



Velneo

Introduction and technical features

1. Introduction

Velneo is a complete business solutions development platform. Its objective is to be used as a global support for business management software developers, mainly because it is very practical. Any organization that needs a management and data administration environment in its information system can take advantage of the characteristics of the platform.

2. Velneo Platform

Architecture and element description.

The tools the developer handles are these:

- § RAD development environment
- § Applications Server
- § Web Server
- § Database server
- § Business templates

2.1 RAD development environment

Allows to generate the database structure, design the entire visual interface of the application as well as the web interface and the coding of the processes that modify data. It inherits the platform's practical philosophy.

Despite having a 100% visual environment, it has more than 150 processes instructions for advanced programming, allowing to design information systems that cover most imaginable needs. Its programmable database avoids having to use repetitive and unintuitive routines.

With the editor it is possible to program all the automatic routines of the database and add programmable visual objects that allow the user to interact with the data. It also allows designing processes that the databases do not contemplate.

It includes a report generator and a great number of inspectors that make browsing easier as well as warn about programming errors.

The applications generated enable the possibility of being used by a mono-user environment (testing environment). They can be deployed immediately, without reprogramming, in a client / server environment.

2.2 Applications Server

The applications server is a multi-user, multitask software that gives access, through TCP/IP networks, to the applications within it. Therefore, these applications are accessible either on the local net or on the internet. This makes the implanting of the client-server system in the final user easier. Security is guaranteed thanks to an own protocol of communications. It is completely integrated in the data base. It allows the execution of remote functions, providing the system with interconnectivity among servers, replication, consolidation and on-off architectures.

2.3 Web Server

The web server is integrated in the Applications server (Velneo vServer). It allows generating the Web designed in the project dynamically. The advantage of this integration is speed. It enables us to do without CGI gateways, data transfer or ODBC connections.

2.4 Relational data base motor

The database motor is integrated in the Applications Server (Velneo vServer) and in the Applications executor (Velneo vRunner) included by default in the development environment installation. It's a relational database model (it first came out twenty years ago) with features that allow it to adapt better to the real issues in computer solutions that manage information.

The data base is compatible with current data transmission systems such as XML or SOAP.

2.5 Velneo FLOSS

The business templates are open code (FLOSS) as a result of thousands of hours programming. Its objective is to reduce substantially the development time, giving developers absolutely personalized applications very common in business management environments; accounting, invoicing, ERP, Web contents, POS... This way, programmers simply have to add their developments to these templates completely integrated among each other.

They are based on the following concepts.

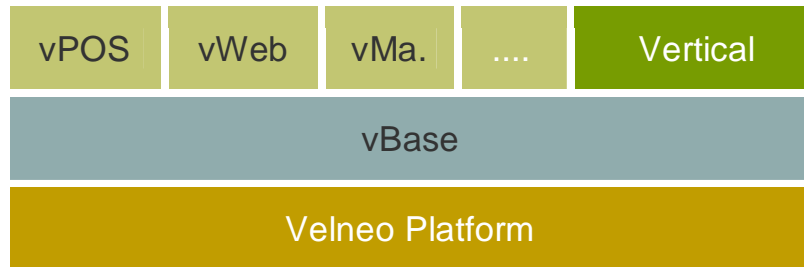
- § Enable to activate a completely functional professional application in just minutes.
- § The application created can be commercialized.
- § They come with normalization guides, styles and glossary, apart from its programming documentation.
- § Final user documentation is available on guides and videos.
- § Updating and technical support service is offered to the developers.
- § It decreases costs and development time giving great profitability.

3. Velneo Applications Development Model

Velneo is a platform orientated to develop business management applications. It starts off from an implementation model of common base structures called templates.

From these templates it is easy to develop with Velneo the specific solution for each sector (vertical solutions).

Therefore, Velneo becomes a completely functional management applications development platform that offers, as an option, **source code of basic business applications**: for example, the POS application, dynamic associated web portal (vWeb), management, etc...



Open code business templates:

- § Velneo vBase FLOSS
- § Velneo vBascis FLOSS
- § Velneo vManagement FLOSS: Open code template for complete management solutions
- § Velneo vPOS FLOSS: Open code template for sales point terminal
- § Velneo vWeb FLOSS: Open code template to manage web contents
- § More info on velneo.com

4. Developing with Velneo

The Velneo developers go from the freeware version users, mainly students and amateur programmers, to development teams belonging to great corporations and multinationals. The community is made of experts from environments of the likes of AS400, Access, Oracle, Visual Basic, Delphi, Filemaker, etc... that needed a complete platform to develop database and information management solutions.

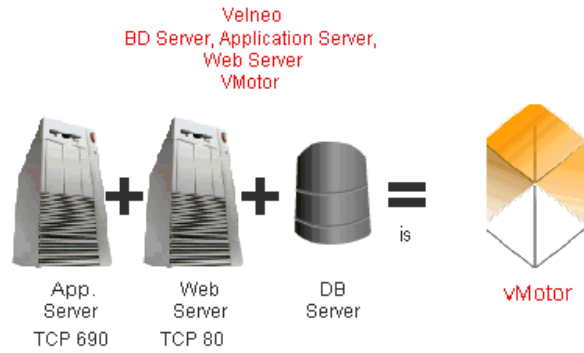
For this reason, we can find in the market final applications whose common denominator is information management, from the simplest agenda to the most complex ERP. Along the way are POS, accounting and infinite vertical solutions.

