

PROVIDEX



sage
software
Your business in mind.



ProvideX—The next level in business application development.

ProvideX from Sage Software is more than the perfect blend of powerful, intuitive, and versatile software tools. In reality, it provides a one-stop development environment.

Your customers need platform independence, data integration, connectivity, tools and strategies for adapting to new-breed technologies—with ProvideX, you are ready to take your applications to the next level.

ProvideX Development System

ProvideX comprises, in itself, all the tools and facilities necessary to build and implement sophisticated business applications—applications that are ready to accommodate industry-standard technologies and a variety of host platforms.

Key Attributes

- **High-Level Programming Language** – ProvideX is easy to learn, easy to use, easy to maintain and very-well supported.
- **Rapid Application Development (RAD) Environment** – a fast interpreter and fully-integrated toolset shortens production time and saves system resources.
- **Object-Oriented Programming** – design and develop modular programs using OOP-specific language and syntax elements for greater flexibility and maintainability.
- **Robust Data Handling** – the native multi-user database/file system supports multiple file types and generous file sizes.
- **External Data Access** – built-in interfaces allow for transparent access to external databases, such as Oracle, DB2, and Microsoft SQL server.
- **External Controls** – language extensions provide support for industry-standard technologies, including DDE, DLLs, and OCA/ActiveX/COM controls.
- **PDF Generation** – create files compatible with Adobe Acrobat and other PDF readers.

Platform-Independence

Designed for cross-platform compatibility, ProvideX is the ideal development environment for distributing applications over multiple target operating systems, platforms, and devices:

- **UNIX**
AIX, SCO (OpenServer, UnixWare), HP-UX, Sun Solaris, DG-UX, and FreeBSD
- **Linux**
Caldera, Debian, RedHat, Slackware, SuSE, and Mandrake

- **Microsoft Windows**

95, 98, Me, NT4, 2000, Server 2003, XP, and Vista

- **Apple**

Mac OS X

- **Mobile/Handheld Devices**

Java 2 Micro Edition (J2ME) for PocketPC, Palm, BlackBerry, Nokia, etc.

ProvideX supports a variety of processor editions to meet your specific performance requirements:

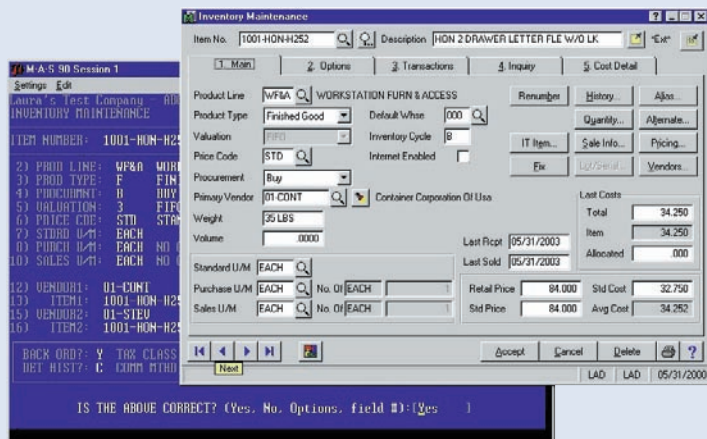
- x86 (Intel, AMD)
- x86 64-bit (Intel EM64T, AMD Opteron)
- PowerPC
- SPARC
- PA -RISC
- Itanium
- Motorola 88K

NOMADS Toolset

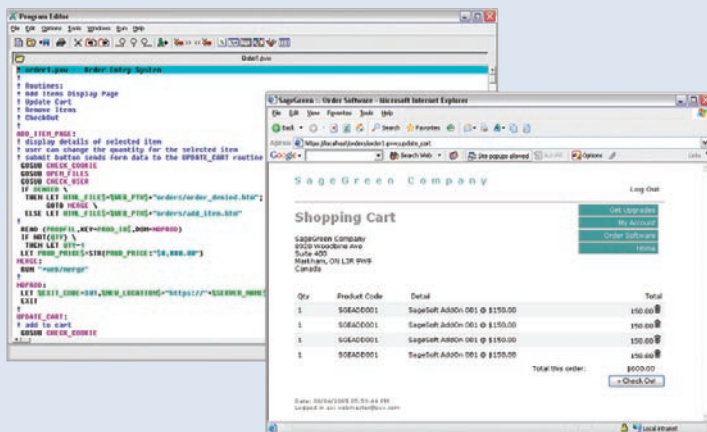
ProvideX NOMADS, the Non-procedural Object Module Application Development System, simplifies the development of complex GUI-based applications. The complete NOMADS toolset, listed below, is part of the Base System and is fully integrated with the ProvideX Graphical Program Editor.

NOMADS tools include:

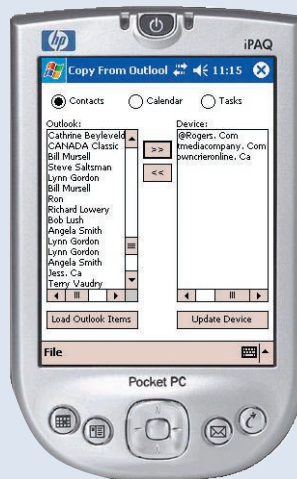
- **Panel Designer.** Create event-driven graphical objects and panels. Design portable objects to be used in multiple applications—buttons, tree views, grids, and more!
- **Security Manager.** Establish user access levels to prevent unauthorized viewing.
- **Data Dictionary.** Embed data definitions and program references for event-triggered I/O instructions within ProvideX data files. Achieve consistent file structures.
- **Data Classes.** Simplify the entry and definition of common data elements and controls.
- **File Maintenance.** Produce maintenance routines automatically, by generating screens and programs based on definitions in the ProvideX Data Dictionary.
- **Query Manager.** Build an extensive selection of custom query objects, including relational queries.
- **Message Manager.** Set up message libraries outside the programs that call them. Create a library for standard prompts, warnings, and error messages that can be easily updated—or translated to deliver a truly multilingual application!



Transform your existing legacy applications quickly and easily.



Produce ProvideX-coded websites for browser access to ProvideX and ODBC data sources.



Your ProvideX applications can be adapted for use in handheld computing devices.

Application-Level Utilities

ProvideX is equipped with a set of portable application-level utilities. Print Preview and Query Display are among the many pre-built routines packaged in the ProvideX Development System, royalty-free!

Product Options

Extend the functionality of the ProvideX base system with a set of tightly integrated application development and deployment solutions. ProvideX offers a range of add-on packages to address your specific business requirements, from stand-alone components to comprehensive product bundles. Refer to the enclosed fact sheets, or browse the ProvideX Web site www.pvx.com, for information on the latest options.

Thin Client Technologies: WindX and JavX

The ProvideX thin client technology introduces Windows, Java, or browser access to ProvideX applications running on UNIX, Linux, Mac OS X, or Windows 9x-2000/Me/NT4/Server 2003/XP/Vista.

WindX and JavX allow application processing and data storage to be maintained on a secure, centralized server, while delivering a Graphical User Interface to the client desktop—with minimal changes to the source code. WindX allows file access and processing to be handled by the client as well as the server to take advantage of functionality on either side of the connection. With JavX, your client application can be run in any web browser as well as a variety of J2ME-enabled mobile/handheld devices.

Note: WindX is available as a stand-alone product and as a freely distributable Plug-In, under the ProvideX Professional or eCommerce license. JavX uses the same licensing method as the WindX Plug-In.

