

# **CRM & Sales Management Book**

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# Foreword

Information Systems have played an increasingly visible role over the past several years in improving the competitiveness of business. More than just tools for handling repetitive tasks, they're used to guide and advance all of a company's' daily activities. Integrated management software is today very often a key source of significant competitive advantage.

## Open Source software at the service of management

Risks and integration costs are important barriers to all the advantages you gain from such systems. That's why, today, few small- and medium-sized companies use ERP. In addition, the larger ERP vendors such as SAP, Microsoft and Oracle haven't been able to reconcile the power and comprehensive cover of an ERP system with the simplicity and flexibility wanted by the users. But this is exactly what small and medium enterprises are looking for.

The development processes of open source software, and the new business models adopted by their developers, provide a new way of resolving such problems of cost and quality for this kind of enterprise software.

To make an ERP system fully available to small and medium enterprises, cost reduction is the first priority. Open source software makes it possible to greatly reduce development costs by aggressive reuse of open source software libraries; to eliminate intermediaries (the distributors), with all of their expensive sales overhead; to cut out selling costs by free publication of the software; and to considerably reduce the marketing overhead.

Since there is open interaction among thousands of contributors and partners working on the same project, the quality of the resulting software benefits greatly from the scrutiny. And you can't be everything at once: accountant, software developer, salesperson, ISO 9001 quality professional, specialist in agricultural products, expert in the customs and habits of pharmaceutical vendors, just as a start.

Faced with these wide-ranging requirements, what could be better than a world network of partners and contributors? Everyone adds their own contribution according to their professional competence. Throughout this book you'll see that the results exceed any reasonable expectations when such work is well organized.

But the real challenge of development is to make this solution simple and flexible, as well as complete. And to reach this level of quality you need a leader and co-ordinator who can organize all of these activities. So the development team of Tiny ERP, today called Open ERP, is responsible for most of the organization, synchronization and coherence of the software.

And Open ERP offers great performance in all these areas!

## The Open ERP Solution

Because of its modularity, collaborative developments in Open ERP have been cleanly integrated, enabling any company to choose from a large list of available functions. As with most open source software, accessibility, flexibility, and simplicity are important keywords for development. Experience has shown that there's no need to train users for several months on the system, because they can just download it and use it directly.

So you'll find the modules for all types of needs, allowing your company to build its customized system by simply grouping and configuring the most suitable modules. Hundreds of modules are available.

They range from specific modules like the EDI interface for agricultural products, which has been used to interface with Match and Leclerc stores, up to the generic demonstration automation module for ordering sandwiches, which can take care of the eating preference of your staff.

The results are quite impressive. Open ERP (once called Tiny ERP when it started out) is management software that is downloaded more than any other in the world, with over 600 downloads per day. It's available today in 18 languages and has a world network of partners and contributors. More than 800 developers participate in the projects on the collaborative development system of Tiny Forge.

To our knowledge, Open ERP is the only management system which is routinely used not only by big companies but also by very small companies and independent companies. This diversity is an illustration of the software's flexibility: a rather elegant coordination between people's functional expectations of the software and great simplicity in its use.

And this diversity is also found in the various sectors and trades which use the software, including agricultural products, textiles, public auctions, IT, and trade associations.

Lastly, such software has arisen from the blend of high code quality, well-judged architecture and use of free technologies. In fact, you may be surprised (if you're an IT person) to find that the size of Open ERP is less than 4 MB when you've installed the software. We've moved a long way from the days when the only people who could be expected to benefit from ERP were the owners of a widget factory on some remote industrial estate.

## **Why this book ?**

Many books set out to tell readers about the management of enterprise, and equally many aim to instruct the reader in the use of a piece of specialized software. We're not aiming to add to those lists because our approach is intended to be different.

Having restructured and reorganized many businesses, we wanted our management experience to generate a work that is both instructive and practical. It was important for us not to write a manual about Open ERP, but instead a work that deals with advanced management techniques realized through these IT tools. You'll see what management practices might be useful, what's possible, and then how you could achieve that in Open ERP.

It's this that we'll consider Open ERP for: not as an end in itself but just the tool you use to put an advanced management system into place.

## **Who's it for ?**

Written by two CEOs who have been successful with new technologies, this book is aimed at directors and managers who have an ambition to improve the performance of their whole company's management team. They're likely already to have significant responsibilities and possess the influence to get things done in their company.

It's likely that most readers will come from small- and medium-sized enterprises (up to a few hundred staff), and independent companies, because of the breadth of functions that need to be analyzed and involved in

change. The same principles also apply to larger companies, however.

## Structure of this book

Part One, *Installation and Initial Setup* (*which can be found in a companion volume to this book and in the online book*), starts with the installation of Open ERP. If you have already installed Open ERP you can directly take your first steps on a guided tour in the *Guided Tour* (*which can be found in a companion volume to this book and in the online book*) chapter. If you're already familiar with Open ERP or Tiny ERP you can use the *Developing a real case* (*which can be found in a companion volume to this book and in the online book*) chapter to find out how to create a new workflow from scratch in an empty database with nothing to distract you. Or you can skip directly to the *Customer Relationship Management* (*which can be found in a companion volume to this book and in the online book*) chapter in the *Managing Customer Relationships* (*which can be found in a companion volume to this book and in the online book*) part, to start with details of Open ERP's functional modules.

Part Two, *Managing Customer Relationships* (*which can be found in a companion volume to this book and in the online book*), deals with Supplier and Customer Relationship Management (SRM & CRM). You'll find the elements necessary for managing an efficient sales department there, and automating tasks to monitor performance.

Part Three, *General Accounting* (*which can be found in a companion volume to this book and in the online book*), is devoted to general accounting and its key role in the management of the whole enterprise.

Part Four, *Effective Management of Operations* (*which can be found in a companion volume to this book and in the online book*), handles all the operational functions of enterprise management: Human Resources for managing projects, through financial analyses supplied by analytic (or cost) accounts. You'll see how using Open ERP can help you to optimize your leadership of an enterprise.

Part Five, *Stock and Manufacturing* (*which can be found in a companion volume to this book and in the online book*), describes the physical movement of Stocks and their Manufacture (the transformation or products and services into other products).

Part Six, *Sales and Purchasing* (*which can be found in a companion volume to this book and in the online book*), deals with Purchasing and Selling goods and services.

Part Seven, *Process and Document Management* (*which can be found in a companion volume to this book and in the online book*), is focused on the Process description and Documentation handling that Open ERP manages.

Finally Part Eight, *System Administration and Implementation* (*which can be found in a companion volume to this book and in the online book*), structured in two chapters, explains first how to administer and configure Open ERP then provides a methodology for implementing Open ERP in the enterprise.



## **About the authors**

### **Fabien Pinckaers**

Fabien Pinckaers was only eighteen years old when he started his first company. Today, over ten years later, he has founded and managed several new technology companies, all based on Free / Open Source software.

He originated Tiny ERP, now Open ERP, and is the director of two companies including Tiny sprl, the editor of Open ERP. In three years he has grown the Tiny group from one to sixty-five employees without loans or external fund-raising, and while making a profit.

He has also developed several large scale projects, such as Auction-in-Europe.com, which became the leader in the art market in Belgium. Even today people sell more art works there than on ebay.be.

He is also the founder of the LUG (Linux User Group) of Louvain-la-Neuve, and of several free projects like OpenReport, OpenStuff and Tiny Report. Educated as a civil engineer (polytechnic), he has won several IT prizes in Europe such as Wired and l'Inscène.

A fierce defender of free software in the enterprise, he is in constant demand as a conference speaker and he is the author of numerous articles dealing with free software in the management of the enterprise.

### **Geoff Gardiner**

Geoff has held posts as director of services and of IT systems for international companies and in manufacturing. He was Senior Industrial Research Fellow at Cambridge University's Institute for Manufacturing where he focused on innovation processes.

He founded Seath Solutions Ltd (<http://www.seathsolutions.com/>) to provide services in the use of Open Source software, particularly Open ERP, for business management.

Author of articles and books focusing on the processes and technology of innovation, Geoff is also an active contributor to the Open ERP project. He holds an MBA from Cranfield School of Management and an MA in Engineering and Electrical Sciences from Trinity Hall, Cambridge. He is a member of the Institution of Engineering and Technology and of the Society of Authors.

Having observed, suffered, and led process implementation projects in various organizations, he has many thoughts to share on the successful adoption of an effective management automation tool.

## Dedication

My gratitude goes to my co-author, Fabien Pinckaers, for his vision and tenacity in developing Tiny ERP and Open ERP, and the team at Tiny for its excellent work on this.

Open ERP relies on a philosophy of Open Source and on the technologies that have been developed and tuned over the years by numerous talented people. Their efforts are greatly appreciated.

Thanks also to my family for their encouragement, their tolerance and their constant presence.

*From Fabien Pinckaers*

I address my thanks to all of the team at Tiny for their hard work in preparing, translating and re-reading the book in its various forms. My particular thanks to Laurence Henrion and my family for supporting me throughout all this effort.



# Part I

## First steps with Open ERP

Open ERP is an impressive software system, being simple to use and yet providing great benefits in helping you manage your company. It's easy to install under both Windows and Linux compared with other enterprise-scale systems, and offers unmatched functionality.

The objective of this first part of the book is to help you to start discovering it in practice.

The first chapter, *Installation and Initial Setup* (which can be found in a companion volume to this book and in the online book), gives detailed guidance for installing it. Next, in *Guided Tour* (which can be found in a companion volume to this book and in the online book), you're taken on a step-by-step guided tour using the information in its demonstration database. Then in *Developing a real case* (which can be found in a companion volume to this book and in the online book) you can try out a real case, from scratch in a new database, by developing a complete business workflow that runs from purchase to sale of goods.



# Installation and Initial Setup

*Installing Open ERP under Windows or Linux for familiarization use should take you only half an hour or so and needs only a couple of operations.*

*The first operation is installation of the application and database server on a server PC (that's a Windows or Linux or Macintosh computer).*

*You've a choice of approaches for the second operation: either install a web server (most probably on the original server PC) to use with standard web clients that can be found on anybody's PC, or install application clients on each intended user's PC.*

When you first install Open ERP you'll set up a database containing a little functionality and some demonstration data to test the installation.



## **Renaming from Tiny ERP to Open ERP**

Tiny ERP was renamed to Open ERP early in 2008 so somebody who's already used Tiny ERP should be equally at home with Open ERP. The two names refer to the same software, so there's no functional difference between versions 4.2.X of Open ERP and 4.2.X of Tiny ERP. This book applies to versions of Open ERP from 5.0.0 onwards, with references to earlier versions from time to time.



## **The SaaS, or “on-demand”, offer**

SaaS (Software as a Service) is delivered by a hosting supplier and paid in the form of a monthly subscription that includes hardware (servers), system maintenance, provision of hosting services, and support.

You can get a month's free trial on Tiny's <http://ondemand.openerp.com>, which enables you to get started quickly without incurring costs for integration or for buying computer systems. Many of Tiny's partner companies will access this, and some may offer their own similar service.

This service should be particularly useful to small companies that just want to get going quickly and at low cost. It gives them immediate access to an integrated management system that's been built on the type of enterprise architecture used in banks and other large organizations. Open ERP is that system, and is described in detail throughout this book.

Whether you want to test Open ERP or to put it into full production, you have at least two starting points:

- evaluate it on line at <http://www.openerp.com> and ask Tiny for an SaaS trial hosted at <http://ondemand.openerp.com>, or the equivalent service at any of Tiny's partner companies,

- install it on your own computers to test it in your company's systems environment.

There are some differences between installing Open ERP on Windows and on Linux systems, but once installed, it gives the same functions from both so you won't generally be able to tell which type of server you're using.



### Linux, Windows, Mac

Although this book deals only with installation on Windows and Linux systems, the same versions are also available for the Macintosh on the official website of Open ERP.



### Web sites for Open ERP

- Main Site: <http://www.openerp.com>,
- SaaS or "on-demand" Site: <http://ondemand.openerp.com>,
- Documentation Site: <http://doc.openerp.com/>,
- Community discussion forum where you can often receive informed assistance: <http://www.openobject.com/forum>.



### Current documentation

The procedure for installing Open ERP and its web server are sure to change and improve with each new version, so you should always check each release's documentation – both packaged with the release and on the website – for exact installation procedures.

Once you've completed this installation, create and set up a database to confirm that your Open ERP installation is working. You can follow these early chapters in this part of the book to achieve this.

## 1.1 The architecture of Open ERP

To access Open ERP you can:

- use a web browser pointed at the Open ERP client-web server, or
- use an application client (the GTK client) installed on each computer.

The two methods of access give very similar facilities, and you can use both on the same server at the same time. It's best to use the web browser if the Open ERP server is some distance away (such as on another

continent) because it's more tolerant of time delays between the two than the GTK client is. The web client is also easier to maintain, because it's generally already installed on users' computers.

Conversely you'd be better off with the application client (called the GTK client because of the technology it's built with) if you're using a local server (such as in the same building). In this case the GTK client will be more responsive, so more satisfying to use.

### Web client and GTK client

There is little functional difference between the two Open ERP clients - the web client and the GTK client at present (since early versions of 5.0). In earlier versions, the web client had fractionally greater functionality.

When you're changing the structure of your Open ERP installation (adding and removing modules, perhaps changing labels) you'll find the web client to be irritating because of its use of **caching**.

Caching speeds it all up by keeping a copy of data somewhere between the server and your client, which is usually good. But you may have made changes to your installation that you cannot immediately see in your browser. Many apparent faults are caused by this! The workaround is to use the GTK client during development and implementation where possible.

The Tiny company will continue to support two clients for the foreseeable future, so you can use whichever client you prefer.

An Open ERP system is formed from three main components:

- the PostgreSQL database server, which contains all of the databases, each of which contains all data and most elements of the Open ERP system configuration,
- the Open ERP application server, which contains all of the enterprise logic and ensures that Open ERP runs optimally,
- the web server, a separate application called the Open Object client-web, which enables you to connect to Open ERP from standard web browsers and is not needed when you connect using a GTK client.

### Terminology: client-web – server or client?

The client-web component can be thought of as a server or a client depending on your viewpoint.

It acts as a web server to an end user connecting from a web browser, but it also acts as a client to the Open ERP application server just as a GTK application client does.

So in this book its context will determine whether the client-web component is referred to as a server or a client.