Developing currently with Velneo:

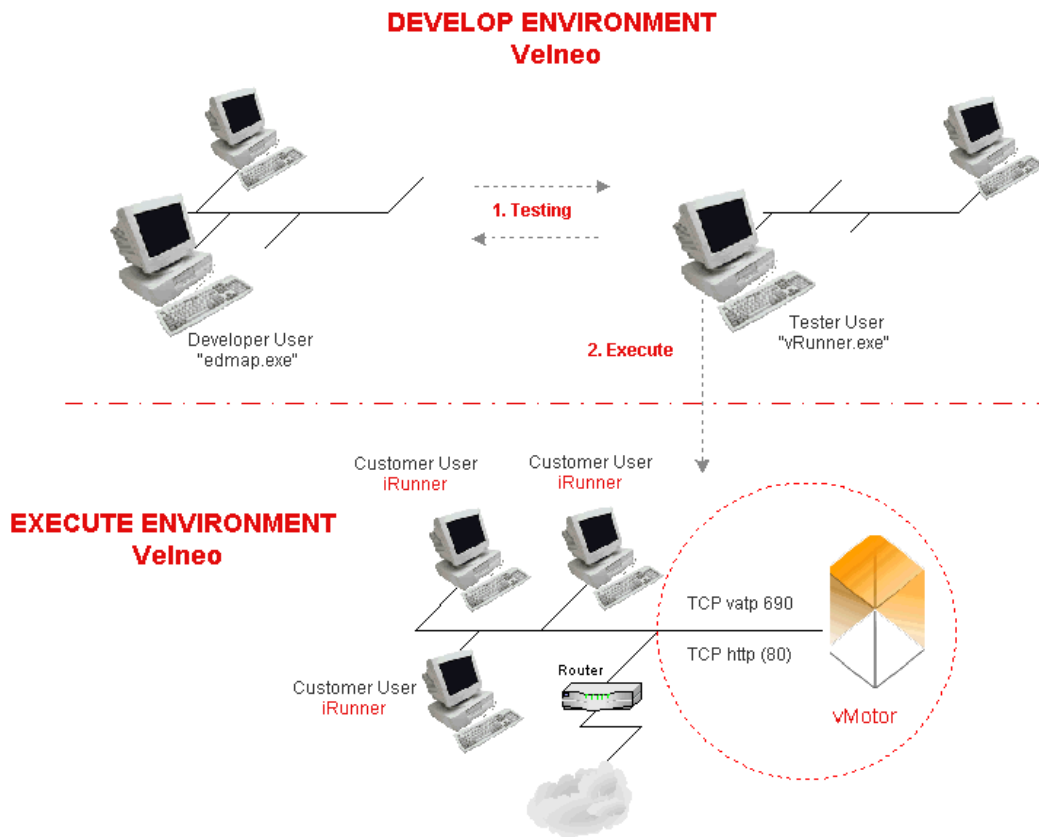
- § Freelancers
- § Consultants
- § SMEs-small and medium sized companies-
- § Developing companies
- § Big corporations

Annex. Design and execution schemes

Applications Server Components



Testing and execution environment



Annex. Specifications

Platform requirements

Processor:	Pentium or similar, or higher.
Operative system:	Windows 32 bits (Windows 95, 98, 2000, XP o higher)
Memory:	64 Mbytes minimum
Hard disc:	100 Mbytes

Technical Features

Development environment	RAD characteristics 100% visual
	Complete integration with DBMS
	Visual objects
	Processes and functions programming
	More than 150 processes instructions
	Editable objects storage template
	Testing environment
	Remote and network functions (TCP/IP)
	SOAP, XML, WSDL Compatibility
	Creation of Web Services
	Compatibility with previous versions
	Reports generation
	Integrated client - server architecture
	POP3 and SMTP protocols

Annex. Specifications

Applications server	Applications server and database
	Web server
	File server
	Message server
	Execution backup copies
	User, client equipment and applications management
	Access and user operations history
	Management by users, client equipment and applications access levels
	Task programming and services or demons
	VATP protocol (TCP 690) access
	Multitask
	Multiprocessor
Web server	Dynamic web server
	Direct connectivity with the database
	Tertiary users refresh system

Annex. Specifications

Data base	Relational model
	Own data base server
	Automatic locks management
	Record lock inside a record list
	Field lock inside a record
	User transactional system
	Third party refresh system
	Triggers
	Intelligent update relations
	Updates
	Document management
	4 billion records
	320 table indexes
	65000 tables
	65000 fields
	API 64 bits implemented
	4 Exabytes size per table on disk
	4 billion characters in text fields

Annex. Specifications

Connectivity	Native access to Oracle and informix
	Access to external databases via ODBC (DB2 ,MySQL, Oracle, SQL Server, etc...)
	Native access to series port
	Creation of own protocols on IP
	Design and execution of remote functions
	Interface for DLLs implementation
	Excel connectivity
Security	Own communications VATP protocol
	Port 690 reserved by IANA
	128 bits encryption in communications

Annex. Performance

Performance	* Reading: 8000000 records per second
	* Entries: 8645 per second
	Capacity: real applications with more than 1000000000 (January 2006)

*These trials were performed on PIV at 3,4 Ghz with 1 GB and 300 GB SATA-RAID. Windows 2000

	Records	Time	Speed records per second
Searches	50 000 000	7, 29 s	6 852 131 rs
Entry	50 000 000	4h 55m	2 782 rs
Modifications	50 000 000	2h 10m	6 337 rs
Discharges	50 000 000	7h 05m	1 963 rs

Test data:

Record capacity: 229bytes

Fields: 29

Indexes: 2 (Code, Date)

Records: 50 000 000

Table size: 10.70 Gbytes

Index size: 1.32 Gbytes