

# Introduction

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Version 14



Nirva is a service oriented framework.

Nirva simplifies, speeds up and allows seamless integration between the different components of existing heterogeneous IT environments, new applications, services or e-business solutions. It therefore allows technology to adapt to business objectives as opposed to the contrary.

## Nirva's scope

The best way to illustrate the potential of Nirva is to describe some of its applications:

- Allow data exchanges between a specific business application developed on a proprietary system (Mainframe, AS/400, UNIX, Unisys, Bull Gecos, etc.) and external or PC ones.
- Automatically, each night, consolidate sales data originating from a wholesaler's branch offices.
- Integrate and foster automatic data exchanges between a sales web site, a financial or invoicing application and logistics management one.
- Automatically gather and transform all contacts met on a web site to make them available to sales and marketing staff in their CRM application or an Excel spreadsheet.
- Utilize the capacities and templates provided by the corporate document composition tool to propose letters, direct mail or business documents on demand from a Web interface and therefore simplify the document management process
- Automate the migration or synchronization of an archival or CRM system to a new one.
- Automatically gather the data generated by production robots to feed the corporate management tools (invoicing, stock management, maintenance applications, etc.) or a client unique file.
- Electronically and securely present customer files online (for call centre, medical, legal applications, etc.)

Nirva has indeed an extremely wide scope. It can be used amongst others:

- As a self-sufficient product for a complete business application, including the presentation layer.
- As a business "brick" or technology behind an application server to improve that latter's performances and make it more independent from external technologies.

- As an outsourcing platform to host applications from several customers
- As a real time processor bringing batch applications in a transactional world.
- As a technology foundation for a complete product allowing software vendors to rapidly create their application independently from the platform.
- As a way to open a technology by allowing access to the technology from any platform or application
- As a way to « web service » any application or technology with a few mouse clicks allowing access to this technology via the communication standards
- To extend the functionalities of a product thanks to the pre and post processing capabilities of Nirva
- To web enable existing applications by giving them modern communication tools.

Nirva's final objective is to help reach some of the organisation's strategic goals:

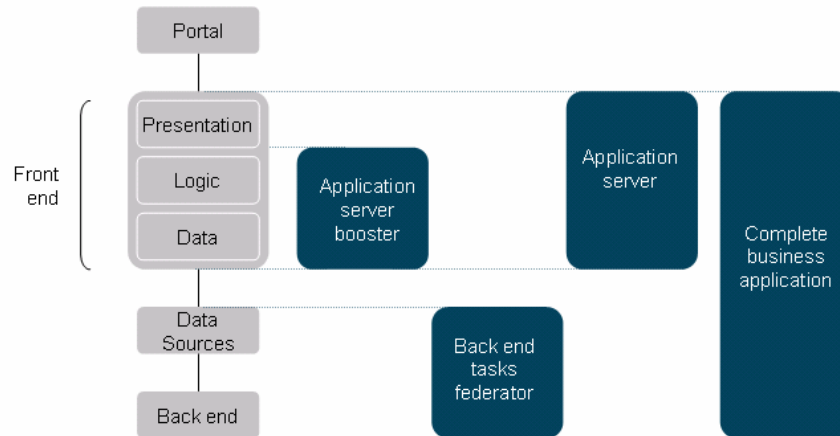
- Customer satisfaction through instant and simple access to information spread across the enterprise and its systems by staff, partners and customers (portals, dashboards, etc.).
- Improved productivity and agility through the automation of repetitive or complex processes (e.g. the launch of a marketing campaign, back office treatments, etc.) and the reutilisation of existing components of the information system.
- Improve sales thanks to a more transparent relationship and collaboration with external partners or the final customer (access to stock levels, electronic presentment, real time publication of catalogues, etc.)



## Nirva's applications

Nirva is aimed at software vendors, integrators and end customers.

- Nirva allows software vendors to make their applications more communicating by bringing them to new technologies.
- Nirva helps integrators to build business solutions by providing them with a performing and easy-to-use basis.
- Last, Nirva allows organizations to modernize and federate their IT systems in order to lengthen their lifespan and respond to new business needs while keeping the existing infrastructure.



Nirva can advantageously replace or complement one or several elements of the layers that traditionally compose a corporate application: the 3 layers business application, databases and back end treatments.

At large organizations, Nirva is used

- To off load a J2EE application server in order to increase its performance
- As a back end tasks federator
- As a complete solution for a new IT application.

At smaller organizations, Nirva is used

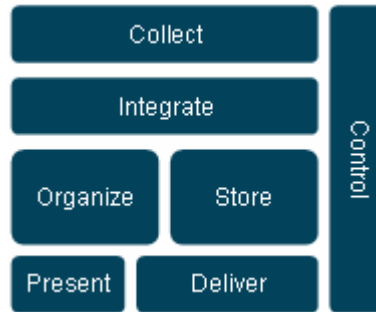
- As an application server (front end)
- As a complete business solution. The advantage then is to have a single and simple to use allowing the management of all processes while maintaining the existing infrastructure.

Software vendors can use Nirva

- As the execution basis for their business solution
- To facilitate the integration of their technology.

