

Release Notes For SoftBench 6.60

Edition 1



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1 **Release Notes For SoftBench 6.60**

Announcements

SoftBench 6.X is the latest version of HP's premier Integrated Development Environment for C and C++ software developers. This version of SoftBench provides the same tight integration (editing, building, debugging) that has always been available from SoftBench. SoftBench 6.X also offers several innovative features:

- The SoftBench project model helps you group important information together and reduce the overall complexity of your software projects.
- SoftBench 6.30 and later does not require or provide network licensing.
- The SoftBench code analysis tool (CodeAdvisor), the SoftBench Software Developer's Kit (SDK), and the SoftBench Configuration Management tool (SoftBench CM) are now bundled with SoftBench:

C SoftBench includes SoftBench CM.

C++ SoftBench includes SoftBench CM, CodeAdvisor, and the SoftBench SDK.

- Blinklink has been removed from SoftBench, it is no longer bundled with the SoftBench compilers.
- The HP-PAK (Puma) performance analyzer has been removed from SoftBench.
- The WDB-GUI debugger is now bundled with SoftBench.
- Support for HP-UX 11i is included in SoftBench 6.60.01 and later.

What's in this Version

SoftBench 6.X is a visual development environment for C and C++ professionals who are developing software for HP-UX.

- **Benefits** — The SoftBench 6.X environment offers a number of ways to develop software more effectively:
 - **Natural Interaction with the Development Environment:** Version 6.X introduces a different use model to SoftBench users - The Project Model. Developers can now organize their work in a way that naturally reflects the underlying structure of their applications.
 - **Increased Productivity through “Complete” Tool Integration:** Complete integration, both in terms of breadth and depth! Building upon the Project Model, version 6.X provides tools for each step of the software development lifecycle - editing, building, debugging, analysis, and management. All tools are integrated by way of SoftBench's sophisticated messaging framework.
 - **Shorter Learning Curve:** The graphical nature of SoftBench makes it easy for new or experienced developers to create value-added software without being concerned about the underlying system.
 - **Extensibility:** You can integrate your favorite development tools into the SoftBench environment, just as the pre-configured tools are, by using the SoftBench Software Developers Kit.
- **Features** — SoftBench 6.X offers the following features:
 - **The Project Tool:** The Project Tool is the focal point of interaction in SoftBench 6.X. The Project Tool replaces the Toolbar and Program Builder found in previous versions of SoftBench. Using the Project Tool, developers organize their source files into logical projects. Other SoftBench tools then operate on projects as self-contained units.
 - **Extended Support for the HP aC++ compiler:** HP's latest compiler, HP aC++, conforms to the latest draft specifications from the ANSI C++ committee. SoftBench 6.X supports the HP aC++ compiler with all SoftBench tools, including the Static Analyzer and CodeAdvisor.
 - **CodeAdvisor:** CodeAdvisor has been enhanced to scan for over 1500 types of potential programming errors. CodeAdvisor is bundled with C++ SoftBench 6.X.

- **SoftBench CM:** SoftBench CM is ideal for managing geographically dispersed development teams. Unlike other configuration management systems, SoftBench CM requires no additional infrastructure and there is no need for a dedicated configuration management administrator. SoftBench CM is bundled with both C and C++ SoftBench.
- **Integrated XEmacs Editor:** SoftBench 6.X uses XEmacs as its default source code editor. XEmacs provides the latest capabilities necessary for effective editing, such as language-sensitive color coding and auto-indenting.
- **Licensing not required:** Embedded license management (FLEXlm) has been removed from SoftBench 6.30 and later. In some cases (internal software audits), SoftBench customers may require a solution for tracking the concurrent usage. There are independent software vendors (ISVs) who provide products that “ride on top of” unlicensed software applications, keeping track of concurrent users and enforcing license limits. As a convenience, a list of several ISVs and their products is provided below. HP in no way endorses or supports any of the products from these ISVs.
 - FLEXwrap from GLOBEtrotter Software - www.globetrotter.com
 - SentinelTrack from Rainbow Technologies (SentinelTrack was previously LicenseTrack from Wyatt River Software - Rainbow Technologies purchased Wyatt in March 1998) - www.rainbow.com
 - KeyServer from Sassafras Software - www.sassafras.com
- **Recursive Makefile Generation Available:** The `Generate Makefile` dialog box supports a recursive build or “nightly” build to generate Makefiles for an entire hierarchy of projects.
- **Compatibility of SoftBench 6.X with Previous Versions:** The SoftBench 6.X Project Model is a complete departure from the way previous versions of SoftBench organized and interacted with development activities. Do not mix and match SoftBench 6.X with SoftBench 5.X or older versions.