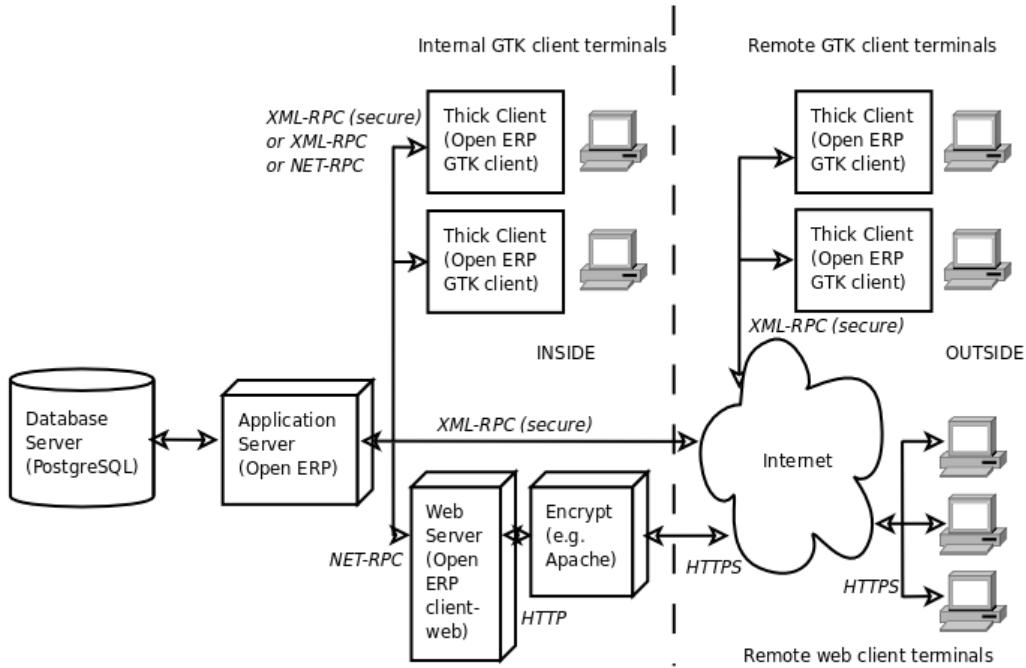


Figure 1.1: *The architecture of Open ERP*



### eTiny

The web application used to be known as “eTiny”. Its name changed to “client-web” as Tiny ERP was renamed to Open ERP, but its characteristics have generally stayed the same.



### PostgreSQL, the relational and object database management system.

It's a free and open-source high-performance system that compares well with other database management systems such as MySQL and FirebirdSQL (both free), Sybase, DB2 and Microsoft SQL Server (all proprietary). It runs on all types of Operating System, from Unix/Linux to the various releases of Windows, via Mac OS X, Solaris, SunOS and BSD.

These three components can be installed on the same server or can be distributed onto separate computer servers if performance considerations require it.

If you choose to run only with GTK clients you won't need the third component – the client-web server – at all. In this case Open ERP's GTK client must be installed on the workstation of each Open ERP user in the company.

## 1.2 The installation of Open ERP

Whether you're from a small company investigating how Open ERP works, or on the IT staff of a larger organization and have been asked to assess Open ERP's capabilities, your first requirement is to install it or to find a working installation.

The table below summarizes the various installation methods that will be described in the following sections.

Table 1.1: Comparison of the different methods of installation on Windows or Linux

Method	Average Time	Level of Complexity	Notes
All-in-one Windows Installer	A few minutes	Simple	Very useful for quick evaluations because it installs all of the components pre-configured on one computer (using the GTK client).
Independent installation on Windows	Half an hour	Medium	Enables you to install the components on different computers. Can be put into production use.
Ubuntu Linux packages	A few minutes	Simple	Simple and quick but the Ubuntu packages aren't always up to date.
From source, for all Linux systems	More than half an hour	Medium to slightly difficult	This is the method recommended for production environments because it's easy to keep it up to date.

Each time a new release of Open ERP is made, Tiny supplies a complete Windows auto-installer for it. This contains all of the components you need – the PostgreSQL database server, the Open ERP application server and the GTK application client.

This auto-installer enables you to install the whole system in just a few mouse-clicks. The initial configuration is set up during installation, making it possible to start using it very quickly as long as you don't want to change the underlying code. It's aimed at the installation of everything on a single PC, but you can later connect GTK clients from other PCs, Macs and Linux boxes to it as well.

The first step is to download the Open ERP installer. At this stage you must choose which version to install – the stable version or the development version. If you're planning to put it straight into production you're strongly advised to choose the stable version.



### Stable versions and development versions

Open ERP development proceeds on two parallel tracks: stable versions and development versions.

New functionality is integrated into the development branch. This branch is more advanced than the stable branch, but it can contain undiscovered and unfixed faults. A new development release is made every month or so, and Tiny have made the code repository available so you can download the very latest revisions if you want.

The stable branch is designed for production environments. Releases of new functionality there are made only about once a year after a long period of testing and validation. Only fault fixes are released through the year on the stable branch.

To download the version of Open ERP for Windows, follow these steps:

1. Navigate to the site <http://openerp.com>.
2. Click *Downloads* on the menu at the left then, under **Windows Installers, All in One**.
3. This brings up the demonstration version Windows installer, currently **openerp-allinone-setup-5.0.0-3**.
4. Save the file on your PC - it's quite a substantial size because it downloads everything including the PostgreSQL database system, so will take some time.

To install Open ERP and its database you must be signed in as an Administrator on your PC. Double-click the installer file to install it and accept the default parameters on each dialog box as you go.

If you had previously tried to install the all-in-one version of Open ERP, you have to uninstall that first because various elements of a previous installation could interfere with your new installation. Make sure that all Tiny ERP, Open ERP and PostgreSQL applications are removed: you're likely to have to restart your PC to finish removing all traces of them.

The Open ERP client can be opened, ready to use the Open ERP system, once you have completed the all-in-one installation. The next step consists of setting up the database, and is covered in the final section of this chapter *Creating the database (which can be found in a companion volume to this book and in the online book)*.

#### 1.2.1 Independent installation on Windows

System administrators can have very good reasons for wanting to install the various components of a Windows installation separately. For example, your company may not support the version of PostgreSQL or Python that's installed automatically, or you may already have PostgreSQL installed on the server you're using, or you may want to install the database server, application server and web server on separate hardware units.

For this situation you can get separate installers for the Open ERP server and client from the same location as the all-in-one auto-installer. You'll also have to download and install a suitable version of PostgreSQL independently.

You must install PostgreSQL before the Open ERP server, and you must also set it up with a user and password so that the Open ERP server can connect to it. Tiny's web-based documentation gives full and current details.

## Connecting users on other PCs to the Open ERP server

To connect other computers to the Open ERP server you must set the server up so that it's visible to the other PCs, and install a GTK client on each of the those PCs:

1. Make your Open ERP server visible to other PCs by opening the Windows Firewall in the Control Panel, then asking the firewall to make an exception of the Open ERP server. In the **Exceptions** tab of Windows Firewall click on **Add a program...** and choose **Open ERP Server** in the list provided. This step enables other computers to see the Open ERP application on this server.
2. Install the Open ERP client (**openerp-client-5.X.exe**), which you can download in the same way as you downloaded the other Open ERP software, onto the other PCs.



### Version matching

You must make sure that the version of the client matches that of the server. The version number is given as part of the name of the downloaded file. Although it's possible that some different revisions of client and server will function together, there's no certainty about that.

To run the client installer on every other PC you'll need to have administrator rights there. The installation is automated, so you just need to guide it through its different installation steps.

To test your installation, start by connecting through the Open ERP client on the server machine while you're still logged in as administrator.



### Why sign in as a PC Administrator?

You'd not usually be signed on as a PC administrator when you're just running the Open ERP client, but if there have been problems in the installation it's easier to remain as an administrator after the installation so that you can make any necessary fixes than to switch user as you alternate between roles as a tester and a software installer.

Start the GTK client on the server through the Windows Start menu there. The main client window appears, identifying the server you're connected to (which is `localhost` – your own server PC – by default). If the message **No database found, you must create one** appears then you've **successfully connected** to an Open ERP server containing, as yet, no databases.



### Connection modes

In its default configuration at the time of writing, the Open ERP client connects to port 8069 on the server using the XML-RPC protocol (from Linux) or port 8070 using the NET-RPC protocol instead (from Windows). You can use either protocol from either operating system. NET-RPC is quite a bit quicker, although you may not notice that on the GTK client in normal use. Open ERP can run XML-RPC, but not NET-RPC, as a secure connection.

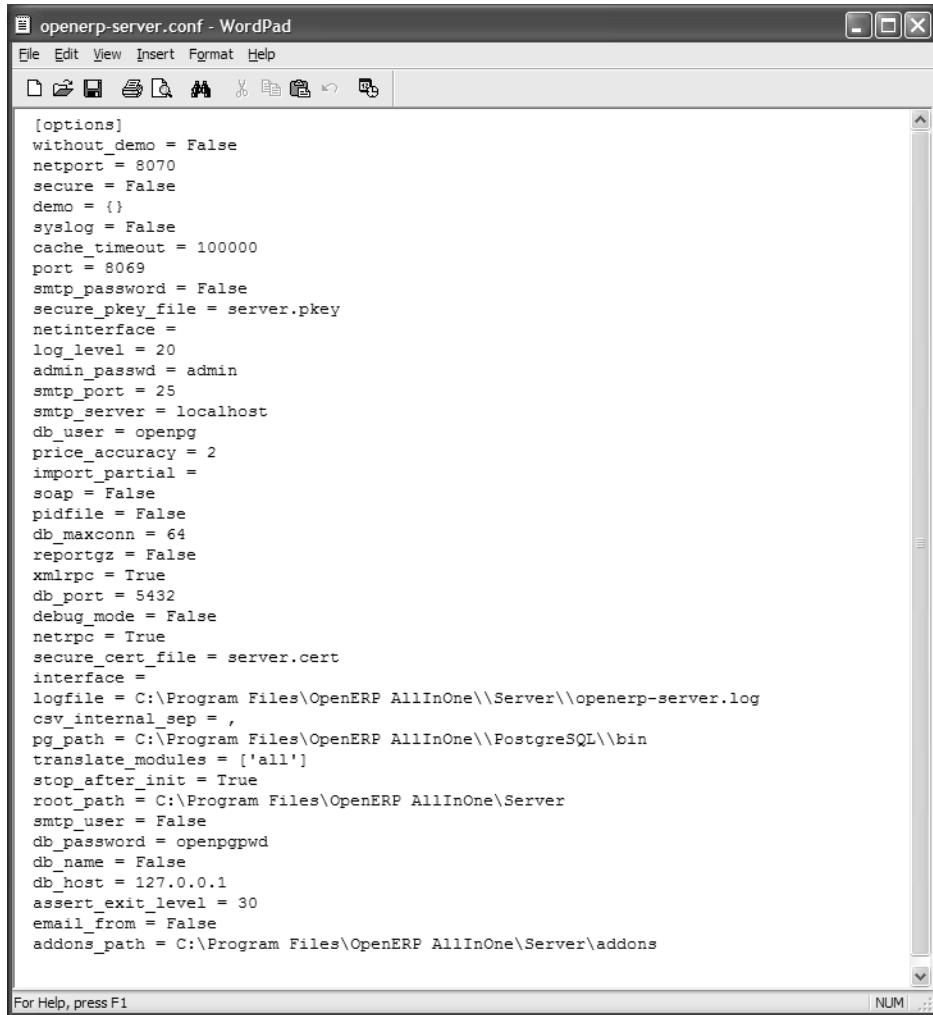


Figure 1.2: Dialog box on connecting a GTK client to a new Open ERP server

### Resolving errors with a Windows installation

If you can't get Open ERP to work after installing your Windows system you'll find some ideas for resolving this below:

1. Is the Open ERP Server working? Signed in to the server as an administrator, stop and restart the service using **Stop Service** and **Start Service** from the menu *Start → Programs → OpenERP Server*.
2. Is the Open ERP Server set up correctly? Signed in to the server as Administrator, open the file `openerp-server.conf` in `C:\Program Files\OpenERP AllInOne` and check its content. This file is generated during installation with information derived from the database. If you see something strange it's best to entirely reinstall the server from the demonstration installer rather than try to work out what's happening.
3. Is your PostgreSQL running? Signed in as administrator, select **Stop Service** from the menu *Start → Programs → PostgreSQL*. If, after a couple of seconds, you can read **The PostgreSQL4OpenERP service has stopped** then you can be reasonably sure that the database server was working. Restart PostgreSQL.
4. Is the database accessible? Still in the PostgreSQL menu, start the pgAdmin III application which you can use to explore the database. Double-click on the PostgreSQL4OpenERP connection. You can find the password in the Open ERP server configuration file. If the database server is accessible you'll be able to see some information about the empty database. If it's not then an error message will appear.
5. Are your client programs correctly installed? If your Open ERP GTK clients haven't started then the swiftest approach is to reinstall them.
6. Can remote client computers see the server computer at all? Check this by opening a command prompt window (enter `cmd` in the window *Start → Run...* ) and enter `ping <address of server>` there



The screenshot shows a Windows WordPad application window titled "openerp-server.conf - WordPad". The window contains the configuration settings for an OpenERP server. The code is as follows:

```
[options]
without_demo = False
netport = 8070
secure = False
demo = {}
syslog = False
cache_timeout = 100000
port = 8069
smtp_password = False
secure_pkey_file = server.pkey
netinterface =
log_level = 20
admin_passwd = admin
smtp_port = 25
smtp_server = localhost
db_user = openpg
price_accuracy = 2
import_partial =
soap = False
pidfile = False
db_maxconn = 64
reportgz = False
xmlrpc = True
db_port = 5432
debug_mode = False
netrpc = True
secure_cert_file = server.cert
interface =
logfile = C:\Program Files\OpenERP AllInOne\\Server\\openerp-server.log
csv_internal_sep = ,
pg_path = C:\Program Files\OpenERP AllInOne\\PostgreSQL\\bin
translate_modules = ['all']
stop_after_init = True
root_path = C:\Program Files\OpenERP AllInOne\Server
smtp_user = False
db_password = openpgpwd
db_name = False
db_host = 127.0.0.1
assert_exit_level = 30
email_from = False
addons_path = C:\Program Files\OpenERP AllInOne\Server\addons
```

Figure 1.3: Typical Open ERP configuration file

(where <address of server> represents the IP address of the server). The server should respond with a reply.

7. Have you changed any of the server's parameters? At this point in the installation the port number of the server must be 8069 using the protocol XML-RPC.
8. Is there anything else in the server's history that can help you identify the problem? Open the file `openerp-server.log` in C:\Program Files\OpenERP AllInOne (which you can only do when the server is stopped) and scan through the history for ideas. If something looks strange there, contributors to the Open ERP forums can often help identify the reason.

## 1.2.2 Installation on Linux (Ubuntu)

This section guides you through installing the Open ERP server and client on Ubuntu, one of the most popular Linux distributions. It assumes that you're using a recent release of Desktop Ubuntu with its graphical user interface on a desktop or laptop PC.



### Other Linux distributions

Installation on other distributions of Linux is fairly similar to installation on Ubuntu. Read this section of the book so that you understand the principles, then use the online documentation and the forums for your specific needs on another distribution.

For information about installation on other distributions, visit the documentation section by following *Product → Documentation* on <http://www.openerp.com>. Detailed instructions are given there for different distributions and releases, and you should also check if there are more up to date instructions for the Ubuntu distribution as well.

### Installation of Open ERP from packages

At the time of writing this book, Ubuntu hadn't yet published packages for Open ERP, so this section describes the installation of version 4.2 of Tiny ERP. This is very similar to Open ERP and so can be used to test the software.

Here's a summary of the procedure:

1. Start Synaptic Package Manager, and enter your root password as required.
2. Check that the repositories `main universe` and `restricted` are enabled.
3. Search for a recent version of PostgreSQL, for example `postgresql-8.3` then select it for installation along with its dependencies.
4. Search for `tinyerp` then select `tinyerp-client` and `tinyerp-server` for installation along with their dependencies. Click **Update Now** to install it all.

