprocessors is required to use embedded module definitions. Preprocessors are language specific and ship on site update tapes (SUTs) with the NonStop SQL/MX product.

### Eclipse

Eclipse Version 3.7.2

### CDT

CDT Version 8.0.2

### Java

To run Eclipse, CDT, and NSDEE 3.0, the required Java version is Java SE 6.0 or later.

For Java application development, the Java version on the system running Eclipse should correspond to the NonStop server for Java (NSJ) version supported on the target NonStop platform.

### Disk space

600 MB for NSDEE (including Eclipse, CDT, and Cygwin) + 150 MB (per target RVU or per each installed cross compiler)

### PC based cross compilers

See Ordering Information section on page 6

### Memory

- Windows x86: 1 GB (2 GB recommended)
- Windows x64: 2 GB (3 GB recommended)
# Ordering information

## HP NonStop Development Environment Version 3.0 for Eclipse

<table>
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### Debuggers and native cross compilers

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<td>Integrity NonStop Native pTAL cross compiler Version 2, for PCs running the Windows operating system, single-seat license</td>
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HP Technology Services

HP Technology Services offer flexible choices that span the entire technology lifecycle, and help build an infrastructure that is reliable, highly available, responsive, and rooted in proven best practices. We offer a support experience that is proactive, personalized and simplified—delivering support when and how you need. HP recommends the following services.

**HP Critical Service** (Optimized Care): High performance reactive and proactive support designed to minimize downtime. It offers an assigned support team which includes an Account Support Manager (ASM). This service offers access to HP’s Global Mission Critical Solution Center, 24x7 HW and SW support, 6-hour Call-to-Repair commitment, enhanced parts inventory, and accelerated escalation management.

**HP Proactive 24** (Standard Care): Provides proactive and reactive support delivered under the direction of an ASM. It offers 24x7 HW support with 4 hour onsite response, 24x7 SW support with 2 hour response and flexible call submittal.

**HP Support Plus 24** (Basic Care): Provides reactive HW and SW support with remote problem diagnosis, 4 hour onsite response, replacement parts. The SW support includes installation advisory support, software updates for HP, and selected third party software products.

**HP Installation and Start-up Services:** This service provides efficient and effective deployment of HP hardware components.

For more information, visit [hp.com/services/nonstop](http://hp.com/services/nonstop).

Learn more at [hp.com/go/nsdee](http://hp.com/go/nsdee)