Current Release Information

Release 7.0 PGI Compiler Features and Performance

- (NEW) Expanded Operating System Support
  - 64-bit and 32-bit Microsoft Subsystem for UNIX-based Applications (SUA) and 32-bit Microsoft Services for UNIX (SFU)
  - 64-bit and 32-bit Apple Mac OS X Preview
  - SuSE 10.2
  - Fedora Core 6
  - Windows Vista
- PGI Unified Binary - generate a single binary fully optimized for x64 processors from both AMD and Intel
  - (NEW)Optimize functions, subroutines or whole files for multiple 64-bit targets using Fortran directives and C/C++ pragmas
  - (NEW) Now generates target-specific functions and subroutines only where beneficial; reduces executable code size 5 - 90% vs. PGI 6.2
- (NEW) Additional Fortran 2003 Support
  - Asynchronously read from and write to external files
  - Stream I/O
  - BIND and C_LOC ISO 'C' bindings
- (NEW) Expanded C99 support including compound literals and designated initializers
- (NEW) Network installation option simplifies installation and configuration on large installations running multiple operating systems
- (NEW) User Modules (shell environment) simplify switching between multiple compiler environments and versions
- (NEW> Enhanced GCC support including extended asm support and GNU statement expressions
- OpenMP 2.5 and (NEW) proposed OpenMP 3.0 support
- (NEW) C/C++ pre-processor improvements including enhanced big macro support
- Enhanced C/C++ pointer target optimizations
- Profile and data feedback and optimizations
- Interprocedural optimizations on libraries
- Inlining of routines from libraries
- Auto-parallelization of loops specifically optimized for multi-core processors.
- Fortran 95 pointer and runtime optimizations
- SSE/SSE2 vectorization of a wider class of loops
- Support for Intel MMX and SSE1/SSE2 intrinsics
- (NEW) Support for new Intel SS3E3 and AMD SSE4a and ABM instructions
- Hand-tuned math intrinsics
- PGI CDK MPICH2 support, including MPICH2 debugging and profiling
- (NEW) Enhanced Windows compatibility
- Microsoft Compute Cluster Server 2003 interoperability -- the Microsoft MPI library (MSMPI) is pre-configured by Microsoft for use with PGI compilers and tools for Windows x64
- Interoperability with Microsoft Visual C++, including support for debugging of mixed PGI Fortran and VC++ executables
- Dynamic vector alignment and prefetching
- Enhanced loop fusion
- Enhanced vector idiom recognition
- Improved parallel SMP/OpenMP efficiency
- Process/CPU affinity in SMP/OpenMP applications
- Fine-grained control of prefetch instructions
- Hand-tuned math intrinsics library routines
- Simplified g++ style template instantiation
- EDG C++ front end release 3.6
- Fast compilation speed
- (NEW) PGPROF profiler supports collection and display of hardware performance counter data on systems with *oprofile* installed
- Support for -mp=numa option for Non-Uniform Memory Access systems
- Support for OpenMP DYNAMIC and GUIDED
- -Mfprelaxed flag for fast div/sqrt/rsqrt when precision needs are lower
- FLEX*lm* for multi-core licensing by socket
- (NEW)Redesigned and updated PGI User's Guide and PGI Tools Guide
- Updated PGI Fortran Reference manual

PGI Cross-platform Support

- Support for the latest Linux releases including SUSE 10.2, SLES 10, Fedora Core 6, and RHEL 4
- Support for 64-bit Microsoft Windows Vista, XP Professional x64 Edition and Windows Server 2003 x64 Edition
- Support for Microsoft Subsystem for UNIX-based Applications
- Preview support for x86 based Apple Mac OS X

PGI Libraries and Applications Support

- (NEW)PGI optimized ACML 3.6 Math Library supported on all targets, both serial and ***OpenMP***
- Tuned intrinsics libraries for 32-bit and 64-bit targets
- Pre-validation of de facto standard support libraries including NetCDF, F90 OpenGL, ATLAS, ScaLAPACK, MPI-CH and LAM MPI
- Pre-validation of POP, MM5, CAM, MOM4, WRF2, AMBER, CHARMM, GAMESS, MOLPRO, MCNP5 and TBMD

Complete details are included in the PGI Workstation 7.0 Installation & Release Notes, the PGI Visual Fortran Installation & Release Notes and the PGI CDK 7.0 Installation & Release Notes.