## A data orchestrator

Nirva is a data orchestrator for the corporate data. It allows to:



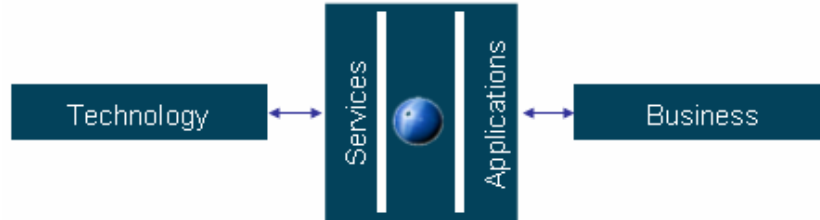
- **Collect** information from any source of data (database, ERP, CRM, vertical application, production robot, etc.)
- **Integrate** this data – The data is verified, complemented and followed it its evolution
- **Stores** it (several seconds to several years) in order to securely use it in other processes.
- **Organizes and combined this heterogeneous data.**
- **Present** them to the user through a web interface.
- **Deliver this data to other components of the information system** (document composition, archival, delivery servers, portal, etc.)
- **Control** all processes.

## Nirva's strengths

Nirva strengths are numerous. Below are the main ones:

- Nirva is simple to use and administer. It does not prevent the need for programming as integration without programming is simply a utopia. However it widely simplifies developments. One can develop a complex application without being a developer.
- Nirva is independent from platforms and languages. An application built on one platform will work on another one. Nirva does not impose a unique programming language but rather gives the choice to use the most appropriate language for the process. A Nirva application can for instance combine different languages (Perl, Java, C++).
- Since Nirva has been entirely made in C++, it is extremely performing. Nirva includes benchmark tools to measure performance for any type of processes. The load can also be adjusted depending on the number of processors.
- Nirva is a flexible and evolutive product. A Nirva application can easily evolve thanks to its pre and post processing capabilities but also thanks to its internal structure where data and procedures that manipulate them are separate (as opposed to Java solutions, for instance, where data and their method are linked tightly, making modifications and evolutions more complex).

- Nirva is unique through its capacity to integrate any type of existing application or technology, be it a complex API in C++ or Java, a Web service, a Perl script or even a simple command line.
- This integration capacity allows Nirva to develop new applications while using the enterprise legacy, including home made developments.
- Nirva has an important storage capacity. Any information structured or not, can be stored for a few milliseconds or several years. The storage is done in ODBC databases for indexes and through the Nirva storage service for mass storage and archival and through Nirva registries for configuration data.
- Last, Nirva is very autonomous. It can be used without any external application installation. Nirva contains in a single executable an application server, and integration server, a web server, a Java environment, a Perl interpreter, XML and XSL processors, a scheduler, etc.



Nirva allows to link business technologies and services to enterprise applications.

The business technologies and services are encapsulated in what we call a Nirva service and the enterprise logic is built inside a Nirva application.

Example of Nirva services: email alert, access to databases, archival, access to LDAP dictionaries, SAP adaptor, PDF conversion, etc...

Example of Nirva applications: online presentation of statements, real time creation of insurance contracts, archival and distribution of technical documentation for a car manufacturer, etc.

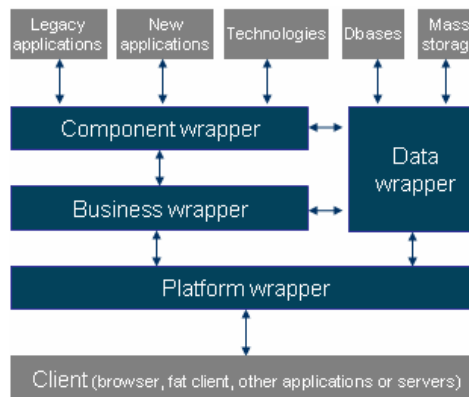
## Nirva components

Nirva defines a certain number of components amongst which some are packaged and not installable with the Nirva web configuration tool.

- The **data model** defines a certain number of objects which are organized under the form of hierarchical containers. The data model is the heart of Nirva. It is in a way the common vocabulary which allows heterogeneous applications and services to collaborate.

- The **Nirva service** encapsulates a technology or tier application. It is made in C++, Java, Perl or a combination of those languages. Creating a Nirva service consists of the definition of a certain number of commands with Nirva objects in entry or exit.
- The **Nirva command** is a simple character chain, easing its access through any type of client, language or platform.
- A **Nirva process** allows the creation of business or technical processes by calling of Nirva commands and providing the necessary logic. The processes are written in Perl, Java, or an extremely simple native language.
- A **Nirva application** is a business solution which contains its logic (in processes), its security and potentially its user interface.
- The **Web services** are business components which can be seen from the outside through web services standards (SOAP, WSDL, XML etc.) but also internally in order to be assembled to build applications.
- As an application server, Nirva manages user **sessions** within Nirva applications. The number of simultaneous sessions is only limited through the licensing structure.
- Last, the **Nirva connectors** allow access to the Nirva applications from any type of language, applications or platform.

## Nirva's architecture



The logical architecture of Nirva is based around 4 « wrappers »

- The « component wrapper » allows the integration of technologies and Nirva.
- The « data wrapper » takes care of all the Nirva data. It encapsulates the data model which allows the integrated technologies and applications to dialogue.
- The « Business wrapper » allows the creation of business views in the form of Nirva applications.
- Last, the « platform wrapper »'s role is to integrate these views into external applications and more generally the user environment. It includes all the Nirva connectors.

For additional information about Nirva, please read the document "Technical description", available at [info@nirva-systems.com](mailto:info@nirva-systems.com).

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