

PGDBG Release Notes

Version 2016



PGI Compilers and Tools

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Chapter 1.

RELEASE OVERVIEW

Welcome to Release 2016 of the PGDBG[®] debugger for 32-bit and 64-bit x86-compatible processor-based workstations, servers, and clusters running versions of Linux, OS X, or Windows operating systems. This document describes late-breaking information not included in the current printing of the PGI Debugger User's Guide.

1.1. Product Overview

PGDBG is licensed software available from The Portland Group. You must agree to an End-User License Agreement when you install the software.

PGDBG supports debugging programs running on local and remote systems. The PGI license keys that enable PGDBG to debug must be located on the same system where the program you want to debug is running.

Local debugging

If you want to debug a program running on the system where you have launched PGDBG, you are doing local debugging and you need license keys on that local system.

Remote debugging

If you want to debug a program running on a system other than the one on which PGDBG is launched, you are doing remote debugging and you need license keys on the remote system. The remote system also needs an installed copy of PGI Workstation, PGI Server, or PGI CDK.

1.2. Release Components

Release 2016 includes the multi-thread graphical debugger for debugging applications.

1.3. Supported Platforms and Operating Systems

PGDBG is supported on six platforms.



Support for 32-bit development is deprecated in PGI 2016 and will no longer be available as of the PGI 2017 release. PGI 2017 will only be available for 64-bit operating systems and will not include the ability to debug 32-bit applications on either 32- or 64-bit operating systems.

- ▶ **32-bit Linux** — includes all features and capabilities of the 32-bit Linux operating systems running on an x64 compatible processor. 64-bit Linux compilers will not run on these systems.
- ▶ **64-bit Linux** — includes all features and capabilities of the 64-bit Linux operating systems running on an x64 compatible processor. Both 64-bit and 32-bit Linux compilers run on these systems.
- ▶ **32-bit Windows** — includes all features of the 32-bit Windows operating systems running on either a 32-bit x86 compatible or an x64 compatible processor. 64-bit Windows compilers will not run on these systems.
- ▶ **64-bit Windows** — includes all features and capabilities of the 64-bit Windows version running on an x64 compatible processor. Both 64-bit and 32-bit Windows compilers run on these systems.
- ▶ **32-bit OS X** — supported on 32-bit Apple operating systems running on either a 32-bit or 64-bit Intel-based Mac system. 64-bit OS X compilers will not run on these systems.
- ▶ **64-bit OS X** — supported on 64-bit Apple operating systems running on a 64-bit Intel-based Mac system. Both 64-bit and 32-bit OS X compilers run on these systems.

Chapter 2.

NEW OR MODIFIED FEATURES

This section provides information about the new or modified features of Release 2016 of the PGI Debugger.

2.1. What's New in Release 2016

16.1 Updates and Additions

- ▶ Added support for the disassembly of AVX3 instructions.
- ▶ Enhanced the debugger's display of Fortran character types and named commons.
- ▶ Improved support for debugging shared objects on OS X.
- ▶ Significantly reduced the debugger load time of large applications on all platforms.

A number of problems are corrected in every release. Refer to www.pgroup.com/support/release_tprs.htm for a complete and up-to-date table of technical problem reports (TPRs) fixed in recent releases of the PGI compilers and tools. This table contains a summary description of each problem as well as the version in which it was fixed.

Chapter 3.

TROUBLESHOOTING TIPS AND KNOWN LIMITATIONS

This section contains information about known limitations, documentation errors, and corrections.

For up-to-date information about the state of the current release, refer to the frequently asked questions (FAQ) section at: www.pgroup.com/support/index.htm.

3.1. Debugging Issues

The following are known debugging issues across platforms:

- ▶ Debugging of PGI Unified Binaries™, that is, 64-bit programs built with more than one `-tp` option, is not fully supported. The names of some subprograms are modified during compilation, and *PGDBG* does not translate these names back to the names used in the application source code.

For detailed information on how to debug PGI Unified Binary files, refer to www.pgroup.com/support/tool.htm.

- ▶ There is a known issue when debugging on OS X 10.11 (El Capitan); the debugger will generate warning messages when running to a breakpoint. These warning messages do not affect the ability of the debugger to debug your application and will be addressed in a future release.
- ▶ When debugging on a Windows 10 system, you may notice that the debugger captures extra "Worker" threads whether or not your application is multi-threaded. These threads are from the Windows 10 thread pool; the loader is taking advantage of multiple cores to load DLLs and initializes the application faster. When you are debugging a multi-threaded application and want to switch control between your program's threads, use the "threads" command to determine that thread's ID in the debugger.

Chapter 4. CONTACT INFORMATION

You can contact PGI at:

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Or electronically using any of the following means:

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Sales: sales@pgroup.com

Support: trs@pgroup.com

WWW: <http://www.pgroup.com>

The PGI User Forum is monitored by members of the PGI engineering and support teams as well as other PGI customers. The forum newsgroups may contain answers to commonly asked questions. Log in to the PGI website to access the forum:

<http://www.pgroup.com/userforum/index.php>

Many questions and problems can be resolved by following instructions and the information available at our frequently asked questions (FAQ) site:

<http://www.pgroup.com/support/faq.htm>

All technical support is by email or submissions using an online form at:

<http://www.pgroup.com/support>

Phone support is not currently available.

PGI documentation is available at <http://www.pgroup.com/resources/docs.htm>.

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