

IBM

High C/C++ Compiler for PowerPC Installation Guide

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Contents

Contents v

Installing the IBM High C/C++ Compiler for PowerPC 7

 Installing High C/C++ on a RISC System/6000 7

 Installing High C/C++ on a PC 8

 Installing High C/C++ on a Sun 9

 Instructions for SunOS 4.1.3 9

 Instructions for Solaris 2.3 10

 Instructions for both SunOS 4.1.3 and Solaris 2.3 10

Installing the IBM High C/C++ Compiler for PowerPC

The High C/C++ Compiler for PowerPC can be installed on a RISC System/6000 running AIX, an IBM PC or compatible running Windows 3.1, or a Sun SPARCstation, as described in the following sections.

Installing High C/C++ on a RISC System/6000

The High C/C++ compiler is installed on an AIX host system using the system management interface tool (**smit**).

Before beginning a High C/C++ installation, you must have:

- The High C/C++ installation diskettes or install files
- A RISC System/6000, running AIX Version 3.2.5 or later
- Superuser privileges on the AIX system

The method used to perform Steps 7 through 18 of the installation procedure depends on your version of **smit**. To select options, use the appropriate method for your version:

- In the X Window version, position the cursor and make selections using the mouse.
- In the character-based version, position the cursor using arrow keys and make selections using function keys.

Installation can be done from diskettes or from install images. If install images are used, you can omit steps 2 through 5 below, and use **smit** to install beginning with step 6.

The following procedure installs the High C/C++ compiler from diskettes:

1. Log in as **root** or use the AIX **su** command to become the superuser.
2. Use a **cd** command to change to the directory where the install image file will be stored.

Typically, the directory **/usr/sys/inst.images** holds install image files. However, any directory can be used.

3. Insert the High C/C++ installation diskette labeled “1 of *n*” (*n* may vary) into the diskette drive.
4. Run the following **restore** command to read the file **highcppc.instal.Z** from the diskette into the working directory:

restore -f/dev/rfd0

5. Insert the rest of the High C/C++ installation diskettes into the diskette drive when prompted.

6. After the diskettes are read, unpack the file:
uncompress highcppc.instal.Z
This produces the file **highcppc.instal**.
7. Run the following command:
smit install_latest
8. Type the fully-qualified path name of the file **highcppc.instal** into the **Input device/directory for software** field.
The path includes the directory selected in Step 2, for example,
/usr/sys/inst.images/highcppc.instal.
9. Press Enter.
10. Position the cursor on the **Software to install** line.
11. Select the **list** button (X Window version) or the **F4=List** function key (character-based version) to display a list of available software.
12. From the list, select the line marked "All".
13. Complete the selection process to return to the **Install software products at latest available level** window.
14. Ensure that the response for **Automatically install PREREQUISITE software** is "no."
15. Ensure that the response for **OVERWRITE existing version** is "yes."
16. Ensure that the **Commit Software** field in the screen contains a **Yes** response and begin the installation by pressing "Do".
17. Select the affirmative response at the **ARE YOU SURE?** screen to continue the installation.
18. When the Command status is **OK**, file installation is complete.
19. Exit **smit**.

The IBM High C/C++ Compiler for PowerPC is installed in the directory **/usr/highcppc**. The compiler and other tools are placed in **/usr/highcppc/bin**.

Installing High C/C++ on a PC

The following is required before you can install High C/C++ on a PC:

- IBM PC or compatible running Windows 3.1
- 5.0 megabytes of disk space
- High C/C++ installation diskettes

To install High C/C++, perform the following:

1. Place the High C/C++ install diskette #1 in the proper drive
2. Start Windows if it is not already running.
3. Select the Run option from the File pulldown in the Program Manager window.
4. Type **a:install** (or **b:install** if applicable), then press the Enter key.

Follow the on-screen prompts to install the High C/C++ compiler.

Installing High C/C++ on a Sun

The High C/C++ compiler is installed on a Sun SPARCstation using the **cpio** command.

The following is required before you can install High C/C++ on a PC:

- Sun SPARCstation with a diskette drive, running either:
 - SunOS 4.1.3
 - Solaris 2.3
 - High C/C++ compiler installation diskettes
 - 'root' privileges on the workstation
1. Log in as **root**
 2. Open at least two windows for this process.
 3. Create the directory where you intend to install the compiler and **cd** to it. We recommend the directory **/usr/hcpcpc**.
 4. Insert the High C/C++ diskette labelled '1 of n' (n may vary) into the diskette drive.

Instructions for SunOS 4.1.3

5. From the second window run the command:
cpio -ivB hcpcpc.tar.Z < /dev/rfd0
where '/dev/rfd0' is the name of your diskette device
6. When the system prompts you for a new volume, move to the first window and type **eject** to eject the diskette. Insert the next diskette.
7. Move to the second window and type the name of the diskette device (/dev/rfd0) to continue the process.
8. If prompted for more diskettes, repeat the above procedures.
9. Skip to instruction 15 below.

Instructions for Solaris 2.3

10. From the first window type **volcheck**. This creates a file called **/vol/dev/rdiskette0/unlabeled** (the diskette device name).

If the system pops up a message box saying the diskette format is unrecognized, ignore the message and cancel the message box.
The name of the file created may be different on your system; use the command **eject -q** to see the actual name.
11. From the second window run the command:

cpio -ivB hcppc.tar.Z < /vol/dev/rdiskette0/unlabeled
12. When the system prompts you for a new volume, move to the first window and type **eject** to eject the diskette. Insert the next diskette and type **volcheck**.
13. Move to the second window and type the name of the diskette device (**/vol/dev/rdiskette0/unlabeled**) to continue the process.
14. If prompted for more diskettes, repeat the above procedures. When finished, type **eject** to remove the final diskette.

Instructions for both SunOS 4.1.3 and Solaris 2.3

15. You now have the file **hcppc.tar.Z** in the current directory. Run the command:

zcat hcppc.tar.Z | tar xvf -

This unpacks the files from the tar file and places them in a tree under the current directory.
16. If you have installed into a directory other than **/usr/highcppc**, edit the **bin/hcppc.cnf** file, and locate the line near the top of the file that reads **HCDIR=/usr/highcppc**. Change this to reflect the directory that you installed into. Save your changes and exit the editor.
17. To make sure the compiler and associated tools are in your execution path you may either:
 - Add the **/usr/highcppc/bin** directory to your PATH environment variableor:
 - Add symbolic links from the **/bin** directory to the executables in **/usr/highcppc/bin**, using these statements:


```
In -s /usr/highcppc/bin/hcppc /bin  
In -s /usr/highcppc/bin/asppc /bin  
In -s /usr/highcppc/bin/ldppc /bin  
In -s /usr/highcppc/bin/arppc /bin
```

```
ln -s /usr/highcppc/bin/hcppc.cnf /bin
```

```
ln -s /usr/highcppc/bin/elfdump /bin
```

```
ln -s /usr/highcppc/bin/unmangle /bin
```

18. Once installation is complete, you may delete **hcppc.tar.z** to recover space.