What are the latest releases?

The current PGI release versions are

PGI Workstation and *PGI Server* for Linux	7.0-2, updated March 1, 2007
PGI® CDK™ for Linux	7.0-2
PGI Workstation and *PGI Server* for Windows	7.0-2, updated March 1, 2007
PGI Workstation and *PGI Server* for Windows SUA/SFU	7.0-2, updated March 7, 2007
PGI Visual Fortran™	7.0-2, updated March 6, 2007

Download the current release or download an older release from the PGI archive.

How do I get the latest release?

The *PGI Workstation* products are available in the download section of this website.

How do I find out if my license will work with the current release?

The license file will have a field with 3.000, 3.100, 3.200, 3.300, 4.000, 4.100, 5.000, 5.100, 5.200, 6.000, 6.100, 6.200 or 7.000 in it. This is the highest release this license will support. For the current release, you should have a 7.000 . Note: Any release prior to the value in the field should work with the license.

How do I find out if I qualify for a current release license?

The subscription information is available by going to the online key generation system. If you go online with the access codes (PIN and password) for your account, and link to the key generation process, you will find entries in the information display that indicate when your subscription expires and your current release. Note: If you qualify for release 7.0-2, for example, you will also qualify for 7.0-3, 7.0-5, and so on when/if they occur.

What is a subscription?

A subscription entitles the user to get new licenses for new minor releases. Whatever product you have purchased a license for, a subscription fee will allow you to upgrade to the latest release for up to a year. If you do not purchase a subscription, you are allowed an upgrade for up to 60 days after purchase. If your subscription expires, you can become a current subscriber by paying the subscription charge over the lapsed period. You may also wish to read the PGI Subscription Service Agreement.

How do I get the access codes?

The access codes are sent when you purchase your compilers. An order acknowledgement email is sent with the codes. If you lose/forget them, email license@pgroup.com and request your original order acknowledgement.

How does this release differ from the previous release?

- The **7.0** release supports a ***network install***, which allows **PGI *compilers*** to run on multiple linux systems and versions from a single network installation.
- The **7.0** release supports a new switch ***-Bstatic_pgi***, which statically links **PGI** created libraries, but not

the linux libraries typically linked dynamically. This allows users to create executables on simliar **Linux** systems, and running them without installing the *Portability Package*. Note that **PGI** executables can run successfully on a wider range of **Linux** systems when using the dynamically linked *Portability Package*.

- The **7.0** release, currently available in the download section will now support SUSE 10.2, Red Hat Enterprise Linux 4, and Fedora Core 6, for 64-bit on AMD64 or EM64T.
- The current release supports dual-core AMD Opteron and Intel EM64T systems. License support treats the dual-code socket as a single *node*, while the compiler treats it as 2 nodes.
- The current release supports **NUMA** (Non-uniform Memory Access). See the release notes for details.
- The current release supports ***module load*** builds, a style of program compilation and linking (like makefiles) that some sites have requested (note: do not confuse this with **Fortran 95 *modules***). Those sites can download and will know how to edit and install the Module TCL script as file ***7.0*** in a directory named ***pgi*** so that

  ```
  module load pgi/7.0
  ```

  works as expected.
- A **Linux *portability package*** is now available for 64-bit executables. Users can obtain it from the Linux Portability Page, along with the 32-bit version.
- Further information can be found in the 7.0 Release Notes located in the documentation section.

Any known problems with the current releases?

- 32-bit executables that use ***libpthreads*** may fail on 64-bit linux systems because libpthreads reduces stack size to 2MB. This is a **Linux** limitation. ***libpthreads*** is used by routines compiled ***-mp*** or ***-Mconcur*** . 64-bit executables do not experience this limitation.
- Some users linking with ***libpthreads*** (**-mp** or **-Mconcur**) have seen the error message

  ```
  symbol _h_errno, version GLIBC_2.2.5 not defined in file libc.so.6
  with link time reference
  ```

  This can be worked around with the environment variable **LD_ASSUME_KERNEL**

  ```
  export LD_ASSUME_KERNEL=2.4.1
  ```

  or

  ```
  export LD_ASSUME_KERNEL=2.2.5
  ```

  for example.

top

© STMicroelectronics 2005 | Legal information | Privacy Policy Last updated: 0/2007