ODBC Driver

ProvideX ODBC delivers third party access to the ProvideX database. Use ANSI-standard SQL commands to read and update ProvideX data files and to interact with popular database managers, query applications, and report writers: MS SQL Server 7, Excel or Word with MSQUERY, Informix, and Crystal Reports®, just to name a few. The ODBC driver is fully compliant with Microsoft's Level 3 ODBC API specifications.

For added performance and security over the network, consider installing ProvideX's TCP-based client/server version of the ODBC driver.

Web Server

ProvideX's Web Server interface serves up Web content and ProvideX functionality without the need for a separate Common Gateway Interface (CGI) utility. Create a dynamic ProvideX-coded Web site that allows browser access to ProvideX and ODBC data sources, as well as other file structures.

The Web Server runs as a background process for UNIX, Linux, Mac OS X, or 9x-2000/Me/NT4/Server 2003/XP/Vista and can co-exist with other Web servers—on various systems—using various browsers!

Features

- Offers excellent response time, even in heavy traffic.
- Employs standard CGI syntax.
- Accepts Web pages and templates from any HTML editor.
- Includes several timesaving utilities.
- Can be used to add all the standard service of an HTTP/1.0-compliant Web server engine.
- Supports socket security protocol for TCP/IP-level data encryption.

Product Bundles

The Professional and eCommerce bundles incorporate a suite of add-ons with the base system to deliver complete, cost-effective, development solutions. All ProvideX add-on packages and bundles are available directly from the ProvideX Web site www.pvx.com.

Watch ProvideX Grow in the 21st Century

Sage Software Canada Ltd. is committed to the continued growth of the entire ProvideX product line to meet the technological and business challenges ahead.

We offer constant upgrades and innovations, enabling your ProvideX software to grow along with your business. You can count on ProvideX to optimize system resources, minimize your development time, and far exceed your customers' technology requirements.

For more information on ProvideX development tools, be sure to look at the technical specifications for each of our products.

Support Resources

The ProvideX Technical Team prides itself on the quality and professionalism of its customer support. Count on service that is worthy of such an outstanding product! For technical assistance, contact the ProvideX Technical Team:

support@pvx.com

Questions regarding product licensing, pricing, and training sessions should be directed to the ProvideX Sales Group, or one of the ProvideX distributors listed on the back cover. For general inquiries, contact the ProvideX Sales Group:

info@pvx.com

ProvideX Web Site

For convenient access to products, developer information and support, refer to the ProvideX Web site **www.pvx.com**—no registration or login process required! This is the first place to look for announcements, helpful hints, downloads, and many other ProvideX resources, including:

Online Support. Submit questions that will be e-mailed directly to the ProvideX Technical Team.

Knowledge Base. Reference hundreds of past articles.

Wish List. Post requests for enhancements, or review requests from other ProvideX customers.

Developers Corner. Download coding examples, programs, and utilities submitted by ProvideX developers—or share samples of your own work.

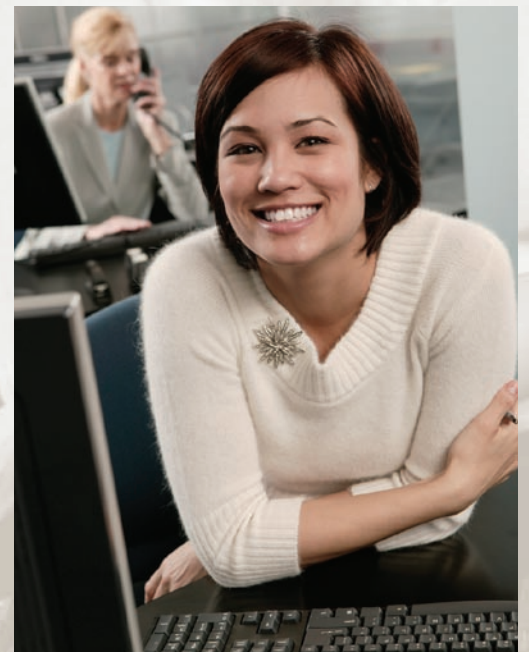
Documentation. Access product manuals, ReadMe's, HowTo's, presentations, and other ProvideX documentation.

Mailing List

The ProvideX mailing list is an online forum for developers of all experience levels to share techniques, solve problems, and learn about new ProvideX features. Members of the ProvideX Technical Team also participate in the discussions. Subscribe today for the most up-to-date:

- Technical solutions.
- Professional contact information.
- Comments on the use of ProvideX.
- News on upcoming ProvideX products.

For more information on how to subscribe, or to send a message to the list, refer to the Support page on the ProvideX Web site: **www.pvx.com**



ABOUT SAGE SOFTWARE

Sage Software began not as one company, but as the efforts of many entrepreneurs who built their successful products and businesses with a sincere focus on their customers. Today, our company represents the culmination of that combined entrepreneurial spirit, drive, and vision.

Our parent company, London-based The Sage Group, plc., reaches a global client base that numbers 4.7 million SMB customers worldwide. It serves these businesses through more than 8,000 employees in operations in North America, the UK, France, Germany, Portugal, Spain, Switzerland, South Africa, Australia, and various countries in Asia.

For more than 30 years, companies that have joined the Sage Software family have assisted businesses with a wide range of business management applications, tools, and services. With roots reaching back to the 1970s, our company has grown and developed to meet the evolving needs of our customers through a combination of internal product development and acquisition.

ProvideX products are licensed by over 600 of the world's leading software development companies and serve in thousands of applications reaching a million end-users worldwide, every day.

