Hewlett Packard Enterprise



# HP Integrity NonStop X Application Migration H6C38S

This 2-day course provides the information needed to convert applications to run on the HP Integrity NonStop X Servers. The course starts with an overview of the hardware architecture and then covers program migration information for each of the main languages. Other topics include the debuggers available on the new systems including a new Native Inspect debugger, the new linker, and changes to NSDEE. The course is 60 percent lecture and 40 percent hands-on labs using HP Integrity NonStop X servers.

| HP Integrity NonStop X Application Migration | |
|---|---|
| **Price** | USD $1,600 |
| **Links to local schedules, pricing and** | **US/Canada**<br>**Mexico/Latin America**<br>**Brazil** |
| **HP course #** | H6C38S |
| **Category** | NonStop |
| **Duration** | 2 days |

## Audience

- System designers, application developers, support personnel

## Prerequisites

- Concepts and Facilities for NonStop Systems (U4147S) and
- Experience with programming languages

## Course objectives

At the conclusion of this course you should be able to:
- Describe the architecture used by Integrity NonStop X servers
- Describe migration paths
- Identify changed and discontinued products
- Convert C/C++, pTAL, and COBOL application programs
- Describe the xld linker
- Describe available program debuggers
- Discuss changes to the NonStop Development Environment for Eclipse (NSDEE)

## Benefits to you

- Streamline application migration tasks and increase your productivity by knowing where and how the application needs to be adjusted and being familiar with how to utilize compilation and debugging utilities including the xld linker, Native Inspect, and NonStop Development Environment for Eclipse (NSDEE)
- Gain valuable hands-on experience compiling, executing, creating, and debugging multiple source file programs

## Next steps

- Consider attending other advanced courses in the HP NonStop Application Development curriculum

## Course outline

**Module 1 - Integrity NonStop X Systems Overview**
- NonStop X basics
- NonStop X NS7 X1 specifications
- Changes from Integrity NonStop NB56000c
- Infiniband Interconnect
- CLIM types and configurations
- Big endian and little endian
- Changed, unchanged, and discontinued products and features

**Module 2 - Software**
- Unavailable software products
- Software products version availability
- Operating system changes
- Changed software products
- NSDEE 5.0 changes
- TS/MP server class launch
- TNS/X process components

**Module 3 - Compilers**
- General considerations
- COBOL, C/C++, xpTAL, Java compilers
- Other tool names
- Labs: compile COBOL, C/C++, xpTAL applications

**Module 4 - Linkers and Other Tools**
- Linking with xld
- xld inputs and outputs
- DLL names and locations
- Run-Time Loader
- Examining an object file with xnoft
- Object Code Accelerator (OCAX)
- Accelerated Program Examiner (TNSVUX)
- BINDER changes
- Code Coverage Utility changes
- Labs: link multiple modules for execution; examine object files; accelerate a non-native application

**Module 5 - Debuggers**
- Available debuggers
- Changes to Native Inspect
- NSDEE 5.0 debugger changes
- Labs: using Native Inspect; using NSDEE debugger

**Module 6 -TNS Support**
- TNS programs and tools available
- Object Code Interpreter
- Debugging TNS programs
- Program compatibility

**Module 7 - General Considerations**
- Migration concerns
- DDL dictionary conversion
- Third party tools
- HP migration services

**Module 8 - Operations**
- OSM System Startup tool
- OSM System Configuration tool
- OSM Quick Start tool
- CLIM receive dump function
- Measure changes
- Peek changes
- Labs: using Peek and SCF

**Onsite Delivery Equipment Requirements**
- System - an Integrity NonStop X system running L15.02 or later release of the NonStop operating system
- Software - TNS/X native COBOL - xpTAL - TNS/X native C/C++ - NonStop TS/MP - NonStop Development Environment for Eclipse (NSDEE)

## Learn more at

**hpe.com/us/training/nonstop**

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