Known Problems and Workarounds

This section describes known problems in SoftBench 6.60. For the latest list of problems and workarounds, refer to the URL:

<http://www.devresource.hp.com/softbench/>

Before running SoftBench 6.60, you should be aware of the following problems and workarounds:

- **The HP cfront-based C++ compiler has been removed from SoftBench**

The HP cfront-based C++ compiler (HP C-Plus-Plus) is no longer bundled with SoftBench. If you already have the HP cfront-based C++ compiler, you can still use it with SoftBench on HP-UX 10.20 or 11.0x.

SoftBench does not support the HP cfront-based C++ compiler on HP-UX 11i.

In order to restore the SoftBench cfront configuration files, do the following:

1. Login as root. (You must have root permissions to perform each “cp”.)
2. `cp -p /opt/softbench/contrib/cfront/packages/sys.Packages.Cfront \`
`/opt/softbench/config/softbuild/packages`
3. `cp -p /opt/softbench/contrib/cfront/transforms/sys.Transforms.Cfront \`
`/opt/softbench/config/softbuild/transforms`
4. `cp -p /opt/softbench/contrib/cfront/bin/CC /opt/softbench/bin`
5. `cp -p /opt/softbench/contrib/cfront/compiler_info/CC \`
`/opt/softbench/config/compiler_info`

- **SoftBench XEmacs and .emacs Files**

Not all .emacs files are compatible with XEmacs. Because of this, SoftBench XEmacs does not automatically load .emacs files. If a .emacs file is detected, SoftBench XEmacs displays a button labeled “Load .emacs”. This button may be hard to see, depending on how colors are defined in your XEmacs environment.

You can modify this behavior by setting the environment variable “SB_LOAD_DOT_EMACS”. If it is set to “TRUE”, the .emacs file will be automatically loaded, and if it is set to “FALSE”, the file is not loaded. Also, if you want to load an alternate file, you can set the variable to the name of the file you want to load. A help window is displayed until this variable is set.

- **euro Compliance**

SoftBench supports the euro symbol. Before using the euro symbol on HP-UX 10.20 or 11.0, you need to install the euro operating system patches. There are no patches required to use the euro symbol with SoftBench on HP-UX 11i.

The following problems were discovered during SoftBench euro testing:

- SoftBench Xemacs Editor handles the euro symbol correctly for all manipulations, but does not display the euro symbol correctly.
- SoftBench Static Analyzer fails to find the euro symbol when it is the only item in a search string. Static Analyzer will find the euro symbol when it is included with other items in a search string.
- SoftBench project names cannot contain the euro symbol because it is interpreted as a non-alphanumeric character.
- The target graph replaces the euro symbol in a target name with a different special symbol.
- Text boxes in SoftBench CM do not display the euro symbol.

- **An A.03.13 and newer aCC option has the potential to break the SoftBench Debugger and DDE on HP-UX 10.20 and 11.0**

The A.03.13 and newer version of the HP aC++ compiler working with an HP linker with a what string date of 981120 or later contains a the feature, the `+objdebug` option. This option instructs the compiler and linker to store debug information in the `*.o` object files instead of adding that information into the executable. This significantly speeds up compile times. However the DDE debugger and SoftDebug cannot locate debug tables stored there. You can use the `+objdebug` option when compiling SoftBench projects. Add the option to "Target: Modify Properties => Customize Build Configuration", (see SoftBench online help for more information). You will not be able to use the integrated SoftBench debugger, SoftDebug. SoftDebug will treat these programs as if they have been stripped and will attempt to debug the program at the assembly level.

A workaround is to use WDB, HP's version of the GDB debugger to debug programs compiled and linked with the `+objdebug` option. See "Compatibility Information" on page 13 for information on how to integrate WDB with SoftBench.

- **Using Static Analyzer Databases from SoftBench 5.X**

If you have a Static Analyzer database that you generated with SoftBench 5.X, you must regenerate the database before you can perform Static Analysis with SoftBench 6.X.

Internationalization Problems

- **SoftXemacs window "rolls up" when it is started with Japanese SoftBench on HP-UX 10.20 and 11.0.**

On HP-UX 10.20 and HP-UX 11.0, SoftXemacs starts but the window immediately shrinks to a one line window instead of maintaining the original window size. To correct this problem you must set the following X resource **BEFORE** you start SoftBench:

```
xemacs*preeditType:Root
```

To set this resource place it in your X resource file (`$HOME/filename` where *filename* is `.Xresources` or `.Xdefaults`) then use the "xrdb" command.

```
xrdb -merge $HOME/.Xresources
```

Compatibility Information and Installation Requirements

Prerequisites for SoftBench are listed in the Installing SoftBench manual. This section describes additional installation information that is not covered in the manual.

