

# PVM

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## PVM

1. [Download](#) and extract source code:

```
cd $INSTALL_DIR
wget http://www.netlib.org/pvm3/pvm3.4.5.tgz
tar -zxvf pvm3.4.5.tgz
```

2. Set your c and c++ compiler information as specified on [the prerequisites page](#).

```
export CC=[your C compiler (i.e. "gcc", "xlc", "icc", "pgcc")|your C compiler (i.e. "gcc", "xlc", "icc",
"pgcc")]
export CXX=[your C compiler (i.e. "gCC", "xlC", "icc", "pgCC")|your C compiler (i.e. "gCC", "xlC",
"icc", "pgCC")]
export F77=[your Fortran 77 compiler (i.e. "g77", "xlf", "ifort", "pgf77")|your Fortran 77 compiler (i.
e. "g77", "xlf", "ifort", "pgf77")]
```

3. 

```
cd $INSTALL_DIR/pvm3
export PVM_ROOT=$PWD
make
make install
```

4. You are now ready to install the next prerequisite, [InterComm-1.6](#).

## Developer Website

<http://www.csm.ornl.gov/pvm>

## Troubleshooting

- While building with gcc-4.1, you may get the following error:

```
gcc -O -DCLUMP_ALLOC -DSTATISTICS -DTIMESTAMPLOG -DSANITY -I../include -DARCHCLASS=\"LINUX\" -
DIMA_LINUX -DSYSVSIGNAL -DNOWAIT3 -DRSHCOMMAND=\"/usr/bin/rsh\" -DNEEDENDIAN -DFDSETNOTSTRUCT -
DHASERRORVARS -DCTIMEISTIMET -DSYSERRISCONST -DNOTMPNAM -DUSESTRERROR -c ../src/host.c
In file included from ../src/host.c:227:
../src/global.h:321: error: array type has incomplete element type
../src/global.h:323: error: array type has incomplete element type
```

We have found two solutions that appear to work:

- Solution #1: include a missing `#include <pvmtev.h>` in global.h, [as described here](#).

```
FILE: pvm3/src/global.h MISSING: #include <pvmtev.h>
...

Changed end of file $PVM_ROOT/pvm3/src/global.h to read:
/* General Trace Globals Declarations */
#include <pvmtev.h>

extern struct Pvmtevidid pvmtevididlist[];

extern struct Pvmtevinfo pvmtevinfo[];

(Original reads:
/* General Trace Globals Declarations */

extern struct Pvmtevidid pvmtevididlist[];

extern struct Pvmtevinfo pvmtevinfo[];

)
```

- Solution #2: Apply the following patch:

```

Only in pvm3/pvmgs: LINUX
diff -urp pvm3-original/src/global.h pvm3/src/global.h
--- pvm3-original/src/global.h 2008-02-22 11:10:16.000000000 -0700
+++ pvm3/src/global.h 2008-02-22 11:11:08.000000000 -0700
@@ -318,7 +318,3 @@ extern struct pvmmclass *pvmmboxclasses;

/* General Trace Globals Declarations */

-extern struct Pvmtevidid pvmtevididlist[];
-
-extern struct Pvmtevinfo pvmtevinfo[];
-
Only in pvm3/src/LINUX: waitc.o
diff -urp pvm3-original/src/pmsg.c pvm3/src/pmsg.c
--- pvm3-original/src/pmsg.c 2008-02-22 11:10:16.000000000 -0700
+++ pvm3/src/pmsg.c 2008-02-22 11:11:41.000000000 -0700
@@ -170,7 +170,7 @@ static char rcsid[] =
** Globals **
** **
*****/
-
+extern struct Pvmtevinfo pvmtevinfo[];

/*****
** Private **
Only in pvm3/src: pvmdtev.c~
diff -urp pvm3-original/src/pvmdtev.c pvm3/src/pvmdtev.c
--- pvm3-original/src/pvmdtev.c 2008-02-22 11:10:16.000000000 -0700
+++ pvm3/src/pvmdtev.c 2008-02-22 11:12:02.000000000 -0700
@@ -75,6 +75,9 @@ static int init_checklist[CHECKLISTSIZE]
static int init_start = 0;
static int init_end = 0;

+extern struct Pvmtevidid pvmtevididlist[];
+extern struct Pvmtevinfo pvmtevinfo[];
+
void
tev_init_pvmd( dst, ctx, tag )
Only in pvm3/src: pvmdtev.c~
diff -urp pvm3-original/src/tev.c pvm3/src/tev.c
--- pvm3-original/src/tev.c 2008-02-22 11:10:16.000000000 -0700
+++ pvm3/src/tev.c 2008-02-22 11:12:18.000000000 -0700
@@ -71,6 +71,7 @@ static char rcsid[] =

struct pmsg *midtobuf();

+extern struct Pvmtevinfo pvmtevinfo[]

/*****
** Private **

```