



PV-WAVE Family Release Notes

April 2010

This file, Release_Notes, contains a summary of technical changes that make PV-WAVE Version 9.5, JWAVE 3.51, and TS-WAVE 4.04 different from previous versions. PV-WAVE version 9.5 contains all bug fixes, enhancements and patches related to the various PV-WAVE 9.0x releases. For convenience, this file is provided online. A detailed list of all changes is available in the Update Notice (Update_Notice.pdf). Documentation for the new features and keywords is available in the New Features Guide (enewfeatures95.pdf)

This document contains a brief overview of new features, followed by information on operating system levels and hardware requirements for this release.

PV-WAVE 9.5 New Features and Enhancements

- Expand OpenMP support
 - Improve parallel performance on Windows with automated runtime control of OpenMP threading parameters
 - Enable OpenMP parallelization for Linux 32-bit and 64-bit platforms
 - Parallelize operations on complex and double complex data types
- Enhance Eclipse plug-in
 - Integrate Eclipse documentation into PV-WAVE Programmers Guide
 - Allow console input as long as users are in the PV-WAVE perspective
 - Add ability to change variable values
 - Add breakpoint support for non-workspace files
- Include JWAVE in PV-WAVE Advantage
- Add INT32 data type
- Add support for Windows Vista 64 and Windows 7 (32-bit and 64-bit)
- Upgrade HP-UX to Oracle 10

Additional details can be found in the PV-WAVE 9.5 New Features Guide.

GTGRID 3.0

GTGRID 3.0 offers the following improvements:

- Improve gridding results. This includes smoother interpolation near faults for all methods and the extension of DIRECT to handle more points without averaging and to honor faults.
- Performance improvement in cases involving large grids and sparse data.
- Add support for both 32- and 64-bit Windows and Linux platforms.

- Increase control over gridding parameters.
- New functions for saving, restoring, accessing, and sampling grid information.
- Ability to sample gridded results in the context of the original gridded vectors, x and y.

PV-WAVE Family Operating System Levels and Hardware Requirements

OPERATING SYSTEM LEVELS

The following operating systems are supported by PV-WAVE:

Platform		Operating System Level	Window Manager	Native X Revision
HP PA-RISC ¹	32	HP-UX 11i	CDE 1.4	X11R6
IBM RS/6000 ³	32 and 64	AIX 5.3	AIXwindows 5.3	X11R6
Intel EM64T ³ (AMD64/x64)	64	MS Windows XP	Windows	N/A
Intel EM64T ³ (AMD64/x64)	64	MS Windows Vista	Windows	N/A
Intel EM64T ³ (AMD64/x64)	64	MS Windows 7	Windows	N/A
Intel x86	32	MS Windows XP	Windows	N/A
Intel x86	32	MS Windows Vista	Windows	N/A
Intel x86	32	MS Windows 7	Windows	N/A
Intel x86	32	Red Hat Enterprise Linux 5	X.org 7.1.1	X11R6
Intel EM64T ³ (AMD64/x64)	64	Red Hat Enterprise Linux 5	X.org 7.1.1	X11R6
SPARC	32 and 64	Solaris 10	CDE 1.6.3	X11R6
Intel Itanium ²	32	OpenVMS 8.3	DECwindows Motif 1.5	X11R6

1. The Eclipse plug-in is not supported for HP-UX.
2. The Eclipse plug-in, HDF5, JWAVE and the Image Processing Toolkit are not supported for OpenVMS.
3. HDF and HDF5 are not supported for the 64-bit versions of PV-WAVE.

PV-WAVE may operate at down level versions of these operating systems, but differences in operating system versions may cause unexpected behavior. Down-level operating system versions are not supported.

While PV-WAVE may work using other window managers, differences in implementation from the window managers listed may cause aberrant behavior when using PV-WAVE. If problems do exist, contact the vendor supplying the window manager, or switch to one of the window managers listed above.

Note for WINDOWS: The Windows DLLs in both the PV-WAVE kernel and the options have been built with the windows subsystem using Visual Studio 2005.

Note for WINDOWS AMD64/x64: While the 32-bit version of PV-WAVE is expected to run properly on a 64-bit Windows machine, it is important to note that the 32-bit version of PV-WAVE is built on and for a different chip/instruction set. Unanticipated problems may arise when running in this unsupported configuration.

Contact your account manager if interest in an unsupported operating system level exists.