5. Close Synaptic Package Manager.

Installing PostgreSQL results in a database server that runs and restarts automatically when the PC is turned on. If all goes as it should with the tinyerp-server package then tinyerp-server will also install, and restart automatically when the PC is switched on.

Start the Tiny/Open ERP GTK client by clicking its icon in the *Applications* menu, or by opening a terminal window and typing `tinyerp-client`. The Open ERP login dialog box should open and show the message **No database found you must create one!**.

Although this installation method is simple and therefore an attractive option, it's better to install Open ERP using a version downloaded from <http://openerp.com>. The downloaded revision is likely to be far more up to date than that available from a Linux distribution.



### Package versions

Maintaining packages is a process of development, testing and publication that takes time. The releases in Open ERP (or Tiny ERP) packages are therefore not always the latest available. Check the version number from the information on the website before installing a package. If only the third digit group differs (for example 5.0.1 instead of 5.0.2) then you may decide to install it because the differences may be minor – fault fixes rather than functionality changes between the package and the latest version.

## Manual installation of the Open ERP server

In this section you'll see how to install Open ERP by downloading it from the site <http://openerp.com>, and how to install the libraries and packages that Open ERP depends on, onto a desktop version of Ubuntu. Here's a summary of the procedure:

1. Navigate to the page <http://openerp.com> with your web browser,
2. Click *Downloads* on the left menu,
3. Download the client and server files from the *Sources (Linux)* section into your home directory (or some other location if you've defined a different download area).

To download the PostgreSQL database and all of the other dependencies for Open ERP from packages:

1. Start Synaptic Package Manager, and enter the root password as required.
2. Check that the repositories `main universe` and `restricted` are enabled.
3. Search for a recent version of PostgreSQL (such as `postgresql-8.3`) then select it for installation along with its dependencies.
4. Select all of Open ERP's dependences, an up-to-date list of which should be found in the installation documents on Tiny's website, then click **Update Now** to install them.



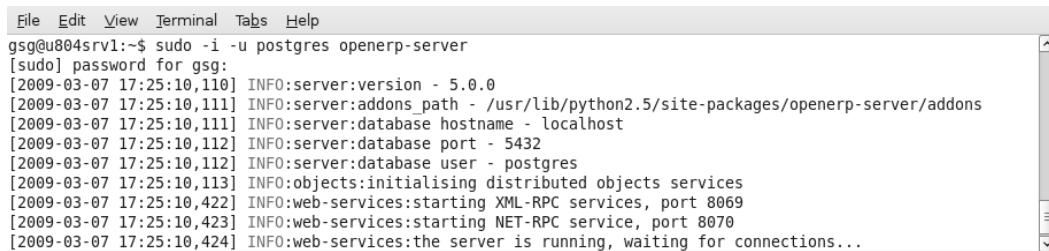
## Python programming language

Python is the programming language that's been used to develop Open ERP. It's a dynamic, non-typed language that is object-oriented, procedural and functional. It comes with numerous libraries that provide interfaces to other languages and has the great advantage that it can be learnt in only a few days. It's the language of choice for large parts of NASA's, Google's and many other enterprises' code.

For more information on Python, explore <http://www.python.org>.

Once all these dependencies and the database are installed, install the server itself using the instructions on the website.

Open a terminal window to start the server with the command `sudo -i -u postgres openerp-server`, which should result in a series of log messages as the server starts up. If the server is correctly installed, the message [...] **waiting for connections...** should show within 30 seconds or so, which indicates that the server is waiting for a client to connect to it.



```
File Edit View Terminal Tabs Help
gsg@u804srv1:~$ sudo -i -u postgres openerp-server
[sudo] password for gsg:
[2009-03-07 17:25:10,110] INFO:server:version - 5.0.0
[2009-03-07 17:25:10,111] INFO:server:addons_path - /usr/lib/python2.5/site-packages/openerp-server/addons
[2009-03-07 17:25:10,111] INFO:server:database hostname - localhost
[2009-03-07 17:25:10,112] INFO:server:database port - 5432
[2009-03-07 17:25:10,112] INFO:server:database user - postgres
[2009-03-07 17:25:10,113] INFO:objects:initialising distributed objects services
[2009-03-07 17:25:10,422] INFO:web-services:starting XML-RPC services, port 8069
[2009-03-07 17:25:10,423] INFO:web-services:starting NET-RPC service, port 8070
[2009-03-07 17:25:10,424] INFO:web-services:the server is running, waiting for connections...
```

Figure 1.4: *Open ERP startup log in the console*

## Manual installation of Open ERP GTK clients

To install an Open ERP GTK client, follow the steps outline on the website installation document for your particular operating system.



### Survey: Don't Cancel!

When you start the GTK client for the first time, a dialog box appears asking for various details that are intended to help the Tiny company assess the prospective user base for its software.

If you click the **Cancel** button, the window goes away – but Open ERP will ask the same questions again next time you start the client. It's best to click **OK**, even if you choose to enter no data, to prevent that window reappearing next time.

Open a terminal window to start the client using the command `openerp-client`. When you start the client on the same Linux PC as the server you'll find that the default connection parameters will just work without needing



Figure 1.5: *Open ERP client at startup*

any change. The message **No database found, you must create one!** shows you that the connection to the server has been successful and you need to create a database on the server.

### Creating the database

You can connect other GTK clients over the network to your Linux server. Before you leave your server, make sure you know its network address – either by its name (such as `mycomputer.mycompany.net`) or its IP address (such as `192.168.0.123`).

 **Different networks**

Communications between an Open ERP client and server are based on standard protocols. You can connect Windows clients to a Linux server, or vice versa, without problems. It's the same for Mac versions of Open ERP – you can connect Windows and Linux clients and servers to them.

To install an Open ERP client on a computer under Linux, repeat the procedure shown earlier in this section. You can connect different clients to the Open ERP server by modifying the connection parameters on each client. To do that, click the **Change** button on the connection dialog and set the following field as needed:

- **Server** : name or IP address of the server over the network,
- **Port** : the port, whose default is 8069 or 8070,
- **Connection protocol** : XML-RPC or NET-RPC .

It's possible to connect the server to the client using a secure protocol to prevent other network users from listening in, but the installation described here is for direct unencrypted connection.

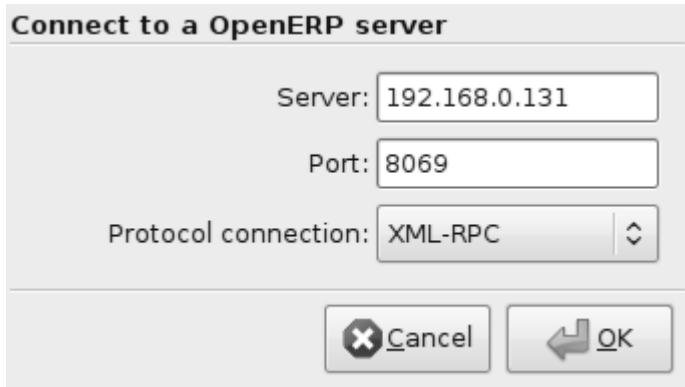


Figure 1.6: Dialog box for defining connection parameters to the server

If your Linux server is protected by a firewall you'll have to provide access to port 8069 or 8070 for users on other computers with Open ERP GTK clients.

### Installation of an Open ERP web server

Just as you installed a GTK client on a Linux server, you can also install the Open ERP client-web server. You can install it from sources after installing its dependencies from packages as you did with the Open ERP server, but Tiny have provided a simpler way to do this for eTiny – using a system known as ez\_setup.

Before proceeding, confirm that your Open ERP installation is functioning correctly with a GTK client. If it's not you'll need to go back now and fix it, because you need to be able to use it fully for the next stages.

To install client-web follow the up-to-date instructions in the installation document on the website.



#### Ez tool

Ez is the packaging system used by Python. It enables the installation of programs as required just like the packages used by a Linux distribution. The software is downloaded across the network and installed on your computer by ez\_install.

**ez\_setup** is a small program that installs ez\_install automatically.

The Open ERP Web server connects to the Open ERP server in the same way as an Open ERP client using the NET-RPC protocol. Its default setup corresponds to that of the Open ERP server you've just installed, so should connect directly at startup.

1. At the same console as you've just been using, go to the Openerp web directory by typing **cd openerp-web-5.X**.
2. At a terminal window type **start-openerp-web** to start the Open ERP Web server.

You can verify the installation by opening a web browser on the server and navigating to <http://localhost:8080> to connect to eTiny as shown in the figure *Verifying your Linux installation* (which can be found in a companion

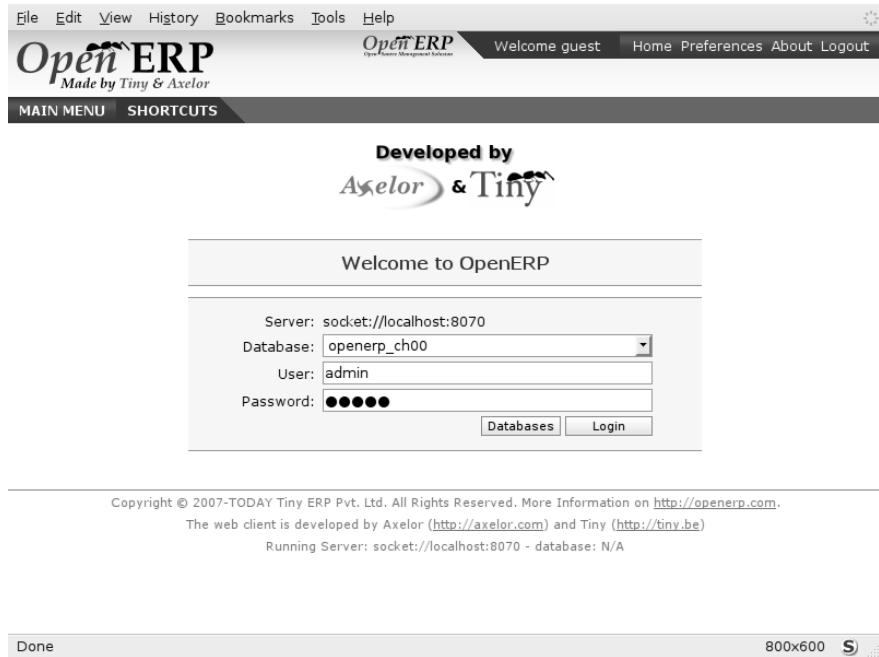


Figure 1.7: *Open ERP web client at startup*

*volume to this book and in the online book).* You can also test this from another computer connected to the same network if you know the name or IP address of the server over the network – your browser should be set to `http://<server_address>:8080` for this.

## Verifying your Linux installation

You've used default parameters so far during the installation of the various components. If you've had problems, or you just want to set this up differently, the following points provide some indicators about how you can set your installation up.



### psql and pgAdmin tools

psql is a simple client, executed from the command line, that's delivered with PostgreSQL. It enables you to execute SQL commands on your Open ERP database.

If you prefer a graphical utility to manipulate your database directly you can install pgAdmin III (it is commonly installed automatically with PostgreSQL on a windowing system, but can also be found at <http://www.pgadmin.org/> ).

1. The PostgreSQL database starts automatically and listens locally on port 5432 as standard: check this by entering `sudo netstat -anpt` at a terminal to see if port 5432 is visible there.
2. The database system has a default role of `postgres` accessible by running under the Linux `postgres`

user: check this by entering `sudo su postgres -c psql` at a terminal to see the psql startup message – then type `\q` to quit the program.

3. Start the Open ERP server from the `postgres` user (which enables it to access the PostgreSQL database) by typing `sudo su postgres -c tinyerp-server`.
4. If you try to start the Open ERP server from a terminal but get the message `socket.error: (98, 'Address already in use')` then you might be trying to start Open ERP while an instance of Open ERP is already running and using the sockets that you've defined (by default 8069 and 8070). If that's a surprise to you then you may be coming up against a previous installation of Open ERP or Tiny ERP, or something else using one or both of those ports.

Type `sudo netstat -anpt` to discover what is running there, and record the PID. You can check that the PID corresponds to a program you can dispense with by typing `ps aux | grep <PID>` and you can then stop the program from running by typing `sudo kill <PID>`. You need additional measures to stop it from restarting when you restart the server.

5. The Open ERP server has a large number of configuration options. You can see what they are by starting the server with the argument `-help` By default the server configuration is stored in the file `.terp_serverrc` in the user's home directory (and for the `postgres` user that directory is `/var/lib/postgresql`).
6. You can delete the configuration file to be quite sure that the Open ERP server is starting with just the default options. It is quite common for an upgraded system to behave badly because a new version server cannot work with options from a previous version. When the server starts without a configuration file it will write a new one once there is something non-default to write to it – it will operate using defaults until then.
7. To verify that the system works, without becoming entangled in firewall problems, you can start the Open ERP client from a second terminal window on the server computer (which doesn't pass through the firewall). Connect using the XML-RPC protocol on port 8069 or NET-RPC on port 8070. The server can use both ports simultaneously. The window displays the log file when the client is started this way.
8. The client setup is stored in the file `.terprc` in the user's home directory. Since a GTK client can be started by any user, each user would have their setup defined in a configuration file in their own home directory.
9. You can delete the configuration file to be quite sure that the Open ERP client is starting with just the default options. When the client starts without a configuration file it will write a new one for itself.
10. The web server uses the NET-RPC protocol. If a GTK client works but the web server doesn't then the problem is either with the NET-RPC port or with the web server itself, and not with the Open ERP server.



#### One server for several companies

You can start several Open ERP application servers on one physical computer server by using different ports. If you have defined multiple database roles in PostgreSQL, each connected through an Open ERP instance to a different port, you can simultaneously serve many companies from one physical server at one time.

## 1.3 Database creation

Use the technique outlined in this section to create a new database, `openerp_ch01`. This database will contain the demonstration data provided with Open ERP and a large proportion of the core Open ERP functionality. You'll need to know your super administrator password for this – or you'll have to find somebody who does have it to create this seed database.

 **The super-administrator password**

Anyone who knows the super-administrator password has complete access to the data on the server – able to read, change and delete any of the data in any of the databases there.

After first installation, the password is `admin`. This is the hard-coded default, and is used if there is no accessible server configuration file. If your system has been set up so that the server configuration file can be written to by the server then you can change the password through the client. Or you could deliberately make the configuration file read-only so that there is no prospect of changing it from the client. Either way, a server systems administrator can change it if you forget it.

So if your system is set up to allow it, you can change the superadmin password through the GTK client from the menu *File → Databases → Administrator Password*, or through the web client by logging out (click the **Logout** link), clicking **Databases** on the login screen, and then clicking the **Password** button on the Management screen.

The location of the server configuration file is typically defined by starting the server with the `--config` command line option.