Required Patches

SoftBench requires a patch on HP-UX 10.20 and HP-UX 11.0X. For the latest patch information, refer to the URL:

<http://devresource.hp.com/softbench>

Refer to `/opt/softbench/README` for instructions on obtaining patches.

Install the following individual patches after you have installed SoftBench:

HP-UX 10.20 patches:

- Patches required for Workstations (s700) and Servers (s800) running HP-UX 10.20:
 - PHSS_20715 s700_800 10.20 CDE Runtime Dec 99 Periodic Patch
 - PHSS_17225 s700_800 dld.sl(5) cumulative patch
 - PHSS_20058 s700_800 ld(1) and som tools cumulative patch
- Patches required for a SoftBench CM server (that does not have SoftBench installed) running on HP-UX 10.20:
 - PHSS_20715 s700_800 10.20 CDE Runtime Dec 99 Periodic Patch
 - PHSS_17225 s700_800 dld.sl(5) cumulative patch
 - PHSS_20058 s700_800 ld(1) and som tools cumulative patch
 - PHSS_17872 s700_800 10.X HP aC++ runtime library components (A.01.21)

HP-UX 11.0X patches:

- Patches required for Workstations (s700) and Servers (s800) running HP-UX 11.0X:
PHSS_20865 s700_800 11.00 X/Motif2.1 Runtime MAR 2000 Cumulative Patch
PHSS_20716 s700_800 11.00 CDE Runtime Dec 99 Periodic Patch
PHNE_20094 s700_800 11.00 Fix for Streams Pty MP race condition
- Patches required for a SoftBench CM server (that does not have SoftBench installed) running on HP-UX 11.0X:
PHSS_20865 s700_800 11.00 X/Motif2.1 Runtime MAR 2000 Cumulative Patch
PHSS_20716 s700_800 11.00 CDE Runtime Dec 99 Periodic Patch
PHNE_20094 s700_800 11.00 Fix for Streams Pty MP race condition

HP-UX 11i patches:

There were no patches required for SoftBench on HP-UX 11i when this document was written.

Compiler Patch Information

- If you are using any of the following compilers/tools see the appropriate Release Note for patch information.

Compiler:	Release Note Location
aC++	/opt/aCC/newconfig/RelNotes/ACXX.release.notes
C-ANSI-C	/opt/ansic/newconfig/RelNotes/ansic.*
DDE	/opt/langtools/newconfig/RelNotes/DDE

Compatibility Information

- **The WDB-GUI is bundled with SoftBench.**

SoftBench now provides an integration with WDB 1.1 and later versions. WDB-GUI is bundled with SoftBench. If SoftBench and the WDB-GUI are both installed on your system, a tool preference option will allow you to use the following steps to select WDB as your default debugger:

1. In the Softbench main window choose, Options: Tool Preferences.
2. In the Tool Preferences dialog box, select Debugger under Select a Tool.
3. Select WDB under Available Tools.
4. Select [OK].

WDB is not tightly integrated with SoftBench. When WDB is running within SoftBench, WDB responds to START, STOP, ICONIFY, NORMALIZE, LOAD, and SET-BREAKPOINT requests from the SoftBench tools. It does not honor program settings configured in the SoftBench main window and will not make requests to the other tools.

- **SoftBench 6.X Removes COBOL SoftBench**

COBOL SoftBench is no longer supported. If you install SoftBench 6.X, COBOL SoftBench will be removed from your system.

- **CacheFS Is Not Supported**

SoftBench 6.X does not support CacheFS (provided with the “Networking Enhancements Release for HP-UX 10.20 (April 1998)”).

Installation Problems

- **Installing SoftBench 6.X removed SoftBench 5.X from your system**

To restore SoftBench 5.X:

1. Remove SoftBench 6.X.
2. Reinstall Softbench 5.X.
3. Install any SoftBench 5.X patches.
4. If you removed your Softbench 5.X licenses, you need to reinstall them.
5. Perform the command:

```
mv /opt/softbench/config.5x /opt/softbench/config
```

This command restores any SoftBench customizations you had made to your system. It also prepares your system for a move to a newer version of SoftBench in the future.

