



Debugging Local MSMPI Applications with PGDBG

Overview

All PGI® products except PGI Visual Fortran® include the ability to debug up to eight local MPI processes on the host system. This enables developers working on MPI cluster applications to debug their programs without the need to access or tie up the cluster resources. PGI products for Windows use the Microsoft MPI libraries available from Microsoft.

Follow these steps to build and debug local MPI programs on Windows.

Prerequisites

1. One of the 32-bit or 64-bit Microsoft operating systems that support MSMPI:
 - a. Windows XP SP3
 - b. Windows Server 2003
 - c. Windows Vista
 - d. Windows Server 2008
2. The Microsoft HPC Pack 2008 SDK, available directly from Microsoft:
<http://www.microsoft.com/downloads/details.aspx?familyid=12887DA1-9410-4A59-B903-693116BFD30E&displaylang=en>
3. A license to a PGI Windows product.

Building and Debugging a Local MSMPI program

1. Check that you are using an MSMPI-compatible Microsoft operating system.
2. Install and license a PGI product for Windows.
3. Download and install the Microsoft HPC Pack 2008 SDK.
4. Use PGF95™ to build a debuggable MSMPI program:

```
PGI$ pgf95 -Mmpi=msmpi -g myapp.f90
```

5. Run with the Microsoft mpiexec utility:

```
PGI$ mpiexec -n 4 myapp.exe
```

6. Debug with the PGDBG® debugger:

```
PGI$ pgdbg -mpi -n 2 myapp.exe
```