ProvideX Products are Available Worldwide

▼ Worldwide Distribution

Sage Software Canada Ltd.
www.pvx.com

PVX Plus Technologies, Ltd.
www.pvxplus.com

▼ United States

Midware Technologies Ltd.
www.midware.com

Edias Software International
www.edias.com

▼ Latin America

PVX Latino America (PVXLA)
www.pvxla.com

▼ Europe

EDIAS Software International BV
www.edias.com

▼ Australia and New Zealand

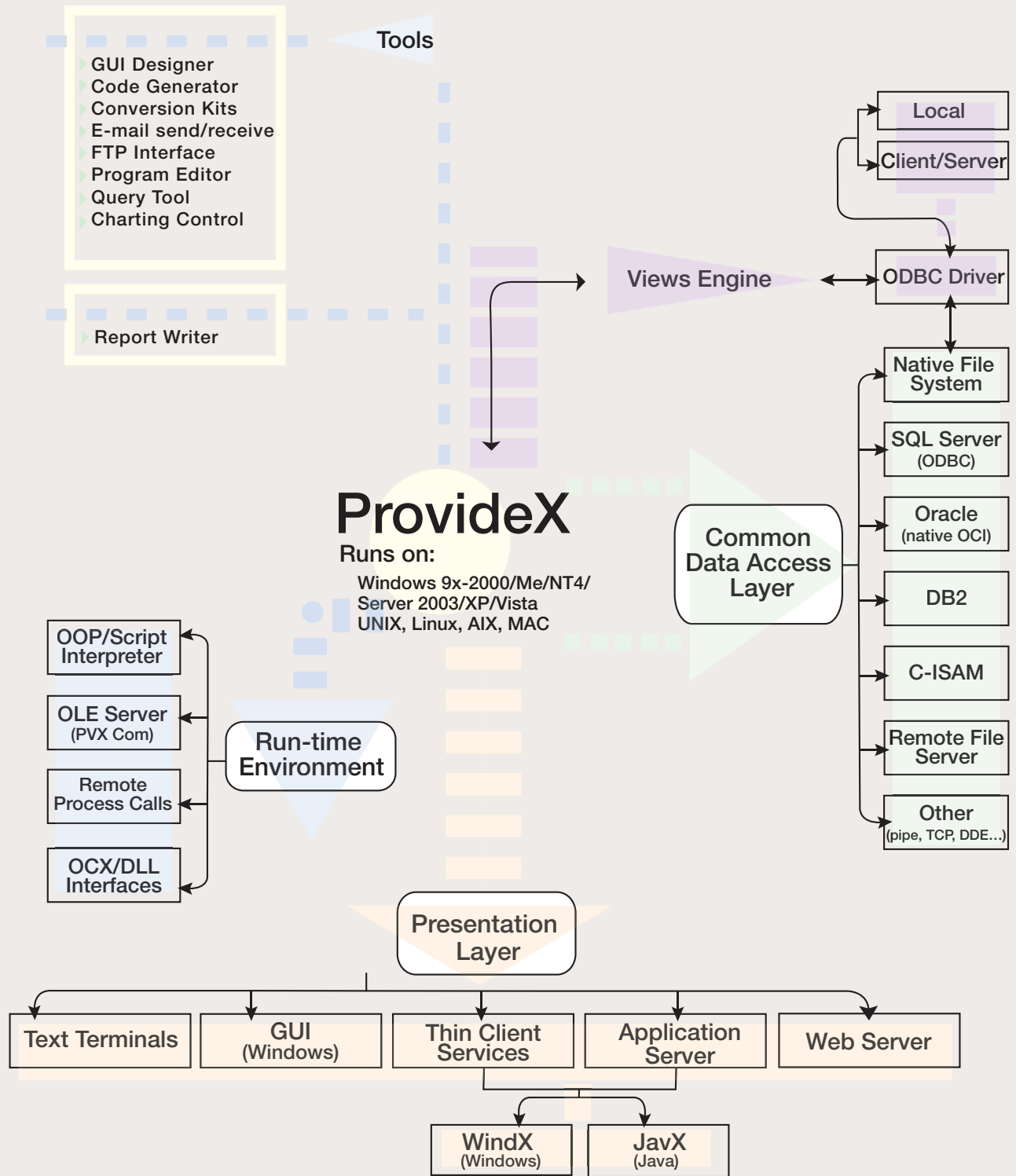
Hatfield Integrated Technologies Pty Ltd.
www.hit.net.au

▼ Africa

PVX SA
www.pvxsa.com



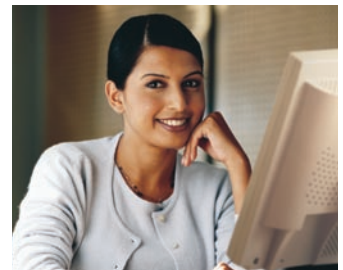
Your business in mind.



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The logo for Sage Software, featuring the word "sage" in a lowercase, sans-serif font with a stylized underline, and the word "software" in a smaller, lowercase, sans-serif font directly below it.



PROVIDEX

DEVELOPMENT SYSTEM

ProvideX Development System at a Glance

- High-Level Programming Language.**
 Easy to learn, easy to use, easy to maintain and very-well supported.
- Rapid Application Development.**
 Fully-integrated toolset saves production time and resources.
- Object-Oriented Programming.**
 Allows modular programming via OOP-specific language and syntax elements.
- Platform-Independence.** Microsoft Windows, UNIX, Linux, and Mac OS X implementations available.
- Robust Data Handling.** Native multi-user database/file system supports multiple file types and generous file sizes.
- External Data Access.** Built-in access for ODBC, Oracle, DB2, and Microsoft SQL server.
- External Controls.** Support for industry standard technologies, including DDE, DLLs, and OCX/ActiveX/COM controls.
- PDF Generation.** Create files compatible with Adobe Acrobat and other PDF readers.

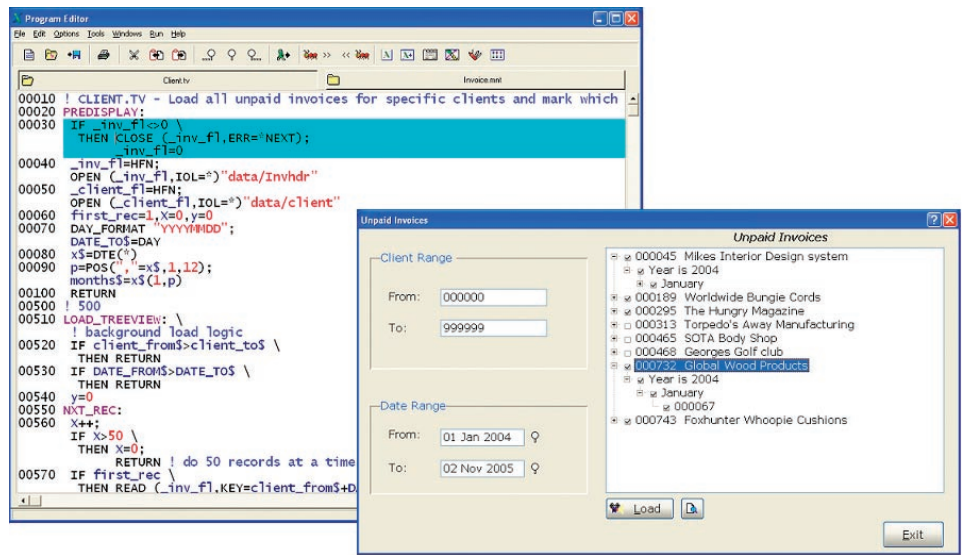
Product Licensing

The ProvideX base system may be licensed separately or in combination with a wide variety of add-ons and product options.

ABOUT PROVIDEX

ProvideX comprises, in itself, all the tools and facilities necessary to build and implement sophisticated business applications—applications that are ready to accommodate industry-standard technologies and a variety of host platforms.

The ProvideX engine currently serves in thousands of accounting and industry-specific applications worldwide. To find out more about ProvideX, visit www.pvx.com.



ProvideX is an exceptionally powerful, versatile, and intuitive programming language for building sophisticated business applications—applications that are ready to accommodate future technologies and a variety of host platforms.

The base system bundles the ProvideX engine with a suite of highly productive development tools and application-level utilities. It offers a robust native database, convenient access to many external technologies, and true platform-independence—no matter where you develop ProvideX applications, they can be implemented on any other supported platform.

The language itself, which is modeled after Business Basic, allows you to leverage your existing applications, data assets, and developer's skills while phasing in more advanced functionality. In essence, ProvideX delivers complete interoperability between character-based and GUI-based applications, a reliable, cost-effective solution for migrating valuable legacy code to newer technologies.

An integrated development environment that offers performance, flexibility, and ease of use.

ProvideX Language Features

- Global variables, functions, and files.
- Public and private (local) variables.
- 2 GB string lengths.
- Program entry points (one program with many entry points becomes a library of routines).
- C-style operators.
- O/S command-level access.
- O/S I/O redirection.
- Extensive multilingual support for both developers and applications.