- **Possible error when updating from SoftBench 5.25 to SoftBench 6.60**

If you have the SoftBench 5.25 cumulative patch, PHSS_15632, installed on your system you may get WARNING and ERROR messages when you update your system to Softbench 6.60. The WARNING and ERROR messages occur when this patch is automatically removed during the SoftBench 6.60 update installation. The WARNING and ERROR messages can safely be ignored. The output file, /var/adm/sw/swagent.log appears as follows:

```
* Software selections:  
SB-SoftBenchCore.SB-GNUBIN-MAN  
* File selections:  
/opt/softbench/config/buildt/include/f90.rules
```

```
* Beginning Modification Phase.
```

```
WARNING: Cannot delete the definition for  
"/opt/softbench/config/buildt/include/f90.rules" from the  
fileset "SB-SoftBenchCore.SB-GNUBIN-MAN".The file does not  
exist in this fileset.
```

```
ERROR:The selected software was not modified. All of the specified  
file modifications are invalid. See the ERROR and/or WARNING  
messages above.
```

- **When you install SoftBench, X11MotifDevKit (which is bundled with SoftBench) emits the following message into the `swagent.log` file on HP-UX 10.20 and 11.0.**

The X11MotifDevKit emits the following spurious message into the `swagent.log` when SoftBench is installed. Please ignore this message, it will not affect your installation.

```
* Running "preinstall" script for fileset
"X11MotifDevKit.X11R6-PRG".
rm: /usr/include/X11/extensions directory
```

Removal Problems

- **Older versions of SoftBench included the HP cfront-based C++ compiler. If you still have this compiler on your system and you remove SoftBench 6.60, you may see an error message. If this situation occurs, SoftBench is removed, but the compiler is not.**

If SoftBench is removed without the compiler, you may see a message in the error log that looks like this:

```
* Summary of Execution Phase:
ERROR:      Skipped (in analysis)
            C-Dev-Tools.C-AUX-MAN,l=/opt/langtools,r=B.11.01.06
ERROR:      Skipped (in analysis)
            C-Dev-Tools.C-AUX,l=/opt/langtools,r=B.11.01.06
ERROR:      2 of 63 filesets had Errors.
```

To remove SoftBench 6.60 and the HP cfront-based C++ compiler without errors:

1. Remove C-Plus-Plus product (Cfront compiler) by entering: `swremove C-Plus-Plus`

WARNING This forcibly removes the Cfront compilers.

2. Remove the SB6.60 bundle. Use `swlist` to determine which SoftBench bundles you have installed. The C++ SoftBench bundles that need to be removed are: B6447EB, B6448EB, B6451EB and B6452EB. Remove the C++ SoftBench bundles you have installed using `swremove`.

Patches and Fixes in this Version

SoftBench 6.60 includes the following fixes:

SR Number	Description
JAGab78483	Compiler package has wrong transform
JAGab78489	Bring SoftBench up-to-date with changes for other GUI's
JAGab78493	Under External Build Command, Specify Directory DB [Help] has no text
JAGab78653	sbparse 6.50 core dumps with program kb_loader.C
JAGab79150	sbparse 6.50 core dumps on code in mtest.C
JAGab81866	SB-BMSFramework NOTE may be excessive
JAGab81867	SB-BMSFramework NOTE may be excessive
JAGab81868	SB-BMSFrameworkJ NOTE may be excessive
JAGab83046	Remove HP-PAK from Softbench for DART49
JAGab83047	Project Build - Using 'Save as' package doesn't update compile options
JAGab83532	Softvi fails to move from line 1 to line 1000 with Jpn SJIS X11/Motif
JAGab84877	Allow SoftCM to honor umask permissions for the .sbcm file
JAGac29190	SoftCM cmserver has date problem with activityLog (ie 100/xx/xx)
JAGac29208	SoftCM PC client displays dates with -17hr offset for timezone JST-9
JAGac41030	Source files containing #line pragmas create bad Makefile
JAGac57045	C/C++ SB LTU Eng/Jpn - excessive messages for configure on SB-BMS
JAGac57046	C/C++ SB LTU Eng/Jpn - excessive messages for configure on SBCM-SRV
JAGac78521	SB 6.X has utility script sccstorcs that is not Y2K safe

Software Availability in Native Languages

SoftBench 6.X is available in English and Japanese.

Table 1-1 Available SoftBench Products

Product Name	HP 9000 Workstation SD Bundle	HP 9000 Server SD Bundle
C SoftBench	B6449EB	B6445EB
Japanese C SoftBench	B6450EB	B6446EB
C++ SoftBench	B6451EB	B6447EB
Japanese C++ SoftBench	B6452EB	B6448EB

The following manuals are available in both English and Japanese:

- Installing SoftBench
- C and C++ SoftBench User's Guide

The following manual is available only in English:

- SoftBench SDK: CodeAdvisor and Static Programmer's Guide