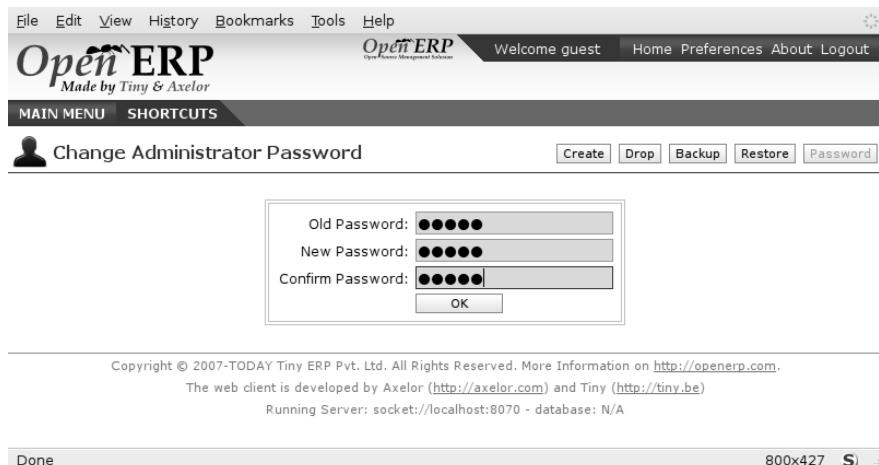


Figure 1.8: Changing the super-administrator password through the web client

### 1.3.1 Creating the database

If you're using the GTK client, choose *Files → Databases → New database* in the menu at the top left. Enter the super-administrator password, then the name of the new database you're creating.

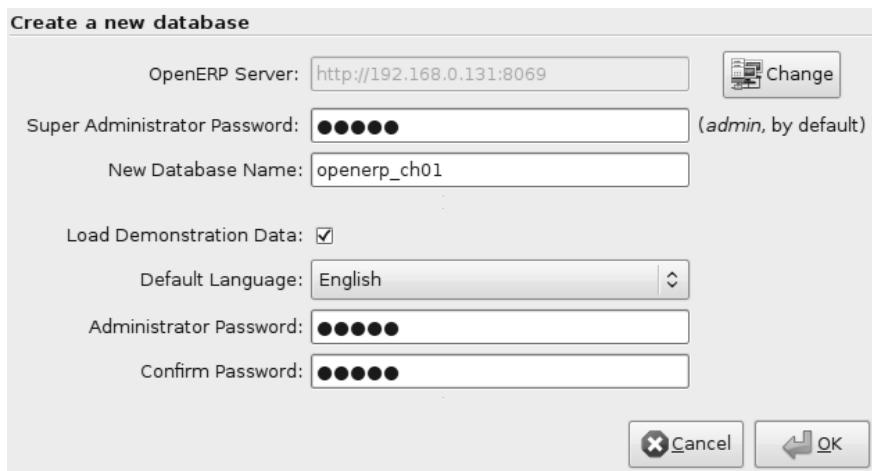


Figure 1.9: *Creating a new database through the GTK client*

If you're using the web client, click **Databases** on the login screen, then **Create** on the database management page. Enter the super-administrator password, and the name of the new database you're creating.

In both cases you'll see a checkbox that determines whether you load demonstration data or not. The consequences of checking this box or not affect the **whole use** of this database.

In both cases you'll also see that you can choose the Administrator password. This makes your database quite secure because you can ensure that it is unique from the outset. (In fact many people find it hard to resist `admin` as their password!)

### 1.3.2 Database `openerp_ch01`

Wait for the message showing that the database has been successfully created, along with the user accounts and passwords (`admin/XXXX` and `demo/demo`). Now you've created this seed database you can extend it without having to know the super-administrator password.



#### User Access

The combination of username/password is specific to a single database. If you have administrative rights to a database you can modify all users. Alternatively you can install the `users_ldap` module, which manages the authentication of users in LDAP (the Lightweight Directory Access Protocol, a standard system), and connect it to several Open ERP databases. Using this, many databases can share the same user account details.



### Failure to create a database

How do you know if you've successfully created your new database? You're told if the database creation has been unsuccessful. If you have entered a database name using prohibited characters (or no name, or too short a name) you will be alerted by the dialog box **Bad database name!** explaining how to correct the error. If you've entered the wrong super-administrator password or a name already in use (some names can be reserved without your knowledge), you'll be alerted by the dialog box **Error during database creation!**.

Connect to the database `openerp_ch01` that you just created, using the default administrator account.

If this is the first time you've connected to this database you'll be asked a series of questions to define the database parameters:

1. **Select a profile** : select Minimal Profile and click **Next**.
2. **Company Details** : replace the proposed default of `Tiny sprl` by your own company name, complete as much of your address as you like, and add some lines about your company, such as a slogan and any statutory requirements, to the header and footer fields. Click **Next**.
3. **Summary** : check the information and go back to make any modifications you need before installation. Then click **Install**.
4. **Installation Completed** : click **Ok**.

Once configuration is complete you're connected to your Open ERP system. Its functionality is very limited because you've selected a minimal installation, but this is sufficient to demonstrate that your installation is working.

### 1.3.3 Managing databases

As a super-administrator you've not only got rights to create new databases, but also to:

- delete databases,
- backup databases,
- restore databases.

All of these operations can be carried out from the menu *File → Databases... → Backup databases* in the GTK client, or from the **Database** button in the web client's **Login** screen.

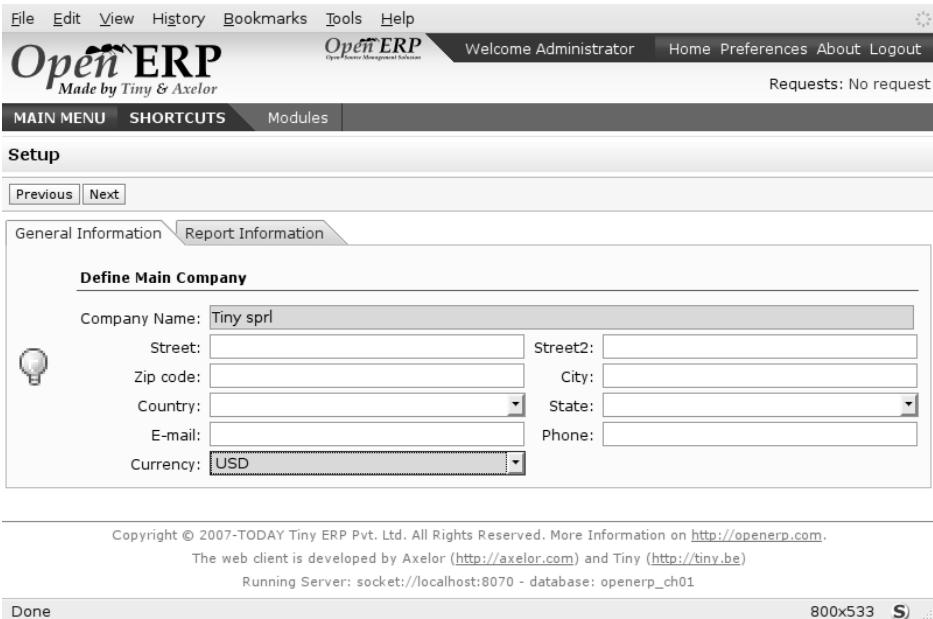


Figure 1.10: Defining your company during initial database configuration



### Duplicating a database

To duplicate a database you can:

1. make a backup file on your PC from this database.
2. restore this database from the backup file on your PC, giving it a new name as you do so.

This can be a useful way of making a test database from a production database. You can try out the operation of a new configuration, new modules, or just the import of new data.

A system administrator can configure Open ERP to restrict access to some of these database functions so that your security is enhanced in normal production use.

You are now ready to use databases from your installation to familiarize yourself with the administration and use of Open ERP.

## 1.4 New Open ERP functionality

The database you've created and managed so far is based on the core Open ERP functionality that you installed. The core system is installed in the file system of your Open ERP application server, but only installed into an Open ERP database as you require it, as is described in the next chapter, *Guided Tour* (*which can be found in a companion volume to this book and in the online book*).

What if want to update what's there, or extend what's there with additional modules?

- To update what you have, you'd install a new instance of Open ERP using the same techniques as described earlier in this section, *Database creation* (*which can be found in a companion volume to this book and in the online book*).
- To extend what you have, you'd install new modules in the `addons` directory of your current Open ERP installation. There are several ways of doing that.

In both cases you'll need briefly to be a `root` user or Administrator of your Open ERP application server.

### 1.4.1 Extending Open ERP

To extend Open ERP you'll need to copy modules into the `addons` directory. That's in your server's `openerp-server` directory (which differs between Windows, Mac and some of the various Linux distributions and not available at all in the Windows all-in-one installer). If you look there you'll see existing modules such as `product` and `purchase`. A module can be provided in the form of files within a directory or a zip-format file containing that same directory structure.

You can add modules in two main ways – through the server, or through the client. To add new modules through the server is a conventional systems administration task. As `root` user or other suitable user, you'd put the module in the `addons` directory and change its permissions to match those of the other modules.

To add new modules through the client you must first change the permissions of the `addons` directory of the server, so that it is writable by the server. That will enable you to install Open ERP modules using the Open ERP client (a task ultimately carried out on the application server by the server software).



#### Changing permissions

A very simple way of changing permissions on the Linux system you're using to develop an Open ERP application is to execute the command `sudo chmod 777 <path_to_addons>` (where `<path_to_addons>` is the full path to the `addons` directory, a location like `/usr/lib/python2.5/site-packages/openerp-server/addons`).

Any user of Open ERP who has access to the relevant administration menus can then upload any new functionality, so you'd certainly disable this capability for production use. You'll see examples of this uploading as you make your way through this book.



*Starting to discover Open ERP, using demonstration data supplied with the system, is a good way to familiarize yourself with the user interface. This guided tour provides you with an introduction to many of the available system features.*

You'd be forgiven a flicker of apprehension when you first sit at your computer to connect to Open ERP, since ERP systems are renowned for their complexity and for the time it takes to learn how to use them. These are, after all, Enterprise Resource Planning systems, capable of managing most elements of global enterprises, so they should be complicated, shouldn't they? But even if this is often the case for proprietary software, Open ERP is a bit of an exception in the class of management software.

Despite its comprehensiveness, Open ERP's interface and workflow management facilities are quite simple and intuitive to use. For this reason Open ERP is one of the few software packages with reference customers in both very small businesses (typically requiring simplicity) and large accounts (typically requiring wide functional coverage).

A two-phase approach provides a good guide for your first steps with Open ERP:

1. Using a database containing demonstration data to get an overview of Open ERP's functionality (described in this chapter, *Guided Tour* (which can be found in a companion volume to this book and in the online book))
2. Setting up a clean database to configure and populate a limited system for yourself (described in the next chapter, *Developing a real case* (which can be found in a companion volume to this book and in the online book)).

To read this chapter effectively, make sure that you have access to an Open ERP server. The description in this chapter assumes that you're using the Open ERP web client unless it states otherwise. The general functionality differs little from one client to the other.

## 2.1 Database creation

Use the technique outlined in *Installation and Initial Setup* (which can be found in a companion volume to this book and in the online book) to create a new database, `openerp_ch02`. This database will contain the demonstration data provided with Open ERP and a large proportion of the core Open ERP functionality. You'll need to know your super administrator password for this – or you'll have to find somebody who does have it to create this seed database.

Start the database creation process from the **Welcome** page by clicking **Databases** and then completing the following fields on the **Create new database** form:

- **Super admin password** : by default it's `admin` , if you or your system administrator haven't changed it,

- **New database name** : openerp\_ch02 ,
- **Load Demonstration data** checkbox: checked ,
- **Default Language** : English ,
- **Administrator password** : admin (because it's easiest to remember at this stage, but obviously completely insecure),
- **Confirm password** : admin .

## 2.2 To connect to Open ERP

Since this is the first time you've connected to it you'll have to go through the Setup wizard in steps:

1. **Select a profile** : select Minimal Profile and click **Next**.
2. At the **Define Main Company** step you should select your own **Company Name** and **Currency**, and address details on the first tab **General Information**; and add more details on the second tab **Report Information** including a logo, if you have one, that appears on reports. Click **Next**.
3. At the **Summary** page you can go back to change details if you need. Click the **Install** button.
4. Finally, at the **Installation done** page, click **Start Configuration**.

Configuration consists of a set of wizards that help you through options for the installed modules. Hardly anything is installed so this is a very simple process at the moment.

1. At the first screen click **Continue** to go into the first wizard. Choose **View Mode** : **Simplified Interface** and then click **Set** to save it.
2. Click **Skip Step** to step over the next wizard, which would enable you to add other users.
3. You've now reached the end of the configuration so click **Continue** to start using the system as the Administrator.

Once you're displaying the main menu you're able to see the following screen items, as shown in screenshot *Preferences toolbar* (*which can be found in a companion volume to this book and in the online book*):

- the **Preferences** toolbar to the top right, showing the user name, links to the **Home** page, **Preferences**, **About** and **Logout**,
- just below you'll find information about the **Request** system,
- links to the **MAIN MENU** and the **SHORTCUTS**,
- information about copyright and the database you're logged into at the bottom of the page,
- the main contents of the window with by the menu toolbar to the left: links generally line up on the right but there are none to show at the moment.

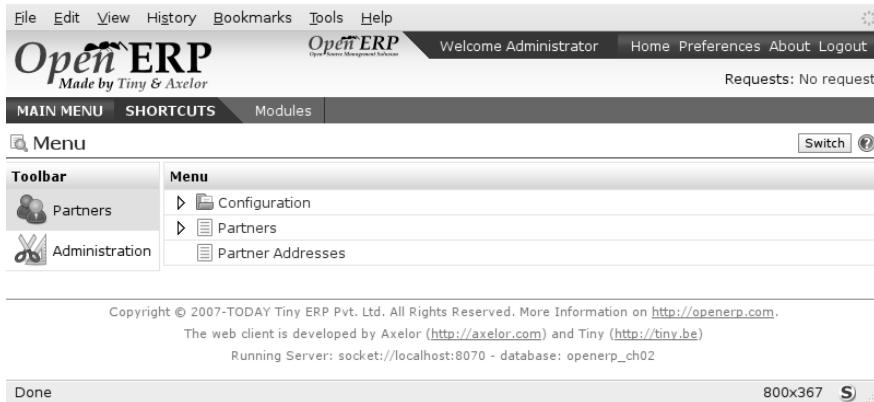


Figure 2.1: The Main Menu of the `openerp_ch02` database

Two menus are available on the left:

- *Partners*,
- *Administration*.

### 2.2.1 Preferences toolbar

When you're connected to Open ERP the Preferences toolbar indicates which user you're connected as. So it should currently be showing **Welcome Administrator** (unless you logged in as another user and it's reflecting the name of that user instead).

You'll find a link to the **Home** page to its right. This takes you to either the dashboard or the available menus, depending on the user configuration. In the case of the `openerp_ch02` database so far the Home page is the Main Menu. But in general each user of the system is presented with a dashboard that's designed to show performance indicators and urgent documents that are most useful to someone of the user's position in the company. You'll see how to assign dashboards to different users in a later chapter, *Configuration & Administration* (which can be found in a companion volume to this book and in the online book).



#### Multi-nationals and time zones

If you have users in different countries, they can configure their own timezone. Timestamp displays are then adjusted by reference to the user's own localization setting.

So if you have a team in India and a team in England, the times will automatically be converted. If an Indian employee sets her working hours from 9 to 6 that will be converted and saved in the server's timezone. When the English users want to set up a meeting with an Indian user, the Indian user's available time will be converted to English time.

The next element in the Toolbar is a link to **Preferences**. By clicking that link you reach a page where the current user can set their password, a timezone, a working language, and a signature:

- The **Password** field gives the user the opportunity to change their own password. You should take steps (perhaps written policies) to prevent users making these too trivial.
- The **Language** field enables the user's working language to be changed. But first the system must be loaded with other languages for the user to be able to choose an alternative, which is described in the next subsection of this chapter. This is a mandatory field, although might initially be set as blank.
- The **Timezone** setting indicates the user's location to Open ERP. This can be different from that of the server. All of the dates in the system are converted to the user's timezone automatically.
- The **Signature** field gives the user a place for the signature attached to messages sent from within Open ERP.