ProvideX

Development System

For All Platforms

- Full screen editor
- Access to console commands
- Console global search and replace
- Command line history
- Breakpoints
- Customizable syntax tables
- Customizable colour syntax elements
- Application security

For Windows Platforms and WindX to UNIX/Linux hosts

- Full GUI functionality (e.g., List Boxes, Multi-Lines, Scroll Bars, Grids, and Menus) for creating standard Windows look and feel.
- Access to built-in control/graphics objects, Windows clipboard, Windows multimedia subsystem, and Windows Print subsystem.
- Entry to the Windows Help system, using WinHelp (Win 95) and Compiled HTML Help.
- GUI program editor (up to six programs simultaneously).
- Separate debugging windows for command mode, program trace, breakpoints and watch values.
- Character-based and GUI utility toolsets.

Programming tools and application-level utilities

The base system bundles the ProvideX engine with the NOMADS toolset, a suite of Rapid Application Development (RAD) tools: Panel Designer, Security Manager, Data Dictionary, Data Classes, File Maintenance, Query Manager, and Message Manager.* In addition, ProvideX is equipped with a set of pre-built application level utilities, including Print Preview and Query Display.

Simple, convenient access to external technologies

To further enhance your applications, ProvideX supports a host of external controls, standards, and protocols:

- OCX/ActiveX/COM object Automation.
- Access to Dynamic Link Libraries (DLLs).
- DDE access to applications such as MS-Word, MS-Excel, WinFax, etc.
- Direct TCP/IP access for Server and Client applications.
- A wide range of SQL Server tasks, such as:
 - SQL I/O access methods using any SQL-based environments (Oracle, Informix, etc.) or by using ProvideX SQL statements and queries.
 - Migration from native ProvideX file structures to the SQL database file structure of your choice with minimal changes to your program code.

A highly effective multi-user native file system

The ProvideX native file system supports numerous file types, including platform-independent files, keyed and indexed files, O/S files (flat text or binary), fixed or variable-length records, delimited or binary records, as well as memory files.

Generous maximum size allowances for your file structures

You can have file sizes up to 504 GB with over two billion records per file and record sizes up to 2 GB each. For keyed files, you can have up to 255 keys per file, with keys composed of up to 255 segments per key. The system allows a primary key length of up to 127 bytes, with alternate key lengths of up to 240 bytes each. Keys (indexes) and data for a specific file are stored within a single file. Keys may be composed of both external and internal (record supplied) data.

Comprehensive support for your file structures

ProvideX offers you additional power and functionality:

- Long file name support.
- Field delimiters that can be assigned on a file-by-file basis.
- SQL Server and non-SQL access methods.
- Direct access to Oracle and DB2 databases.
- Integrated data dictionaries that can be set up on a file-by-file basis.
- Embedded program references in data files that can trigger instructions on file I/O events.
- File journalization.
- Transaction Commit and Rollback.
- Advisory locking on all supported platforms.

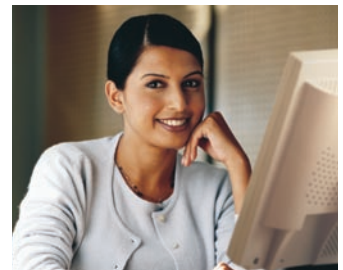
Coding advantages for maximum flexibility

With ProvideX, you will enjoy the flexibility of developing your programs in both tokenized and ASCII text formats. You can use tokenized code to improve operating speed in end-user and production environments. And, since ProvideX operates in an interpreted environment, you can create and debug your code on the fly. You can also control and fine-tune caching for maximum local and wide area network performance.

True Object Oriented Programming

ProvideX introduces an approach to Object Oriented Programming (OOP) that enables you to develop applications based on the key design principles (inheritance, encapsulation, and polymorphism) while maintaining access to your existing ProvideX applications and file structures. The language has been extended with a set of new directives and functions to handle OOP mechanisms: define classes, create objects, and reference properties and methods. ProvideX based OOP objects can also be integrated into external applications using the COM interface with the ProvideX OLE Server Add-on.

*See the ProvideX NOMADS technical specification sheet for more information.



PROVIDEX

NOMADS SYSTEM

NOMADS Toolset at a Glance

- **NOMADS Panel Designer.** Build event-driven graphical screens quickly and easily.
- **Data Dictionary.** Create standard data definitions for your application.
- **File Maintenance.** Generate maintenance screens and programs for your data.
- **Query Manager.** Build a collection of custom relational queries.
- **Message Manager.** Maintain message libraries for your prompts, warnings, and errors.
- **Security Manager.** Control access to screens and objects to prevent unauthorized access.

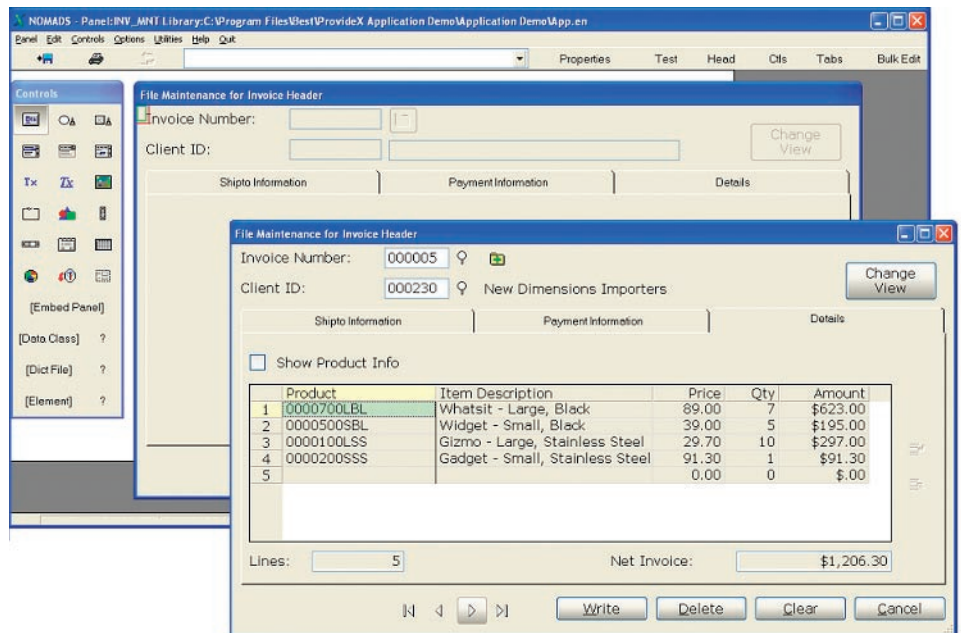
Product Licensing

The NOMADS toolset is a part of the ProvideX Base System license.

ABOUT PROVIDEX

ProvideX comprises, in itself, all the tools and facilities necessary to build and implement sophisticated business applications—applications that are ready to accommodate industry-standard technologies and a variety of host platforms.

The ProvideX engine currently serves in thousands of accounting and industry-specific applications worldwide. To find out more about ProvideX, visit www.pvx.com.



The ProvideX Non-procedural Object Module Application Development System (NOMADS) is an integrated programming environment for the development of complex GUI-based applications. NOMADS is bundled with the ProvideX Development System and is fully integrated with the ProvideX graphical program editor.*

This set of highly advanced Rapid Application Development (RAD) tools makes it easy to develop user-friendly interfaces, controls, and dialogues in harmony with existing character-based applications. In addition, you can move your NOMADS GUI applications to UNIX seamlessly using ProvideX thin-client technologies (WindX and JavX).**

NOMADS employs a top-down approach that streamlines and simplifies development tasks, optimizes system resources, and saves time. It enables you to:

- Separate your data, logic, presentation text, and images into reusable segments.
- Localize and simplify changes to your applications.
- Integrate NOMADS-built applications with other types of applications.
- Design event-driven applications.

