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# Migrating to the gcc 4.6 compiler

## Accessing the compiler

gcc4.6 is not installed by default in either slc5 or slc6. To use it for regular Gaudi/LHCb builds it is enough to set the environment variable CMTCONFIG accordingly:

```
lslLogin -c x86_64-slc5-gcc46-opt
```

To be able to use it on the command line outside the Gaudi/LHCb builds, you can do the following (bash):

```
# export CMTCONFIG=x86_64-slc5-gcc46-opt
# SetupProject LCGCMT gcc
```

(use `setenv` on `tcsh`)

## Accessing gcc46 builds

gcc46 builds are part of the official LHCb software distribution for all projects released since January 2012

## Common compilation errors

The most common problems are described on the gcc 4.6 migration guide [?](#) (it may be useful to have a look to the gcc 4.4 one [?](#) too).

Below are hints on solving other common errors or warnings.

### Errors

### Warnings

**warning:** operation on ... may be undefined [-Wsequence-point]

Comes from code like:

```
a = b = a = 1;
```

The problem is that the assignment to `a` appears twice and the standard does not define what the behavior should be. The code should be modified to remove the duplicated assignment:

```
a = b = 1;
```

or, better

```
a = 1;
b = 1;
```

## Differences in application output between gcc43 and gcc46

The most common cause of differences when comparing the output of an application build with gcc46 with the gcc43 equivalent are due to differences in sorting. In most cases, the differences have been fixed by replacing occurrences of `std::sort` with `std::stable_sort`

-- MarcoClemencic - 23-Nov-2011

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This topic: LHCb > Gcc46PortIssues

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