The **About** link gives information about the development of the Open ERP software and various links to other information.

The **Logout** link enables you to logout and return to the original login page. You can then login to another database, or to the same database as another user. This page also gives you access to the super-administrator functions for managing databases on this server.

The **Requests** link sits just below this toolbar. It is only visible if you're logged into a database. If your database is new it will say **No request**. You can click on that link to look at requests that have been sent to you at any time.

### Installing a new language

Each user of the system can work in his or her own language. More than twenty languages are currently available besides English. Users select their working language using the Preferences link. You can also assign a language to a partner (customer or supplier), in which case all the documents sent to that partner will be automatically translated into that language.



#### More information about languages

The base version of Open ERP is translated into the following languages: English, German, Chinese, Spanish, Italian, Hungarian, Dutch, Portuguese, Romanian, Swedish and Czech.

But other languages are also available: Arabic, Afghan, Austrian, Bulgarian, Indonesian, Finnish, Thai, Turkish and Vietnamese..

As administrator you can install a new main working language into the system.

1. Select *Administration* in the Menu Toolbar and click *Translations* → *Load an Official Translation* in the main menu window,
2. Select the language to install, French for example, and click on **Start Installation**,

3. When the message **Installation done** appears in the **Language file loaded** window, click **OK** to return to the menu. (Your system will actually need the French locale loaded to be able to do this, so you may not be successful here.)

To see the effects of this installation change the preferences of your user to change the working language (you may first need to ensure that you have explicitly selected English as your language, rather than keep the default, before you're given the French option). The main menu is immediately translated in the selected language. If you're using the GTK client you'll first have to close the menu then open a new main menu to start seeing things in the new language.



### Navigating the menu

From this point in the book navigation from the main menu is written as a series of menu entries connected by the → character. Instead of seeing “Select Administration in the Menu toolbar then click Translations > Load an Official Translation” you’ll just get “use menu *Administration* → *Translations* → *Load an Official Translation*”.

## Requests as a mechanism for internal communication

Requests are a powerful communication mechanism between users of the system. They’re also used by Open ERP itself to send system messages to users.

They have distinct advantages over traditional emails:

- requests are linked to other Open ERP documents,
- an event’s history is attached to the request,
- you can monitor events effectively from the messages they’ve sent.

Open ERP uses this mechanism to inform users about certain system events. For example if there’s a problem concerning the procurement of a product a request is sent by Open ERP to the production manager.

Send a request to get an understanding of its functionality:

1. Click on the **Requests** link that should currently be showing **No Requests**. This opens a window that lists all of your waiting requests.
2. Click **New** to create and send a new request.
3. Complete the subject of the request, such as **How are things?** then give a description of the enquiry in the field.
4. Click the **Search** button to the right of the **To** field and select **Administrator** in the window that opens (that’s the user that you’re already connected as).
5. You can then link this request to other system documents using the **References** field, which could, for example, be a partner or a quotation or a disputed invoice.

6. Click **Send** to send the request to the intended recipient – that's yourself in this case. Then click **MAIN MENU** to return to the original screen.

The screenshot shows the OpenERP web interface with the Requests module open. The top navigation bar includes File, Edit, View, History, Bookmarks, Tools, Help, and a logo for OpenERP. The main menu bar has MAIN MENU, SHORTCUTS, and Modules selected. The Requests tab is active. The main content area shows a message entry form. The 'From' field is set to 'Administrator', and the 'To' field is also 'Administrator'. The 'Subject' field contains 'How are things?'. The 'Request' text area contains the message 'I just wanted to know if you're doing Ok with the new system.'. Below this is a 'Trigger Date' input field and a 'Send' button. A 'References' section follows, containing fields for 'Partner Ref.', 'Document Ref 1', and 'Document Ref 2', each with a dropdown and a search icon. At the bottom right, there are 'Done' and '800x600' buttons.

Figure 2.2: *Creating a new request*

To check your requests:

1. Click on the link to the right of the **Requests** label to open a list of your requests. (It's possible that you'll still see the statement **No Requests** because this information is updated periodically rather than instantly.) The list of requests then opens and you can see the requests you've been sent there.
2. Click the **Edit** icon, represented by a pencil, at the right hand end of the request line. That opens the request in edit mode.
3. You can then click the **Reply** button and make your response in the **Request** field that appears in place of the original message.
4. Click **Send** to save your response and send it to the original sender.



### Requests vs. email

The advantage of an Open ERP request compared with a set of emails about one thread of discussion is that a request contains all of the conversation in one place. You can easily monitor a whole discussion with the appropriate documents attached, and quickly review a list of incomplete discussions with the history within each request.

Look at the request and its history, then close it.

1. Click on the **History** tab in the **Request** form to see the original request and all of the responses. By clicking on each line you could get more information on each element.
2. Return to the first tab, **Request** and click **End of Request** to set it to `closed`. This then appears greyed out.

The request is no longer active. It's not visible to searches and won't appear in your list of waiting requests.



### Trigger dates

You can send a request with a future date. This request won't appear in the recipient's waiting list until the indicated date. This mechanism is very useful for setting up alerts before an important event.

## 2.2.2 Configuring Users

The database you created contains minimal functionality but can be extended to include all of the potential functionality available to Open ERP. About the only functions actually available in this minimal database are Partners and Currencies – and these only because the definition of your main company required this. And because you chose to include demonstration data, both Partners and Currencies were installed with some samples. Because you logged in as Administrator, you have all the access you need to configure users. Click *Administration → Users → Users* to display the list of users defined in the system. A second user, Demo User, is also present in the system as part of the demonstration data. Click the Demo User name to open a non-editable form on that user.

Click the **Security** tab to see that the demo user is a member of only the Employee group, has no roles and is subject to no specialized rules. The admin user is different, as you can see if you follow the same sequence to review its definition. It's a member of the admin group, which gives it more advanced rights to configure new users.



### Roles, Groups and Users

Users and groups provide the structure for specifying access rights to different documents. Their setup answers the question “Who has access to what?”

Roles are used in business processes for permitting or blocking certain steps in the workflow of a given document. For example you can assign the role of approving an invoice. Roles answer the question “Who should do what?”

Click *Administration → Users → Groups* below the main menu to open the list of groups defined in the system. If you open the form view of the `admin` group by clicking its name in the list, the first tab give you the list of all the users who belong to this group.

Click the Security tab and it gives you details of the access rights for that group. These are detailed later in *Configuration & Administration* (which can be found in a companion volume to this book and in the online book), but you can already see there further up in the window, the list of menus reserved for the `admin` group. By convention, the `admin` in Open ERP has rights of access to the *Configuration* menu in each section. So `Partners / Configuration` is found in the list of access rights but `Partners` isn't found there because it's accessible to all users.

You can create some new users to integrate them into the system. Assign them to predefined groups to grant them certain access rights. Then try their access rights when you login as these users. Management defines these access rights as described in *Configuration & Administration* (which can be found in a companion volume to this book and in the online book).



### Changes to default access rights

New versions of Open ERP differ from earlier versions of Open ERP and Tiny ERP in this area: many groups have been predefined and access to many of the menus and objects are keyed to these groups by default. This is quite a contrast to the rather liberal approach in 4.2.2 and before, where access rights could be defined but were not activated by default.

## 2.2.3 Managing partners

In Open ERP, a partner represents an entity that you do business with. That can be a prospect, a customer, a supplier, or even an employee of your company.

### List of partners

Click *Partners → Partners* in the main menu to open the list of partners. Then click the name of the first partner to get hold of the details – a form appears with several tabs on it:

- the **General** tab contains the main information about the company, such as its corporate name, its primary language, your different contacts at that partner and the categories it belongs to.

- the **Sales & Purchases** tab contains information that's slightly less immediate.
- the *History* tab contains the history of all the events that the partner has been involved in. These events are created automatically by different system documents: invoices, orders, support requests and so on, from a list that can be configured in the system. These give you a rapid view of the partner's history on a single screen.
- the *Notes* tab is an area for free text notes.

To the right of the form is a list of Reports, Actions and Links related to a partner. Click some of them to get a feel for their use.

The screenshot shows the OpenERP web client interface for managing partners. The top navigation bar includes File, Edit, View, History, Bookmarks, Tools, Help, and a user dropdown (Welcome Administrator). The main menu bar has MAIN MENU, SHORTCUTS, and MODULES. The current module is Partners, indicated by a blue bar at the top. Below it, there are tabs for General, Sales & Purchases, History, and Notes. The main content area displays a partner record for 'Agrolait'. The record includes fields for Name (Agrolait), Code, Customer (checkbox checked), Supplier (checkbox uncheckable), Title, Language, and various contact details like Street, Zip, Country, Phone, and Mobile. Below the record, there is a section for 'Partner Contacts' with similar fields. On the right side of the interface, there is a sidebar titled 'REPORTS' which lists 'Labels', 'ACTIONS' which lists 'Company Architecture', 'Send SMS', and 'Mass Mailing', and 'LINKS' which lists 'Events'. At the bottom of the page, there is a footer with copyright information and a 'Done' button.

Figure 2.3: *Partner form*

💡

### Partner Categories

Partner Categories enable you to segment different partners according to their relation with you (client, prospect, supplier, and so on). A partner can belong to several categories – for example it may be both a customer and supplier at the same time.

But there are also Customer, Supplier and Rental checkboxes on the partner form, which are different. These checkboxes are designed to enable Open ERP to quickly select what should appear on some of the system drop-down selection boxes. They, too, need to be set correctly.

## Partner Categories

You can list your partners by category using the menu *Partners* → *Partners by category*. This opens a hierarchical structure of categories where each category can be divided into sub-categories. Click a category to obtain a list of partners in that category. For example, click all of the partners in the category **Supplier** or **Supplier** → **Components Supplier**. You'll see that if a company is in a subcategory (such as **Components Supplier**) then it will also show up when you click the parent category (such as **Supplier**).

The screenshot shows the OpenERP web interface. At the top, there's a navigation bar with links for File, Edit, View, History, Bookmarks, Tools, and Help. The OpenERP logo is in the center, followed by 'Welcome Administrator' and links for Home, Preferences, About, and Logout. A message 'Requests: No request' is displayed. Below the header is a toolbar with MAIN MENU, SHORTCUTS, Modules, and an [ADD] button. The main content area is titled 'Partners by Categories' and shows a hierarchical tree view:

- Category Name
  - ▽ Customer
    - ▽ OpenERP Partners
    - Basic Partner
    - Gold Partner
    - Starter Partner
  - Openstuff.net
  - ▷ Segmentation
  - Prospect
  - ▽ Supplier
    - Components Supplier
    - Open Source Service Company
    - Textile Suppliers

At the bottom of the page, there's a copyright notice: "Copyright © 2007-TODAY Tiny ERP Pvt. Ltd. All Rights Reserved. More Information on <http://openerp.com>. The web client is developed by Axelor (<http://axelor.com>) and Tiny (<http://tiny.be>). Running Server: socket://localhost:8070 - database: openerp\_ch02".

Figure 2.4: *Categories of partner in a hierarchical structure, for example Customer, Prospect, Supplier*

The administrator can define new categories. So you'll create a new category and link it to a partner:

1. Use *Partners* → *Configuration* → *Partner Categories* to reach a list of the same categories as above but in a list view rather than a hierarchical tree structure.
2. Click **New** to open an empty form for creating a new category
3. Enter **My Prospects** in the field **Name of Category**. Then click on the **Search** icon to the right of the **Parent Category** field and select **Prospect** in the list that appears.
4. Then save your new category using the **Save** button.

**Required Fields**

Fields colored blue are required. If you try to save the form while any of these fields are empty the field turns red to indicate that there's a problem. It's impossible to save the form until you've completed every required field.

You can review your new category structure using *Partners* → *Partners by category*. You should see the new structure of Prospects / My Prospects there.

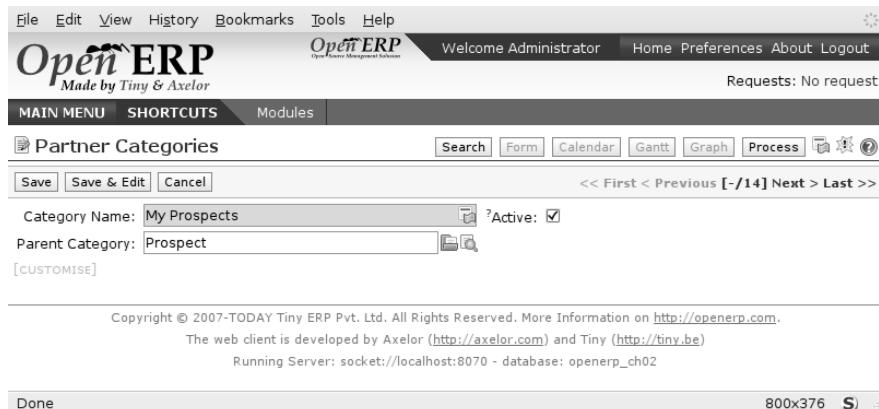


Figure 2.5: Creating a new partner category

To create a new partner and link it to this new category open a new partner form to modify it.

1. In the **General** tab, type New Partner into the **Name** field.
2. Then click on the search icon to the right of the **Categories** field and select your new category from the list that appears: Prospect / My Prospects
3. Then save your partner by clicking **Save** The partner now belongs in the category Prospect / My prospects .
4. Monitor your modification in the menu *Partners* → *Partners by category*. Select the category **My Prospect**. The list of partners opens and you'll find your new partner there in that list.



#### Searching for documents

If you need to search through a long list of partners it's best to use the available search criteria rather than scroll through the whole partner list. It's a habit that'll save you a lot of time in the long run as you search for all kinds of documents.



### Example Categories of partners

A partner can be assigned to several categories. These enable you to create alternative classifications as necessary, usually in a hierarchical form.

Here are some structures that are often used:

- geographical locations,
- interest in certain product lines,
- subscriptions to newsletters,
- type of industry.

## 2.3 Installing new functionality

All of Open ERP's functionality is contained in its many and various modules. Many of these, the core modules, are automatically loaded during the initial installation of the system and can be updated online later. Although they're mostly not installed in your database at the outset, they're available on your computer for immediate installation. Additional modules can also be loaded online from the official Open ERP site <http://openerp.com>. These modules are inactive when they're loaded into the system, and can then be installed in a separate step.

You'll start by checking if there are any updates available online that apply to your initial installation. Then you'll install a CRM module to complete your existing database.

### 2.3.1 Updating the Modules list

Click *Administration → Modules Management → Update Modules List* to start the updating tool. The **Scan for new modules** window opens showing the addresses that Open ERP will look in for downloading new modules (known as the repositories), and updating existing ones.



### Remote module repositories

If the repository list doesn't reflect your needs then you can edit it from *Administration → Modules Management → Repository List*. There you can link to new repositories by adding their URLs and disable listed ones by unchecking their **Active** checkbox. If you're not connected to the Internet then you probably want to disable anything there.

Your Open ERP installation must be configured with its addons directory as writable for you to be able to download anything at all. If it hasn't been, then you may need the assistance of a systems administrator to change your server's settings so that you can install new modules.