The system features a common data manager for consistent access to a variety of data files. It also facilitates the conversion from character-based to GUI functionality by allowing you to run graphical and character-based application components concurrently.

NOMADS Engine

The powerful run-time engine, *winproc, works behind the scenes to process the components you built in NOMADS, and effectively ties them together into an attractive, user-friendly, GUI application.

*See the Development System technical specification sheet for more information.

**See the Thin Client technical specification sheet for more information.



ProvideX

NOMADS System

Let NOMADS streamline and simplify your development tasks.

Build GUI control objects quickly and easily with the NOMADS Panel Designer.

Use the NOMADS Panel Designer to create portable, reusable common control objects, including:

- Buttons
- Check Boxes
- Radio Buttons
- Drop Boxes
- List Boxes
- Multi Lines
- Scroll Bars
- Dialogue Boxes
- COM Controls
- Menu Bars
- Popup Menus
- Message Bars
- Tree Views
- List Views
- Grids
- Frames
- Charting Controls
- Lines and Shapes

The Panel Designer allows you to produce graphical control objects and panels, set up event processing and field validation, and create application menus. You can assign your objects' properties (such as position, size, font, alignment, and status signals) as well as:

- Define Drag & Drop events for input controls.
- Set up Dependency Tables to hide/show/enable/disable specified controls under different circumstances.
- Define how controls will behave (in terms of size and location) when panels are resized.
- Set up simple internal help on an individual control basis.

Protect your system using the NOMADS Security Manager.

Use the Security Manager component to protect your applications from unauthorized viewing. The Security Manager allows you to control access to a specific screen or individual components on the screen.

Achieve consistent file structures with the NOMADS Data Dictionary.

Define and maintain data definitions on a file-by-file basis. The data definition can be embedded right in the physical file, which allows you to separate the IOLISTS from your code and ensure standardized definitions for the entire application. Also, program references can be embedded for event-triggered I/O instructions.

Generate masterfile maintenance panels using the NOMADS File Maintenance system.

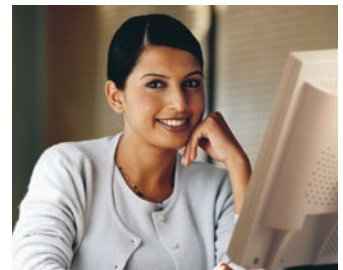
The NOMADS File Maintenance system automatically creates a file maintenance panel for any file defined in the Data Dictionary. These panels can be used to invoke either a generic or custom file maintenance program that allows you to insert, update, and delete records, as well as browse the file.

Set up online queries with the NOMADS Query Manager.

With NOMADS, you can set up query objects, including relational queries. The Query Manager uses the data dictionaries built with the NOMADS Data Dictionary component, as well as manual file definitions and references to ODBC tables.

Separate your message text from your applications using the NOMADS Message Manager.

The NOMADS Message Manager maintains message libraries outside the programs that call them. This component allows you to set up a library for standard prompts, warnings, and error messages that can be easily updated, or translated for multilingual applications.



PROVIDEX

THIN-CLIENT PRODUCTS: WINDX AND JAVX

ProvideX Thin Clients at a Glance

- **ProvideX-based technology.** Application source code can be easily adapted for client-server use.
- **Flexibility.** Implement a full-featured GUI from an otherwise character-based or platform-specific application.
- **Control.** Focus IT resources by moving processing and file handling to a more powerful and secure central server.
- **Maintainability.** Auto-update capability allows client installations and upgrades to be handled remotely, automatically.
- **Security.** Design applications so that no critical data or processing is ever handled on the client side.
- **Marketability.** As eBusiness markets mature, you will be able to deliver ProvideX applications that can carry your customer's data over multiple networks and platforms, and on devices of every conceivable size, shape, and location.

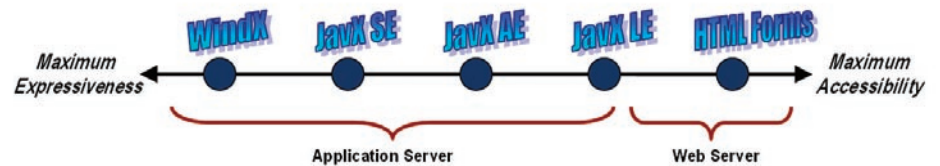
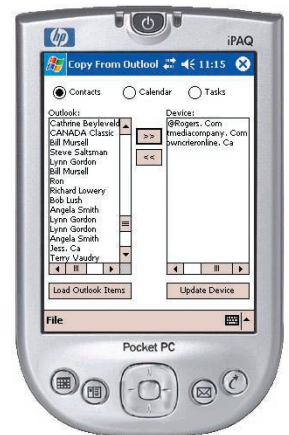
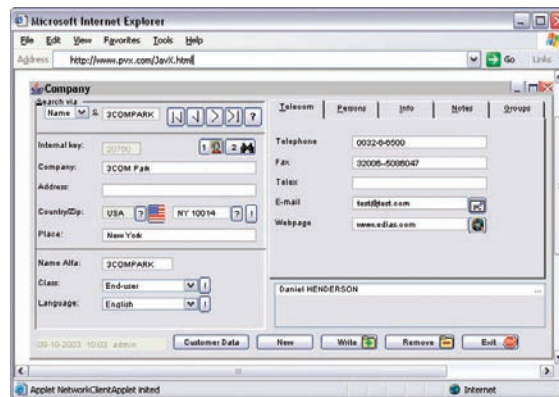
Product Licensing

WindX is available as a stand-alone product and as a freely distributable Plug-In, under the ProvideX Professional or eCommerce license. JavX uses the same licensing method as the WindX Plug-In.

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WindX and JavX thin clients deliver platform-independent, multi-user and multi-device access to your server-based ProvideX applications, with minimal changes to your ProvideX source code.

Optimize the development and deployment of your programs across your user base. With the ProvideX thin-client architecture in place, you can maintain the heavy processing and data storage on your secure central server while delivering a flexible user-oriented interface to multiple desktop systems and/or handheld devices.

Which configuration is right for your needs? ProvideX offers a range of client-server solutions, each with its own set of advantages in functionality and accessibility:

WindX – Full-featured thin client that delivers a complete graphical environment (with auto-update capability) from any remote ProvideX host system to any Windows client via the ProvideX Application Server.

JavX SE – JavX Swing Edition, Java-based thin client similar to WindX that enables ProvideX applications to run on any number of OS platforms that support the Java 2 Standard Edition (J2SE) runtime.

JavX AE – JavX AWT Edition, basic GUI version of JavX intended for PDA/handheld devices that support the Java 2 Micro Edition (J2ME) runtime.

JavX LE – JavX Light Edition, limited non-GUI version of JavX intended primarily for fixed-purpose industrial or consumer devices (interactive television, network printers, automotive components, etc.).

ProvideX Thin Client products are described below:

WindX

The WindX thin-client makes it possible to distribute a feature-rich, graphical user interface to a Windows client from any server-based ProvideX application, even if the host system does not support that type of interface. In fact, WindX is more than a typical thin-client—it can also be configured to take full advantage of each platform's functionality by allowing you to move processing and file access to either side of the client/server connection.