HARDWARE REQUIREMENTS

UNIX PLATFORMS: minimum and recommended operating system and hardware requirements for UNIX architectures include:

	Minimum	Recommended
Memory	512 MB	1 GB
Display Colors	8-bit	24-bit or higher
Display Resolution	1024 x 780	1024 x 780 or better
DVD Drive		

Note for Linux. The general license management on Linux requires an Ethernet card. If the machine running PV-WAVE does not have an Ethernet card you are limited to using extended DEMO softkeys only.

WINDOWS PLATFORMS: Minimum and recommended operating system and hardware requirements for Windows XP/Vista/7 using Intel processors include:

	Minimum	Recommended
Memory	512 MB	1 GB
Display Colors	256	24-bit or higher
Display Resolution	1024 x 768	1024 x 768 or better
DVD Drive		

OpenVMS

	Minimum	Recommended
Memory	512 MB	1 GB
Display Colors	8-bit	24-bit or higher
Display Resolution	1024 x 780	1024 x 780 or better
CD Drive		

DISK SPACE REQUIREMENTS

The minimum installation requires 150 MB and a full installation up to 500MB. Full installation includes all components and online documentation. Note for WINDOWS: Disk space requirements are for a PV-WAVE installation on an NTFS-formatted disk. A disk that is formatted with a FAT file system requires 20-40% additional space.

COMPILER COMPATIBILITY

PV-WAVE was compiled and tested using the following compilers:

Platform	Operating System Level	C Compiler	Fortran Compiler
HP PA-RISC	*HP-UX 11i	HP C version A.11.01.00	HP FORTRAN version B.11.00.01
IBM RS/6000 (32/64)	AIX 5.3	IBM XL C/C++ v8.00.0	IBM XL Fortran v10.1.0.0
Linux (32/64)	*Red Hat Enterprise 5	*gcc v4.4.0	*gfortran v4.4.0
SPARC (32/64)	Solaris 10	*cc (Forte10 - Sun C 5.7)	*f77 (Forte10 - Sun Fortran 95 8.1)
Intel x86/x64	Windows XP SP2	MS Visual Studio 2005	*Intel Fortran Pro 11
HP Integrity	OpenVMS 8.3	HP C V7.2	HP FORTRAN V8.1

* Indicates an updated Operating System and/or Compiler for the PV-WAVE 9.5 release

NOTE: Red Hat Enterprise Linux 5.0 does not come with GCC version 4.4, which is required by PV-WAVE. Make sure that GCC 4.4 is installed on the Red Hat Enterprise Linux 5.0 machine you intend to run PV-WAVE on.

If no specific linker/loader is listed, the native linker/loader provided by the compiler is used. While PV-WAVE may compile and link using other compilers and linkers/loaders, differences in implementation for additional compilers or linker/loaders may cause aberrant behavior when used with PV-WAVE. If problems do exist, contact the vendor supplying the compiler or linker/loader, or switch to one of the utilities listed above.

DATABASE COMPATIBILITY

The PV-WAVE Database Connection was linked and tested with the following database systems:

Platform	Operating System Level	Oracle	Sybase
*HP PA-RISC	HP-UX 11i	ORACLE 10.2.0.3	Sybase 12.0.0
IBM RS/6000	AIX 5.3	ORACLE 10.2.0.3	Sybase 12.0.0
SPARC	Solaris 10	ORACLE 10.2.0.3	Sybase 12.0.0 (32-bit Solaris only)
Intel /Opteron	RedHat Linux 5	ORACLE 10.2.0.3	

* Indicates an update for the PV-WAVE 9.5 release

While this version of PV-WAVE may work at different OS levels and DBMS levels, differences in implementation for a different DBMS version may cause aberrant behavior when used with PV-WAVE. If problems do exist, contact the vendor supplying the DBMS, or switch to one of the versions listed above.

Additional database management systems may be connected to PV-WAVE. For more details, contact the Visual Numerics Consulting Services Group or your local Visual Numerics account manager.

LICENSE MANAGER COMPATIBILITY

PV-WAVE 9.5 uses Macrovision's FlexNet 10.8 on all UNIX and Windows platforms.

PV-WAVE Eclipse Plug-in 2.0

The Eclipse Plug-in requires Java JDK 1.6 or greater, and Eclipse 3.5.1 or greater.

Java can be obtained from <http://java.sun.com/>.

Eclipse can be obtained from <http://www.eclipse.org/>.

JWAVE 3.51 Release Notes

Client System Requirements

- JDK 1.4.2 or later (for non browser-based interaction)
- JWAVE Beans:
 - BDK 1.0_jul98 or later
 - Any http server that supports CGI version 1.1 or later
- JWAVEJSPServlet support