Click **Check New Modules** to start the download from the specified locations. When it's complete you'll see a **New Modules** window indicating how many new modules were downloaded and how many existing modules were updated. Click **OK** to return to the updated list.

It won't matter in this chapter if you can't download anything, but some of the later chapters refer to modules that aren't part of the core installation and have to be obtained from a remote repository.



### Modules

All the modules available on your computer can be found in the addons directory of your Open ERP server. Each module there is represented by a directory carrying the name of the module or by a file with the module name and .zip appended to it. The file is in ZIP archive format and replicates the directory structure of unzipped modules.



### Searching through the whole list

The list of modules shows only the first available modules. In the web client you can search or follow the First / Previous / Next / Last links to get to any point in the whole list, and you can change the number of entries listed by clicking the row number indicators between **Previous** and **Next** and selecting a different number from the default of 20.

If you use the GTK client you can search, as you would with the web client, or use the + icon to the top left of the window to change the number of entries returned by the search from its default limit of 80, or its default offset of 0 (starting at the first entry) in the whole list.

## 2.3.2 Installing a module

You'll now install a module named `product`, which will enable you to manage the company's products. This is part of the core installation, so you don't need to load anything to make this work, but isn't installed in the Minimal Profile.

Open the list of uninstalled modules from *Administration* → *Modules Management* → *Modules* → *Uninstalled modules*. Search for the module by entering the name *product* in the search screen then clicking it in the list that appears below it to open it. The form that describes the module gives you useful information such as its version number, its status and a review of its functionality. Click **Schedule for Installation** and the status of the module changes to **To be installed**.

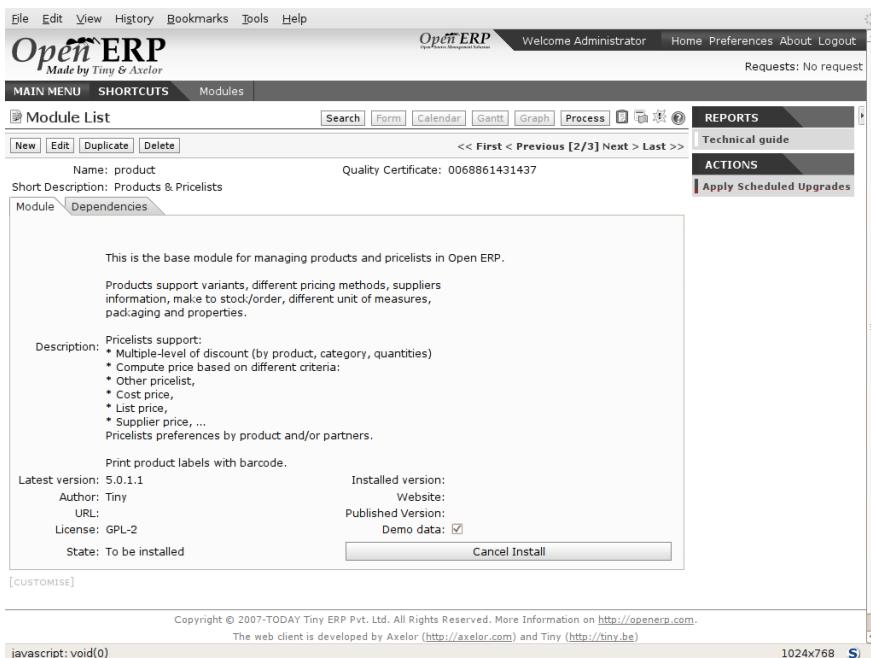


Figure 2.6: Installation of the product module



### Technical Guide

If you select a module in any of the module lists by clicking on a module line and then on **Technical Guide** at the top right of the window, Open ERP produces a technical report on that module. It's helpful only if the module is installed, so the menu *Administration* → *Modules Management* → *Modules* → *Installed Modules* produces the most fruitful list.

This report comprises a list of all the objects and all the fields along with their descriptions. The report adapts to your system and reflects any modifications you've made and all the other modules you've installed.

Click **Apply Scheduled Upgrades** then **Start Upgrade** on the **System Upgrade** form that appears. Close the window when the operation has completed. Return to the main menu you'll see the new menu *Products* has become available.



### Refreshing the menu in the GTK client

After an update in the GTK client you'll have to open a new menu to refresh the content – otherwise you won't see the new menu item. To do that use the window menu *Form → Refresh/Cancel*.

### 2.3.3 Installing a module with its dependencies

Now install the CRM module (Customer Relationship Management) using the same process as before. Start from *Administration → Modules Management → Modules → Uninstalled modules*.

1. Get the list of modules to install, and search for the `crm` module in that list.
2. Schedule the module for installation by clicking **Schedule for Installation**.
3. Do the same for `account`.
4. Click **Apply Scheduled Upgrades** on the action toolbar to the right.
5. Click **Start Upgrade** to install both modules.
6. After a wait, when the installation is complete, click **Start Configuration**.
7. Accept the defaults for accounts setup and select `None` for the chart of accounts.
8. You'll see details of all the features installed by the modules on a new **Features** tab on the module form.

When you return to the main menu you'll find the new customer relationship management menu *CRM & SRM*. You'll also see all the accounting functions that are now available in the *Financial Management* menu.

There is no particular relationship between the modules installed and the menus added. Most of the core modules add complete menus but some also add submenus to menus already in the system. Other modules add menus and submenus as they need. Modules can also add additional fields to existing forms, or simply additional demonstration data or some settings specific to a given requirement.



#### Dependencies between modules

The module form shows two tabs before it's installed. The first tab gives basic information about the module and the second gives a list of modules that this module depends on. So when you install a module, Open ERP automatically selects all the necessary dependencies to install this module.

That's also how you develop the profile modules: they simply define a list of modules that you want in your profile as a set of dependencies.

Although you can install a module and all its dependencies at once, you can't remove them in one fell swoop – you'd have to uninstall module by module. Uninstalling is more complex than installing because you have to handle existing system data.



### Uninstalling modules

Although it works quite well, uninstalling modules isn't perfect in Open ERP. It's not guaranteed to return the system exactly to the state it was in before installation.

So it's recommended that you make a backup of the database before installing your new modules so that you can test the new modules and decide whether they're suitable or not. If they're not then you can return to your backup. If they are, then you'll probably still reinstall the modules on your backup so that you don't have to delete all your test data.

If you wanted to uninstall you would use the menu *Administration → Modules Management → Modules → Installed Modules* and then uninstall them in the inverse order of their dependencies: crm, account, product.

## 2.3.4 Installing additional functionality

To discover the full range of Open ERP's possibilities you can install many additional modules. Installing them with their demonstration data provides a convenient way of exploring the whole core system. When you build on the `openerp_ch02` database you'll automatically include demonstration data because you checked the **Load Demonstration Data** checkbox when you originally created the database. Click *Administration → Modules Management → Modules → Uninstalled modules* to give you an overview of all of the modules available for installation.

To test several modules you won't have to install them all one by one. You can use the dependencies between modules to load several at once. For example, try loading the following modules:

- `profile_accounting`,
- `profile_crm`,
- `profile_manufacturing`,
- `profile_service`.

To find these quickly, enter the word `profile` in the **Name** field of the search form and click **Filter** to search for the relevant modules. Then install them one by one or all at once.

As you update you'll see thirty or so modules to be installed. Move on from the **System upgrade done** form by clicking **Start configuration** and then accepting the default crm configuration and picking configuration in turn.

Finally install the additional modules **Analytic Accounting** and **Document Management** when you're offered that configuration option. Don't install any more - you now have quite a fully-loaded system to look at.

Click **Home** and you'll be returned to a dashboard, not the main menu you had before. To get to the main menu, use the **MAIN MENU** link.

## 2.4 Guided Tour of Open ERP

You'll now explore the database `openerp_ch02` with these profile modules installed to give you an insight into the coverage of the core Open ERP software.



### Translating new modules

When you've installed a new module and are using additional languages to English you have to reload the translation file. New terms introduced in these modules aren't translated by default. To do this use *Administration → Translations → Load an Official Translation*.

Depending on the user you're connected as the page appears differently from the Main Menu that showed before. Using the installation sequence above, certain dashboards may be assigned as various users' home pages. They show a summary of the information required to start the day effectively. A project dashboard might contains:

- a list of the next tasks to carry out,
- a list of the next deadlines,
- public notes about projects,
- a planning chart of hours required,
- the timesheet.

Each of the lists can be reordered by clicking on the heading of a column – first in ascending then in descending order as you click repeatedly. To get more information about any particular entry click on the name in the first column, or if you want to show a particular panel click **Zoom** above it.

Users' home pages are automatically reassigned during the creation or upgrading of a database. It's usual to assign a dashboard to someone's home page but any Open ERP screen can be assigned to the home page of any user.



### Creating shortcuts

Each user has access to many menu items throughout all of the available menu hierarchy. But in general an employee uses only a small part of the system's functions.

So you can define shortcuts for the most-used menus. These shortcuts are personal for each user. To create a new shortcut open the select menu and click on the **Add** link to the far right of **SHORTCUTS**.

To change or replace a link click **SHORTCUTS**. Open ERP then opens a list of editable shortcuts.

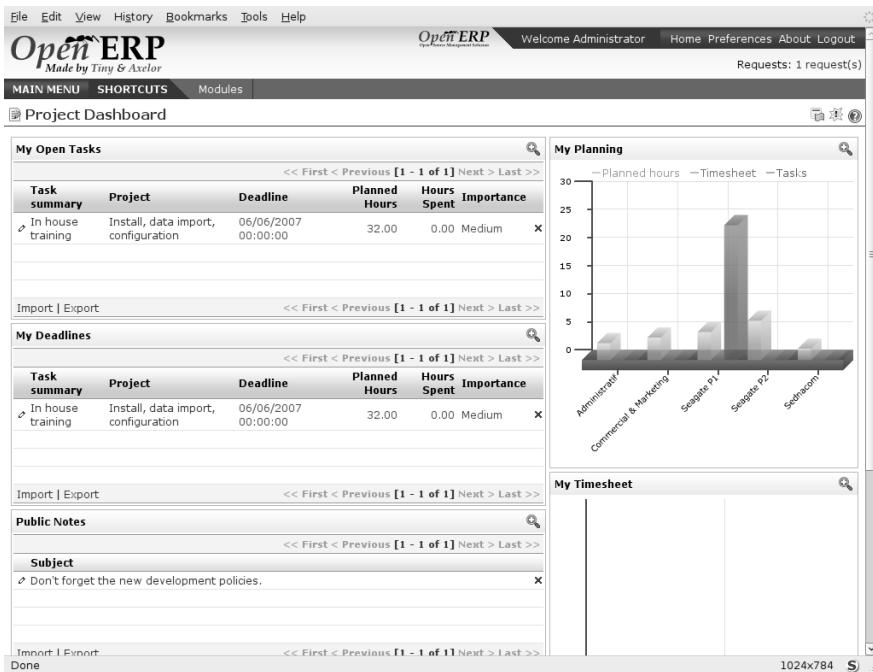


Figure 2.7: Project Dashboard

The following sections present an overview of the main functions of Open ERP. Some areas are covered in more detail in the following chapters of this book and you'll find many other functions available in the optional modules. Functions are presented in the order that they appear on the main menu.

## 2.4.1 Partners

To familiarize yourself with Open ERP's interface, you'll start work with information about partners. Clicking **Partners → Partners** brings up a list of partners that were automatically loaded when you created the database with **Load Demonstration Data** checked.

### Search for a partner

Above the partner list you'll see a search form that enables you to quickly filter the partners. Two tabs are available for searching – **Basic Search** and **Advanced Search**. The latter simply shows more fields to narrow your selection.

If you've applied no filter, the list shows every partner in the system. For space reasons this list shows only the first few partners. If you want to display other records you can search for them or navigate through the whole list using the **First**, **Previous**, **Next**, **Last** arrows.

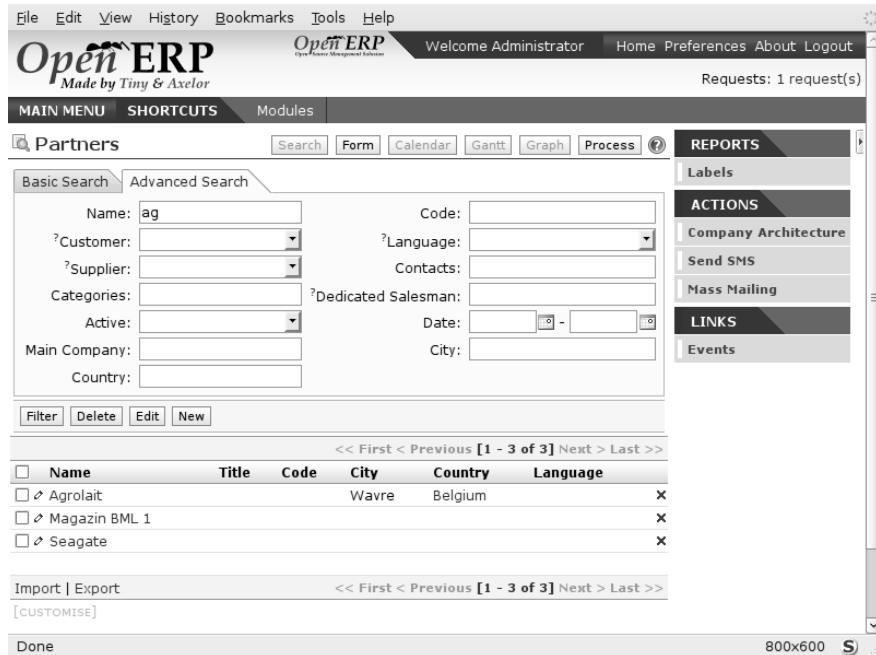


Figure 2.8: Standard partner search

### List limits

By default the list in the GTK client shows only the first 80 records, to avoid overloading the network and the server.

But you can change that limit by clicking the + icon to the left of the search criteria, and you can change the offset so that it starts further down the whole list than the first entry.

Similarly the list in the web client shows only the first 20, 40, 60, 80 or 100 records.

The actual number can be switched by clicking on the number and selecting one of the other limits, but you can't select any other limit (so, unlike the GTK client you can't select hundreds or thousands).

If you click on the name of a partner the form view corresponding to that partner opens in Read-Only mode. In the list you could alternatively click the pencil icon to open the same form in Edit mode. Once you have a form you can toggle between the two modes by clicking **Save** or **Cancel** when in Edit mode and **Edit** when in Read-Only mode.

When you're in Read-Only mode you can navigate through the whole list you selected, as though you were in the List view. In Read-Only mode you can also click **Search** to see the form in List view again.

## Partner form

The partner form contains several tabs, all referring to the current record:

- **General**,
- **Suppliers & Customers**,
- **History**,
- **Notes**.

The fields in a tab aren't all of the same type – some (such as **Name**) contain free text, some (such as the **Language**) enable you to select a value from a list of options, others give you a view of another object (such as **Partner Contacts** – because a partner can have several contacts) or a list of link to another object (such as **Categories**). There are checkboxes (such as the **Active** field in the **Suppliers & Customers** tab), numeric fields (such as **Credit Limit**) and date fields (such as **Date**).