ProvideX

Thin-Client Products: WindX and JavX

At the core of WindX is the ProvideX engine. The WindX communications layer ties your server-based ProvideX to a client-based ProvideX to deliver a complete ProvideX-for-Windows graphical environment:

- DLL calls, OCXs, ActiveX/COM controls, ODBC, and DDEs.
- Full-featured graphical interface and mouse support.
- Local file access.
- Access to Windows clipboard, printers, applications, and multimedia.
- Terminal emulation (built-in Telnet connections).
- **AutoUpdater** – ability to configure your software to automatically check for and install critical patches/upgrades on all client workstations.

WindX communicates with Windows, UNIX, Linux, or Apple Mac OS X servers using either Transmission Control Protocol/Internet Protocol (TCP/IP) or Telnet connections. Under TCP/IP, WindX gives you multi-tasking (using standard UNIX Socket Layer and Windows Winsock). Using serial asynchronous communications, WindX gives you single tasking only. WindX clients can connect using any combination of:

- Local Area Network (LAN)
- Wide Area Network (WAN)
- Remote access, serial and Point-to-Point Protocol (PPP) dialup, Virtual Private Networking (VPN)
- Internet connections
- Communications may be encrypted via industry-standard SSL.

Speed and Bandwidth usage by WindX is highly optimized. Only the user interface information travels across the network; this keeps network traffic to a bare minimum (allowing for more concurrent users on a connection) and increases data integrity as the data processing remains on the server.

For even greater security and reliability, use the ProvideX Application Server with your WindX implementation.

JavX

JavX offers a platform-independent solution for displaying and interacting with your server-based ProvideX applications. With JavX, your applications can be run via any web browser anywhere, as well as on an increasing number of J2ME-enabled mobile/handheld devices.

Essentially, JavX is a Java-based version of WindX that requires nothing on the client side but a freely-available Java 2 Standard Edition, Java Runtime Environment (JRE), or a standard Web browser with JRE installed—users simply navigate to your JavX-enabled Web page, and it sends a Java applet back to the browser to establish an interface to your ProvideX application. Using embedded JavX applets, you can deliver a unique combination of static and dynamic HTML along with your core ProvideX application, all on the same Web page. The Java-based thin client also has the advantage of greater flexibility and mobility—WindX browser access is limited to Windows systems only, and it requires a local copy of the WindX plugin.

Most server-based ProvideX applications that use the WindX implementation will work with JavX as well. JavX requires no client installation or modification, and it will run on any client platform where a Java 2 Runtime Environment is already installed—this includes Windows, Linux and UNIX X-Window based systems, Apple Mac OS X, and other GUI environments.

Application Server

Designed for usability and security, the ProvideX Application Server protects your data in the most hostile of network environments, such as the Internet: secure access control, user and application launch control, central administration, and access tracking. This technology establishes safe TCP/IP connections for your server-based (WindX/JavX) applications.

Key advantages of the Application Server are outlined below:

Server

- Uses only one TCP/IP Socket
- Designed for Internet / Intranet / Extranet environments
- Designed for firewalls and NAT devices
- Enables sessions to be launched as specific users
- Simplifies client-side configuration
- Provides informative error messages
- Platform independent

Security

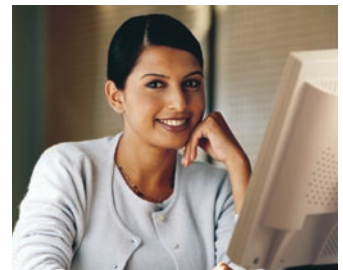
- Optional SSL encryption for sessions and traffic
- Application Configuration
- Limits to Clients Accessing Applications
- Full Logging of all Accesses
- Tracking of Active Sessions
- Administration of Active Sessions
- User Authentication

Licensing Information

WindX is licensed in two forms: Stand-Alone, which requires a separate client-side activation for each connection; and the Plug-In, which uses server-side licensing as part of the ProvideX Professional and eCommerce bundles. You can freely distribute and install as many copies of the WindX Plug-in as you wish—it is the server that controls how many users may connect any one time.

JavX uses server-side licensing similar to the WindX Plug-In and is distributed as part of the Professional and eCommerce product bundles.

The Application Server can be purchased separately as an Add-On, but it is also distributed as part the eCommerce product bundle.



PROVIDEX

ODBC DRIVER

ProvideX ODBC Driver at a Glance

- **Third party Access.** Enables any ODBC-compliant application on any Windows platform to communicate with your ProvideX database.
- **SQL Standard.** Meets Microsoft Level 3 Open DataBase Connectivity specifications.
- **Marketability.** Opens up your ProvideX data to commercially available database products.
- **Easy to Implement.** Once the driver is installed, all you need to do is create the ProvideX DSN in Microsoft's ODBC Administrator's control panel.
- **Client/Server Option.** Increase performance and security by moving query optimization to the server side for safer high-speed access to data.

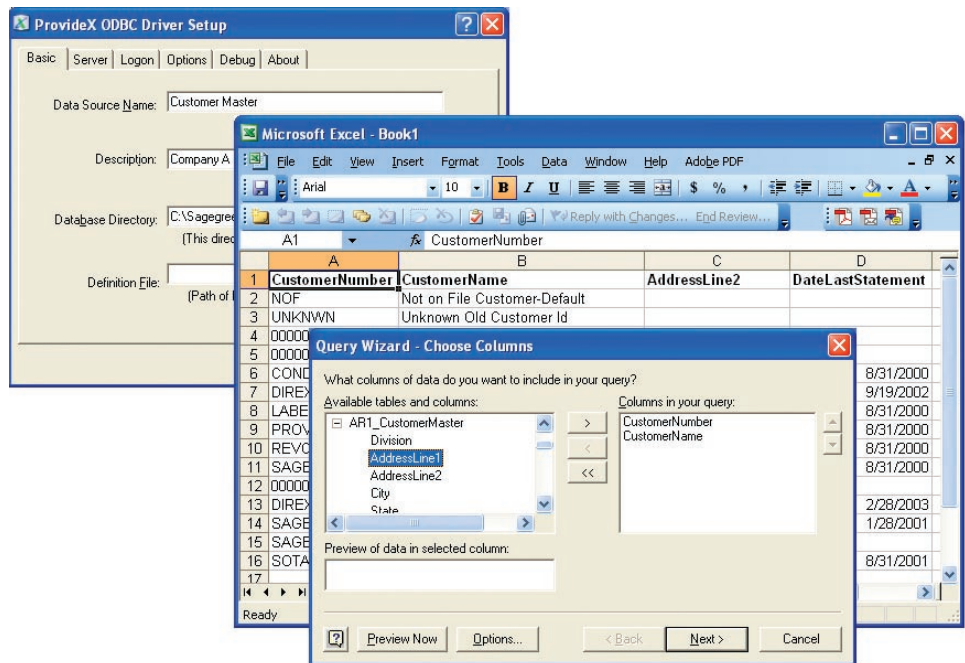
Product Licensing

The stand-alone ODBC driver requires its own serial number, user count, and activation key. The Client ODBC driver is freely distributable, but it requires a fully activated ProvideX File Server to be operational.

ABOUT PROVIDEX

ProvideX comprises, in itself, all the tools and facilities necessary to build and implement sophisticated business applications—applications that are ready to accommodate industry-standard technologies and a variety of host platforms.

The ProvideX engine currently serves in thousands of accounting and industry-specific applications worldwide. To find out more about ProvideX, visit www.pvx.com.



The ProvideX ODBC driver delivers third-party access to ProvideX data. It enables any ODBC-compliant application on any Windows platform to communicate with your ProvideX database anywhere on the network.

ProvideX ODBC meets the specifications for Microsoft Level 3 Open DataBase Connectivity. This is the API standard that enables Windows-based applications to access multiple data sources using Structured Query Language (SQL).

With ProvideX ODBC in place, your ProvideX database can be read and updated using standard SQL commands. Also, it ensures maximum interoperability. By using the single interface, you can open up your ProvideX data to the most popular database managers, query applications, and report writers: MS SQL Server, Word, or Excel with MSQUERY, Informix, and Crystal Reports® (just to name a few). The ProvideX ODBC driver runs under Windows 95/98, Me, NT4, 2000, Server 2003, and XP, and it will allow access to your ProvideX data across Windows and UNIX platforms.

The interface itself is easy to implement. The driver installs automatically from the setup program. All you need to do is open the Microsoft ODBC Administrator's control panel applet and create a new ProvideX Data Source Name (DSN). Once a DSN is established, other applications will be able to use SQL requests to access the ProvideX native database. The Driver also supports a "DSN-less" connection to ProvideX data using a connection string supplied by the calling application.



ProvideX

ODBC Driver

Two versions of ProvideX ODBC are available for download from the ProvideX website, www.pvx.com:

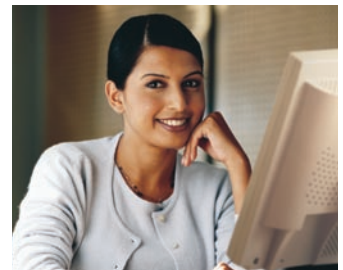
ODBC Local/Standalone

The Local/Standalone version of the driver may be configured for read only or read/write capabilities. Each local license requires its own serial number, user count, and activation key.

Client/Server Version

For greater performance and security over the network (without the need for additional software) consider the Client /Server version of the ProvideX ODBC driver. This interface performs optimization of query processing on the server side to ensure safe high-speed access to your data, particularly for implementing distributed multi-user applications.

The Client side is freely distributable. However, to be operational, it must be connected to a fully installed and activated ProvideX File Server (included with the Professional and eCommerce product bundles).



PROVIDEX

WEBSERVER

ProvideX WebServer at a Glance

- Integrates ProvideX programs directly with standard web server operations
- Provides direct access to ProvideX application features, ProvideX file structures, and ODBC data files for use in your web applications
- Accepts and runs CGI-compliant URLs as ProvideX programs
- HTTP/1.0 Server
- SSL – Secure Socket Layer encryption
- Monitors up to 100 discreet TCP Sockets each acting as its own web server
- Allows up to 1000 handlers per web server
- Virtual root directories
- Automatic restarting of stops/stalls
- On-the-fly configuration updating

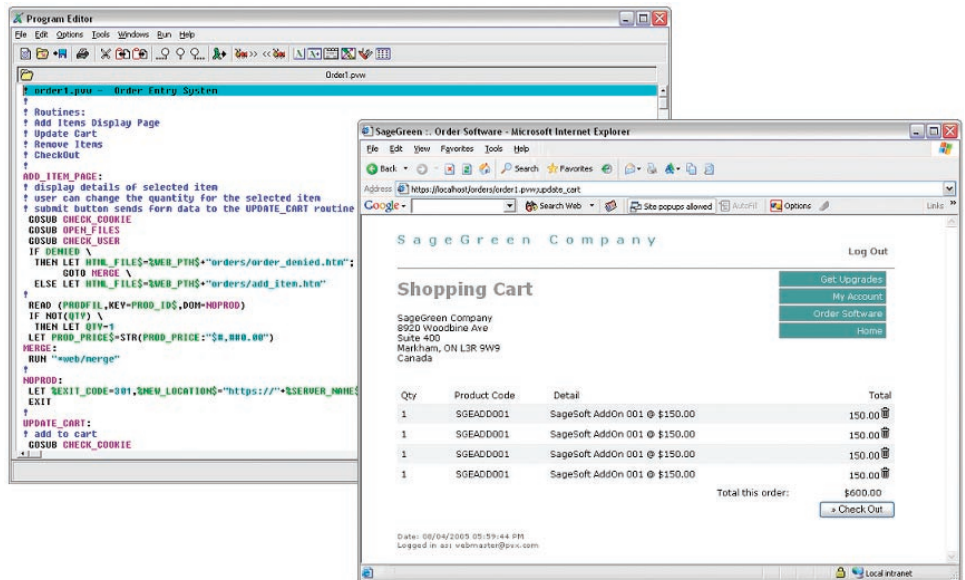
Product Licensing

The ProvideX WebServer is available as an add-on package and is also licensed under the ProvideX eCommerce bundle.

ABOUT PROVIDEX

ProvideX comprises, in itself, all the tools and facilities necessary to build and implement sophisticated business applications—applications that are ready to accommodate industry-standard technologies and a variety of host platforms.

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The ProvideX WebServer interface serves up Web content and ProvideX functionality without the need for a separate Common Gateway Interface (CGI) utility. Create a dynamic ProvideX-coded Web site that allows browser access to ProvideX as well as other file structures—and do it easily, with minimal knowledge of HyperText Markup Language (HTML).

Simply create the Web content using your favourite HTML authoring tool (Microsoft Word, FrontPage, etc.) or by using ProvideX itself. The WebServer interface enables you to include line label entry points in Uniform Resource Locators (URLs) to redirect processing to subprograms from your Web applications. ProvideX treats variables passed as arguments in your URLs as real variables in your programs. The interface's coding standards for HTML and for implementing ProvideX applications follow all CGI conventions.

The WebServer interface runs as a background process for Windows 9x-2000/Me/NT4/Server 2003/XP/Vista, UNIX, or Linux servers and can co-exist with other Web servers. Use it exclusively, or to augment your existing Internet operations. For instance, Apache, Microsoft IIS, or Netscape can serve your main site while your ProvideX WebServer delivers the transaction oriented applications that have access to your ProvideX data.

It works with any standard Web browser and offers excellent response time even in heavy traffic. The system can process as many as a thousand simultaneous requests by monitoring up to a hundred ports on a server—each port serving documents and programs from one or more root directories.



ProvideX

WebServer

A number of built-in utilities are included with the ProvideX WebServer interface, so you can:

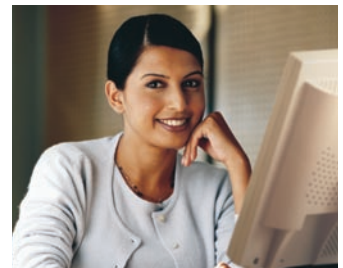
- Merge data dynamically with template-style documents
- Perform automatic table generation
- Send e-mail responses to any Simple Mail Transfer Protocol (SMTP) based e-mail server
- Create truly dynamic HTML pages with an HTML merge utility

In addition, the interface includes many other features that will help you develop your Web applications quickly and easily. Here's the short list:

- Graphical User Interface (GUI) configuration
- Virtual root directories based on host name
- Mime type configuring
- Directory browsing
- Default documents
- Automatic or specific list and hit counters on pages served

SSL Support Included

For added security, the ProvideX WebServer supports use of a TCP/IP-level Secure Socket Library, a security protocol that allows you to encrypt your TCP/IP communications. The ProvideX SSL support is available as part of the ProvideX license. This product uses the OpenSSL cryptography toolkit.