The **History** tab gives a quick overview of things that have happened to the partner – an overview of useful information such as orders, open invoices and support requests. Events are generated automatically by Open ERP from changes in other documents that refer to this partner.

It's possible to add events manually, such as a note recording a phone call. To add a new event click **Create new record**. to the right of the **Partner Events** field. That opens a new **Partner Events** dialog box enabling an event to be created and added to the current partner.

## Actions possible on a partner

To the right of the partner form is a toolbar containing a list of possible **Reports**, **Actions**, and quick **Links** about the partner displayed in the form.

You can generate PDF documents about the selected object (or, in list view, about one or more selected objects) using certain buttons in the **Reports** section of the toolbar:

- **Labels** : print address labels for the selected partners,

Certain actions can be started by the following buttons in the **Actions** section of the toolbar:

- **Company Architecture** : opens a window showing the partners and their children in a hierarchical structure.
- **Send SMS** : enables you to send an SMS to selected partners. This system uses the bulk SMS facilities of the Clickatell® company <http://clickatell.com>.
- **Mass Mailing** : enables you to send an email to a selection of partners.



### Reports, Actions and Links in the GTK client

When you're viewing a form in the GTK client, the buttons to the right of the form are shortcuts to the same Reports, Actions and Links as described in the text. When you're viewing a list (such as the partner list) those buttons aren't available to you. Instead, you can reach Reports and Actions through two of the buttons in the toolbar at the top of the list – Print and Action.

Partners are used throughout the Open ERP system in other documents. For example, the menu *Sales Management* → *Sales Orders* → *All Sales Orders* brings up all the Sales Orders in list view. Click the name of a partner rather than the order number on one of those lines and you'll get the Partner form rather than the Sales Order form.



### Right clicks and shortcuts

In the GTK client you don't get hyperlinks to other document types. Instead, you can right-click in a list view to show the linked fields (that is fields having a link to other forms) on that line.

In the web client you'll see hyperlink shortcuts on several of the fields on a form that's in Read- Only mode, so that you can move onto the form for those entries. When the web form is in Edit mode, you can instead hold down the control button on the keyboard and right-click with the mouse button in the field, to get all of the linked fields in a pop-up menu just as you would with the GTK client.

You can quickly try this out by going to any one of the sales orders in *Sales Management* → *Sales Order* → *All Sales Orders* and seeing what you can reach from the **Customer** field on that sales order form using either the web client with the form in both read-only and in edit mode, or with the GTK client.

Before moving on to the next module, take a quick look into the *Partners* → *Configuration* menu, particularly *Partner Categories* and *Localisation* menus. They contain some of the demonstration data that you installed when you created the database.

## 2.4.2 Financial Management

The chapters in *General Accounting* (which can be found in a companion volume to this book and in the online book) in this book are dedicated to general and analytic accounting. A brief overview of the functions provided by these modules is given here as an introduction.

Accounting is totally integrated into all of the company's functions, whether it's general, analytic, budgetary or auxiliary accounting. Open ERP's accounting function is double-entry and supports multiple company divisions and multiple companies, as well as multiple currencies and languages.

Accounting that's integrated throughout all of the company's processes greatly simplifies the work of entering accounting data, because most of the entries are generated automatically while other documents are being processed. You can avoid entering data twice in Open ERP, which is commonly a source of errors and delays.

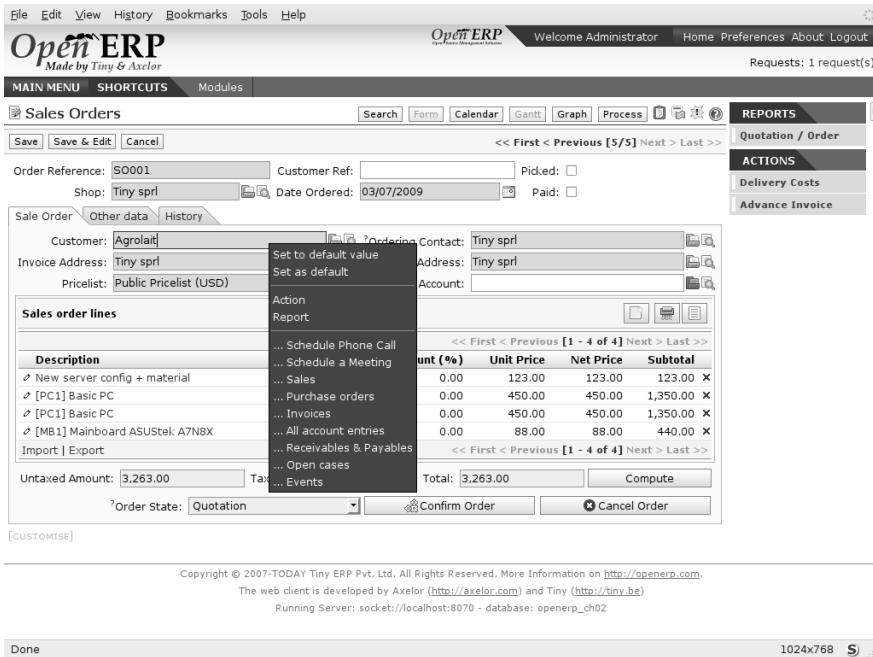


Figure 2.9: *Links for a partner appear in an order form*

So Open ERP's accounting isn't just for financial reporting – it's also the anchorpoint for many of a company's management processes. For example if one of your accountants puts a customer on credit hold then that will immediately block any other action related to that company's credit (such as a sale or a delivery).

Open ERP also provides integrated analytical accounting, which enables management by business activity or project and provides very detailed levels of analysis. You can control your operations based on business management needs, rather than on the charts of accounts that generally meet only statutory requirements.

### 2.4.3 Dashboards

Dashboards give you an overview of all the information that's important to you on a single page. The *Dashboards* menu gives you access to predefined boards for *Financial Management*, *Manufacturing* and *Project Management*.



### Dashboards

Unlike most other ERP systems and classic statistically-based systems, Open ERP can provide dashboards to all of the system's users, and not just to a select few such as directors and accountants.

Users can each have their own dashboard, adapted to their needs, to enable them to manage their own work effectively. For example a developer using the **Project Dashboard** can see such information as a list of the next tasks, task completion history and an analysis of the state of progress of the relevant projects.

Dashboards are dynamic, which lets you navigate easily around the whole information base. Using the icons above a graph, for example, you can filter the data or zoom into the graph. You can click on any element of the list to get detailed statistics on the selected element.

Dashboards are adaptable to the needs of each user and each company.



### Construction of dashboards

Open ERP contains a dashboard editor. It lets you construct your own dashboard to fit your specific needs using only a few clicks.

## 2.4.4 Products

In Open ERP, product means a raw material, a stockable product, a consumable or a service. You can work with whole products or with templates that separate the definition of products and variants.

For example if you sell t-shirts in different sizes and colors:

- the product template is the “T-shirt” which contains information common to all sizes and all colors,
- the variants are “Size:S” and “Color:Red”, which define the parameters for that size and color,
- the final product is thus the combination of the two – t-shirt in size S and color Red.

The value of this approach for some sectors is that you can just define a template in detail and all of its available variants briefly rather than every item as an entire product.



### Example Product templates and variants

A product can be defined as a whole or as a product template and several variants. The variants can be in one or several dimensions, depending on the installed modules.

For example, if you work in textiles, the variants on the product template for “T-shirt” are:

- Size (S, M, L, XL, XXL),
- Colour (white, grey, black, red),
- Quality of Cloth (125g/m<sup>2</sup>, 150g/m<sup>2</sup>, 160g/m<sup>2</sup>, 180g/m<sup>2</sup>),
- Collar (V, Round).

This separation of variant types requires the optional module `product_variant_multi`. Using it means that you can avoid an explosion in the number of products to manage in the database. If you take the example above it's easier to manage a template with 15 variants in four different types than 160 completely different products. This module is available in the `addons-extra` list (it had not been updated, at the time of writing, to work in release 5.0 of Open ERP).

The *Products* menu gives you access to the definition of products and their constituent templates and variants, and to price lists.



### Consumables

In Open ERP a consumable is a physical product which is treated like a stockable product except that stock management isn't taken into account by the system. You could buy it, deliver it or produce it but Open ERP will always assume that there's enough of it in stock. It never triggers a procurement exception.

Open a product form to see the information that describes it. Several different types of product can be found in the demonstration data, giving quite a good overview of the possible options.

Price lists (*Products → Pricelists*) determine the purchase and selling prices and adjustments derived from the use of different currencies. The *Default Purchase Pricelist* uses the product's **Cost** field to base a Purchase price on. The *Default Sale Pricelist* uses the product's **List Price** field to base a Sales price on when issuing a quote.

Price lists are extremely flexible and enable you to put a whole price management policy in place. They're composed of simple rules that enable you to build up a rule set for most complex situations: multiple discounts, selling prices based on purchase prices, price reductions, promotions on whole product ranges and so on.

You can find many optional modules to extend product functionality through the Open ERP website, such as:

- **membership** : for managing the subscriptions of members of a company,

- `product_electronic` : for managing electronic products,
- `product_extended` : for managing production costs,
- `product_expiry` : for agro-food products where items must be retired after a certain period,
- `product_lot_foundry` : for managing forged metal products.

## 2.4.5 Human Resources

Open ERP's Human Resources Management modules provide such functionality as:

- management of staff and the holiday calendar,
- management of employment contracts,
- benefits management,
- management of holiday and sickness breaks,
- managing claims processes,
- management of staff performance,
- management of skills and competencies.

Most of these functions are provided from optional modules whose name starts with `hr_` rather than the core `hr` module, but they're all loaded into the main *Human Resources* menu.

The different issues are handled in detail in the fourth part of this book *Effective Management of Operations* (*which can be found in a companion volume to this book and in the online book*), dedicated to internal organization and to the management of a services business.

## 2.4.6 Stock Management

The various sub-menus under *Stock Management* together provide operations you need to manage stock. You can:

- define your warehouses and structure them around locations and layouts of your choosing,
- manage inventory rotation and stock levels,
- execute packing orders generated by the system,
- execute deliveries with delivery notes and calculate delivery charges,
- manage lots and serial numbers for traceability,
- calculate theoretical stock levels and automate stock valuation,
- create rules for automatic stock replenishment.

Packing orders and deliveries are usually defined automatically by calculating requirements based on sales. Stores staff use picking lists generated by Open ERP, produced automatically in order of priority.

Stock management is, like accounting, double-entry. So stocks don't appear and vanish magically within a warehouse, they just get moved from place to place. And, just like accounting, such a double-entry system gives you big advantages when you come to audit stock because each missing item has a counterpart somewhere.

Most stock management software is limited to generating lists of products in warehouses. Because of its double-entry system Open ERP automatically manages customer and suppliers stocks as well, which has many advantages: complete traceability from supplier to customer, management of consigned stock, and analysis of counterpart stock moves.

Furthermore, just like accounts, stock locations are hierarchical, so you can carry out analyses at various levels of detail.

#### 2.4.7 Customer and Supplier Relationship Management

Open ERP provides many tools for managing relationships with partners. These are available through the *CRM & SRM* menu.



##### CRM & SRM

CRM stands for Customer Relationship Management, a standard term for systems that manage client and customer relations. SRM stands for Supplier Relationship Management, and is commonly used for functions that manage your communications with your suppliers.

The concept of a “case” is used to handle arbitrary different types of relationship, each derived from a generic method. You can use it for all types of communication such as order enquiries, quality problems, management of a call center, record tracking, support requests and job offers.

Open ERP ensures that each case is handled effectively by the system's users, customers and suppliers. It can automatically reassign a case, track it for the new owner, send reminders by email and raise other Open ERP documentation and processes.

All operations are archived, and an email gateway lets you update a case automatically from emails sent and received. A system of rules enables you to set up actions that can automatically improve your process quality by ensuring that open cases never escape attention.

As well as those functions, you've got tools to improve the productivity of all staff in their daily work:

- a document editor that interfaces with OpenOffice.org,
- interfaces to synchronize your contacts and Outlook Calendar with Open ERP,
- an Outlook plugin enabling you to automatically store your emails and their attachments in a Document Management System integrated with Open ERP,
- a portal for your suppliers and customers that enables them to access certain data on your system.

You can implement a continuous improvement policy for all of your services, by using some of the statistical tools in Open ERP to analyze the different communications with your partners. With these, you can execute a real improvement policy to manage your service quality.

The management of customer relationships is detailed in the second section of this book (see *Managing Customer Relationships* (which can be found in a companion volume to this book and in the online book)).

## 2.4.8 Purchase Management

Purchase management enables you to track your suppliers' price quotations and convert them into Purchase Orders as you require. Open ERP has several methods of monitoring invoices and tracking the receipt of ordered goods.

You can handle partial deliveries in Open ERP, so you can keep track of items that are still to be delivered on your orders, and you can issue reminders automatically.

Open ERP's replenishment management rules enable the system to generate draft purchase orders automatically, or you can configure it to run a lean process driven entirely by current production needs.

## 2.4.9 Project Management

Open ERP's project management tools enable you to handle the definition of tasks and the specification of requirements for those tasks, efficient allocation of resources to the requirements, project planning, scheduling and automatic communication with partners.

All projects are hierarchically structured. You can review all of the projects from the menu *Project Management → All Projects*. To view a project's plans, select a project line and then click **Print**. Then select **Gantt diagram** to obtain a graphical representation of the plan.

You can run projects related to Services or Support, Production or Development – it's a universal module for all enterprise needs.

Project Management is described in *Internal Organization and Project Management* (which can be found in a companion volume to this book and in the online book).

## 2.4.10 Manufacturing

Open ERP's production management capabilities enable companies to plan, automate, and track manufacturing and product assembly. Open ERP supports multi-level bills of materials and lets you substitute subassemblies dynamically, at the time of sales ordering. You can create virtual sub- assemblies for reuse on several products with phantom bills of materials.

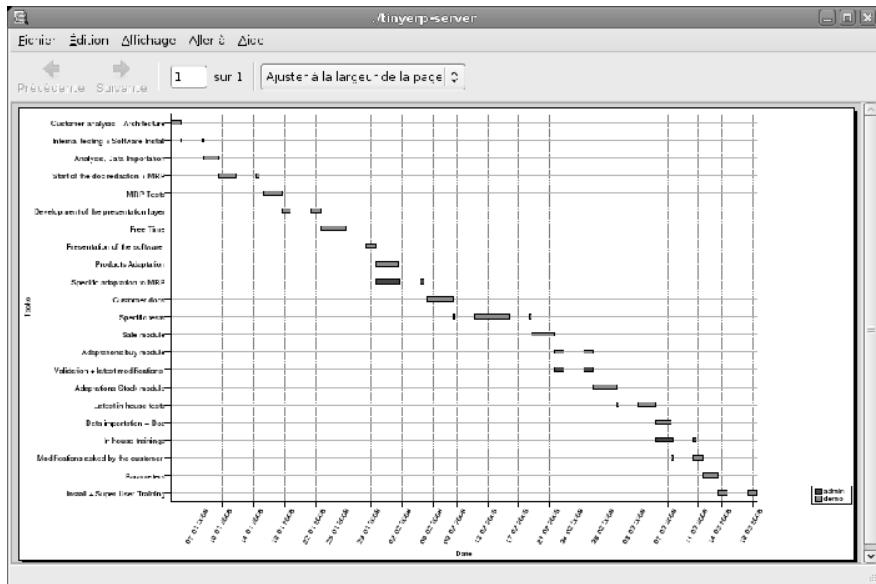


Figure 2.10: *Project Planning*



### BoMs, routing, workcenters

These documents describe the materials that make up a larger assembly. They're commonly called Bills of Materials or BoMs.