PROVIDEX

PRODUCT OPTIONS

ProvideX Add-Ons at a Glance

- RPC – Remote Processing Capability
- OCI – ORACLE Call Interface
- Internet Toolkit
- Multiple Image Support
- Smart Controls
- Charting Control
- NOMADS Customizer
- Views System
- I/O Library
- OLE Server
- WebServer
- BBx Keyed File Read
- Application Server
- Report Writer

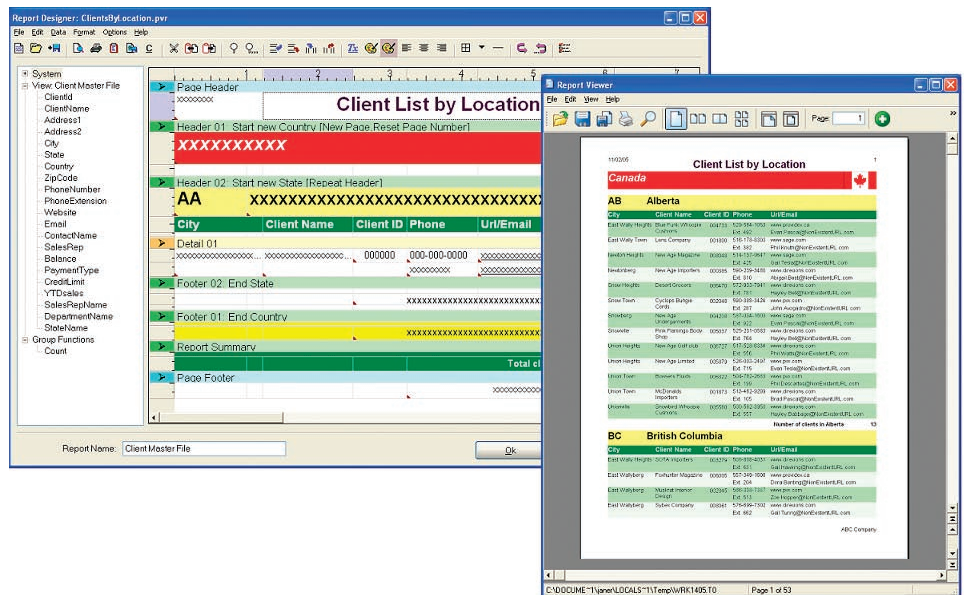
Professional and eCommerce Bundles

Incorporate various product packages with the base system to deliver complete, cost-effective, development solutions.

ABOUT PROVIDEX

ProvideX comprises, in itself, all the tools and facilities necessary to build and implement sophisticated business applications—applications that are ready to accommodate industry-standard technologies and a variety of host platforms.

The ProvideX engine currently serves in thousands of accounting and industry-specific applications worldwide. To find out more about ProvideX, visit www.pvx.com.



Extend the functionality of the ProvideX base system with a set of tightly integrated application development and deployment solutions. ProvideX offers a range of add-on packages to address your specific business requirements, from stand-alone components to comprehensive product bundles.

ProvideX add-ons require a separate activation key apart from your initial activation—many are bundled under the Professional and eCommerce licensed copies of ProvideX, that are described on the reverse side of this page.

The following products are immediately available, directly from the ProvideX Web site at www.pvx.com.

Report Writer

Using the Report Writer add-on, ProvideX programmers and end-users can manipulate the contents of their generated reports with the ease and functionality of a commercial spreadsheet application. Features include drag and drop, column/row sizing, computational values, cell formatting tools, sorting, data filters, run-time parameter settings, and more. This product also includes the PvxReport object interface, which gives developers programmatic access to report definitions for changing data and format on the fly.

Views System

The Views system is a ProvideX add-on for presenting and processing customized end-user views of application data. It allows system designers to create logical representations of application data regardless of its physical format/layout. Based on this logical representation, the user can select and extract specific data elements/fields for the purposes of display and reporting. Views can be accessed through a View object, the ProvideX Report Writer and the ProvideX ODBC driver.

Multiple Image Type Support

The ProvideX Multiple Image Type Support allows you to use other graphics file formats (e.g., jpg, png) anywhere you currently use bitmap (bmp) files.



ProvideX

Product Options

Smart Controls

The Smart Controls add-on allows you to auto-load your list and drop boxes, grids, multi-lines, or even files based on query definitions—you do not have to code your own load routines. It can also be triggered to load selected records based on values changing in specified trigger variables. Any type of listbox or dropbox may be used with any selection of attributes.

Charting Control

With the Charting Control, you can create Line Area, Bar, Column, Pie, Ribbon, and Scatter Chart illustrations with 2D and 3D effects. This add-on can be used directly by an application or from within the NOMADS environment.

Internet Toolkit

This collection of utilities assists in the development of e-mail and Web-enabled ProvideX applications, including the ability to generate, send, and accept e-mail messages and to send/receive files using an FTP server program.

Web Server

Using the ProvideX Web Server, you can develop ProvideX-coded Web sites that allow browser access to ProvideX and ODBC data sources, as well as other file structures. Refer to the Web Server fact sheet for more information.

Customizer

The NOMADS Customizer allows users to display additional information dynamically on any panel. No coding or custom panels required. The information is displayed in a Customizer grid that is added to the bottom of the panel. Information sources include application files, user-defined files and formulas.

OLE Server

The ProvideX.Script OLE server allows external applications to directly invoke and interact with ProvideX and ProvideX objects. The server can be used by virtually any COM compliant application or programming language such as VB, Delphi, VB script or VBA.

BBx Keyed File Read

The BBx Keyed File Read add-on enables you to access BBx SORT, DIRECT, and MKEYED files using the ProvideX READ directive—clients who are migrating to ProvideX will be able to use their existing historical files without having to convert the data, use ODBC or other middleware.

I/O Library

The ProvideX I/O Library is a set of functions that let you access ProvideX keyed or indexed data files using programs that have been written in C and other languages.

Professional and eCommerce Bundles

The Professional and eCommerce bundles incorporate a suite of add-ons with the ProvideX base system to deliver complete, fully-integrated development solutions—much more cost-effective solutions than the separate licenses combined.

Professional Bundle

Under the Professional license, the ProvideX base system is extended to include the following products:

- **WindX and JavX plug-in support** – Provide thin-client interfaces to ProvideX for running enhanced graphical applications.
- **Local and Client/Server ODBC** – Enables Open Data Base Connectivity (ODBC) access to ProvideX databases.
- **RPC** – Enables Remote Processing Capability for true distributed processing of ProvideX applications across the Internet/intranet—distributes applications and files so that processing logic is executed on the remote machine (server) where the data files reside.
- **OCI** – Provides an Oracle Call Interface so that ProvideX can access ORACLE databases directly.
- **Multiple Image Support** – Supports a variety of image formats, including jpg and png.
- **Internet Toolkit** – Comprises several utilities for assisting in the development of e-mail/Web-enabled ProvideX applications.
- **Smart Controls** – Auto-load lists, drop boxes, grids, and multi-lines using simple query definitions—you do not have to code lengthy load routines.
- **Charting Control** – Creates chart illustrations for your application.
- **BBx File Read** – Reads BBx keyed data without conversion, ODBC, or other middleware components.*

*Note: BBx is a registered trademark of Basis International Ltd.

eCommerce Bundle

The eCommerce license augments the Professional bundle with modules for enhanced Web functionality, including:

- **Web Server** – Enables the creation of dynamic ProvideX coded Web sites that allow browser access to ProvideX and ODBC data sources.
- **Application Server** – Establishes client/server TCP-IP connections for ProvideX-based thin-client applications.