They're linked to routings which list the operations needed to carry out the manufacture or assembly of the product.

Each operation is carried out at a workcenter, which can be a machine, a tool, or a person.

Production orders based on your company's requirements are scheduled automatically by the system, but you can also run the schedulers manually whenever you want. Orders are worked out by calculating the requirements from sales, through bills of materials, taking current inventory into account. The production schedule is also generated from the various lead times defined throughout, using the same route.

The demonstration data contains a list of products and raw materials with various classifications and ranges. You can test the system using this data.

## 2.4.11 Sales Management

The *Sales Management* menu gives you roughly the same functionality as the *Purchase Management* menu – the ability to create new orders and to review the existing orders in their various states – but there are important differences in the workflows.

Confirmation of an order triggers delivery of the goods, and invoicing timing is defined by a setting in each

individual order.

Delivery charges can be managed using a grid of tariffs for different carriers.

## 2.4.12 Document Management

Open ERP integrates a complete document management system that not only carried out the functions of a standard DMS, but also integrates with all of its system-generated documents such as Invoices and Quotations. What's more it keeps all of this synchronized.

## 2.4.13 Process Management

Many documents have a workflow of their own, and also take part in cross-functional processes. Take a document that could be expected to have a workflow, such as a Sales Order, and then click the **Process** button above its form to see the full process.

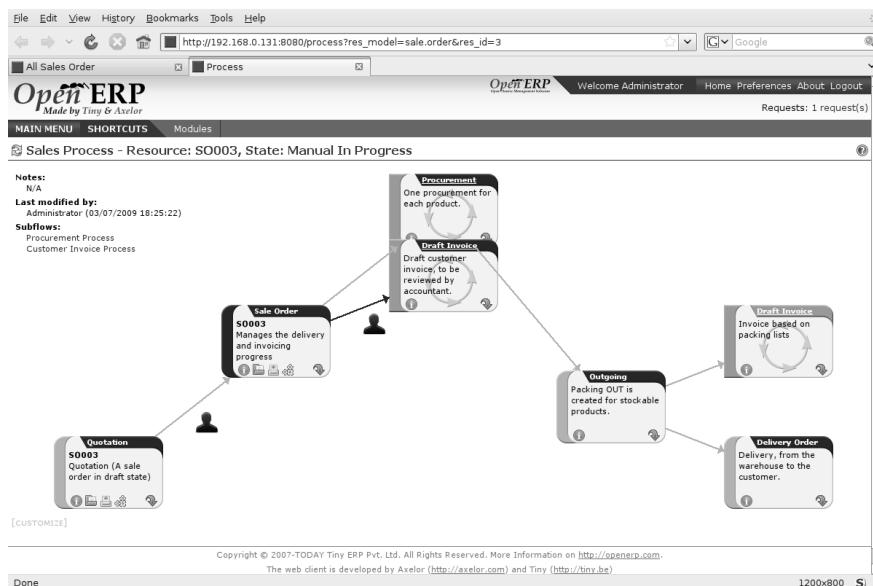


Figure 2.11: Process for a Sales Order

You can see the position of that particular document in its process, if you have selected a single document, by the solid bar on one of the process nodes. You also link to documents and menus for each of the stages.

There is a clear distinction between a cross-functional process (that is currently only shown in the web client) and the detailed document workflow (that is shown in both the web client from a process node, and the GTK client from the *Plugins > Execute a Plugin...* menu and clicking either the **Print Workflow** or the **Print Workflow (Complex)** option).

Alongside the document management system, the process visualization features make Open ERP far better for documentation than similar systems.

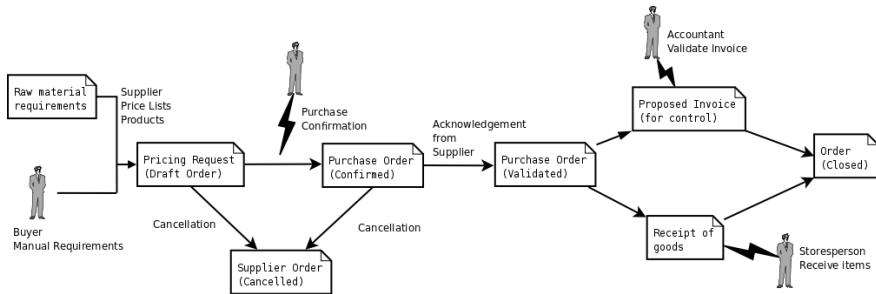


Figure 2.12: Workflow for a Purchase Order

#### 2.4.14 Other functions

You've been through a brisk, brief overview of many of the main functional areas of Open ERP. Some of these – a large proportion of the core modules – are treated in more detail in the following chapters.

You can use the menu *Administration* → *Modules Management* → *Modules* → *Uninstalled modules* to find the remaining modules that have been loaded into your installation but not yet installed in your database. Some modules have only minor side-effects to Open ERP (such as `base_iban`), some have quite extensive effects (such as the various charts of accounts), and some make fundamental additions (such as `multi_company`).

But there are now more than three hundred modules available. If you've connected to the Internet, and if your `addons` directory is writable as described at the beginning of this chapter, you can download new modules using the menu *Administration* → *Modules Management* → *Update Modules List*.

A brief description is available for each module, but the most thorough way of understanding their functionality is to install one and try it. So, pausing only to prepare another test database to try it out on, just download and install the modules that appear interesting.

## **Part II**

# **Managing Customer Relationships**

The Sales department is the engine of your whole company. Sales success drives staff motivation and your company's general dynamism, which in turn enables you to keep innovating and lay the foundations for future success.

The key to continued Sales success is effective Customer Relationship Management (most often known as CRM). Open ERP's CRM capabilities are flexible and highly developed to assist you in managing all aspects of both supplier and customer relationships. Analytic tools help you understand your performance drivers, and the automation of data and processes drives new levels of efficiency.

Open ERP can share information through its interfaces to the most common office applications, minimizing disruption to your operations when you first install it. Your staff can build on their previous productivity by continuing to use their email and office systems, now connected to Open ERP, transferring to the Open ERP interface only if they need to.



# Leads, Business Opportunities and Campaigns 3

This chapter introduces the pre-sales activities of managing leads and opportunities. You're introduced to a more complex set of relationships between partners and contacts than offered by the 'base' module, and shown how to use the company calendar. You'll finish by discussing how a call center might use the Open ERP system.

## 3.1 Managing Contacts

The standard way of representing partners and contacts throughout Open ERP and many other enterprise systems (such as phone contact applications) is having a partner with multiple contacts. *Partner* is the word for any entity that you do business with - supplier, customer, etc. This representation may not be flexible enough for some uses, so Open ERP provides an alternative, which is brought into the system by installing the `base_contact` module.

The two figures *Organizing Prospects* (which can be found in a companion volume to this book and in the online book) and *Organizing Prospects* (which can be found in a companion volume to this book and in the online book) show the structure of partners and contacts in the form of UML classes both with and without this `base_contact` module. For the non-programmer this diagram can be a bit of a brutal way of showing it, but it's the clearest way to illustrate the complexities that can be accomplished.

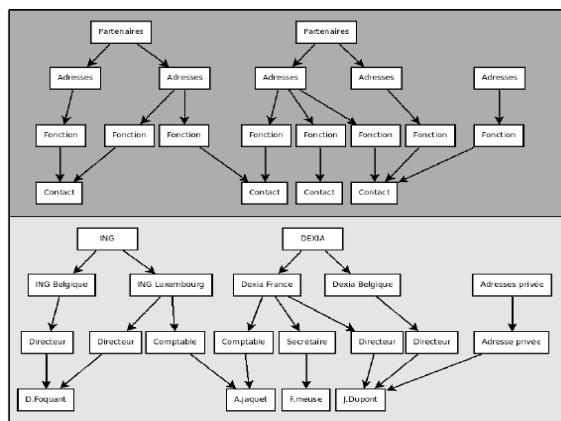


Figure 3.1: UML class diagram with `base_contact` module installed

A concrete example may illustrate this concept of multiple relationships between contacts and partners (companies) better. The figure *Organizing Prospects* (which can be found in a companion volume to this book and in the online book) shows two companies each having several addresses (places of business) and several contacts attached to these addresses.

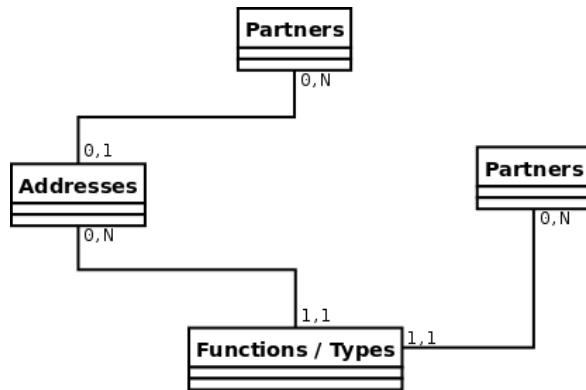


Figure 3.2: *UML class diagram with base\_contact module not installed*



Figure 3.3: *Example of a structure with management of partners and contacts*

In this example you'll find the following elements:

- The ABC bank has two places of business, represented by the addresses of ABC Belgium and ABC Luxembourg,
- The addresses of Dexey France and Dexey Belgium belong to the Dexey company,
- At the office of ABC Luxembourg, you have the contacts of the director (D Fogerty) and the accountant (A. Jacket),
- Mr Jacket holds the post of accountant for ABC Luxembourg and Dexey France,
- Mr J Smith is director of Dexey France and Dexey Belgium and we also have his private address attached to no partner.

Depending on your needs, Open ERP provides three menus to access the same information:

- List of partners: *Partners* → *Partners*,
- List of contacts: *Partners* → *Contacts*,
- List of posts held by contacts at partners: *Partners* → *Contact's Jobs*.

The three menus above are only three different views on the same data. If you correct a contact name on the contact form, this will be modified on all the posts occupied in the different companies.

The screen above represents a partner form. You can see several possible address there and a list of contacts above each address. For each contact you see a name, a function, a phone number and an email.

If you click on the line you can get more detail about the function (such as start date, end date, and fax) or enter into the contact form (such as personal phone, different posts occupied, and personal blog).

Partner management is found in the Open ERP base modules. To manage partner relations you have to install the CRM modules. Then start by installing a CRM profile and configure the system to meet your needs.

For this chapter you should start with a fresh database that includes demo data, using the **CRM profile** and no particular chart of accounts configured. Open ERP's modularity enables you to install only the CRM module if your requirements are limited to customer relationships.

Once the database is installed, Open ERP suggests that you configure it using a series of questions:

- Creating users: click **Skip**,
- Simplified or Extended mode: select simplified and click **Ok**,
- Select the CRM functionality to install.



#### The CRM configuration module

The pre-configuration of the management of customer relations to generate prospects, opportunities, and phone calls isn't supplied by the `crm` module itself but by the `crm_configuration` module.

The screenshot shows a Mozilla Firefox browser window titled 'Partners - Mozilla Firefox'. The OpenERP interface is displayed, with the 'Partners' module selected. The main form is for editing a partner named 'ASUSTek'. It includes fields for Name, Code, Customer status, Title, Language, and Supplier status. Below the form are tabs for General, Sales & Purchases, History, Notes, and Categories. A detailed 'Address' section shows a default address with street, zip, city, country, phone, fax, and email fields. A 'Contacts' section lists one contact named 'Tang' with the role 'Salesman' and email 'asustek@tech.com'. Navigation buttons like 'Save', 'Save & Edit', and 'Cancel' are at the top left, along with search and form buttons. A footer bar at the bottom includes 'MAIN MENU', 'SHORTCUTS', 'Modules', 'Search', 'Form', 'Calendar', 'Gantt', 'Graph', 'Process', and a 'Done' button.

Figure 3.4: A partner form with the base\_contact module installed

The screenshot shows a Mozilla Firefox browser window titled 'Contacts - Mozilla Firefox'. It displays a contact record for 'Mediapole SPRL' with the function 'Salesman'. The contact details include address ('Rue de l'Angelique, 1348 Louvain-la-Neuve'), contact sequence (0), phone number, email ('asustek@tech.com'), date start (Current), and date stop. The 'Done' button is visible at the bottom right.

Figure 3.5: Detail of a job post occupied by a contact at a partner

If you install the modules separately don't forget to install the `crm_configuration` module. The `crm` module just contains the generic case management system.

Open ERP proposes a selection from pre-configured functions for CRM:

- managing a prospects database,
- managing and tracking opportunities,
- managing meetings and the company calendar,
- managing pre-sales,
- managing phone calls and/or a call center,
- managing after-sales service,

The screenshot shows a contact form titled 'Partners - Mozilla Firefox'. At the top, there are fields for 'Name: Tiny sprl', 'Code:', 'Customer: ', and 'Supplier: '. Below this is a 'General' tab, followed by tabs for 'Sales & Purchases', 'History', 'Notes', and 'Categories'. The 'Address' section contains fields for Street (Chaussée de Namur, 40), Zip (1367), City (Grand-Rosière), Country (Belgium), Fed. State (dropdown), Phone (+32.81.81.37.00), Fax (+32.81.73.35.01), and E-Mail (dropdown). The 'Contacts' section lists 12 entries:

Partner Seq.	Contact	Partner Function	Phone	E-Mail
1	M. Pinckaers Fabien	Director		fpi@mycompany.com
0	M. Wirtel Stéphane	Chief Technical Officer		stw@mycompany.com
0	M. Simonis Christophe	Chief Technical Officer		chs@mycompany.com
0	M. Laurent Olivier	Chief Technical Officer		olt@mycompany.com
0	M. Lambotte Frédéric	Chief Technical Officer		fla@mycompany.com
0	M. van de Werve Alain	Salesman		awv@mycompany.com
0	M. Sermal Fabian	Chief Technical Officer		fbs@mycompany.com
0	M. De Paoli Quentin	Chief Technical Officer		qdp@mycompany.com
0	Ms. El Khayat Najla	Chief Technical Officer		nel@mycompany.com
0	Ms. Luu Phuong	Chief Technical Officer		phu@mycompany.com
0	M. Mignon Philippe	Salesman		pni@mycompany.com
0	M. Dakhil	Salesman		

At the bottom right of the contacts table is a 'Done' button.

Figure 3.6: Detail of a contact form for someone employed in several job posts

The screenshot shows the 'Create new database' dialog in the OpenERP web client. The URL is http://rpa:8080/database. The dialog has the following fields:

- Super admin password: [REDACTED]
- New database name: crm
- Load Demonstration data:
- Default Language: English
- Administrator password: [REDACTED]
- Confirm password: [REDACTED]

At the bottom right is an 'OK' button. Below the dialog, the footer includes copyright information and server details:

Copyright © 2007-TODAY Tiny ERP Pvt. Ltd. All Rights Reserved. More Information on <http://openerp.com>.  
The web client is developed by Axelor (<http://axelor.com>) and Tiny (<http://tiny.be>).  
Running Server: socket://rpa:8070 - database: N/A

Figure 3.7: Creating a new database

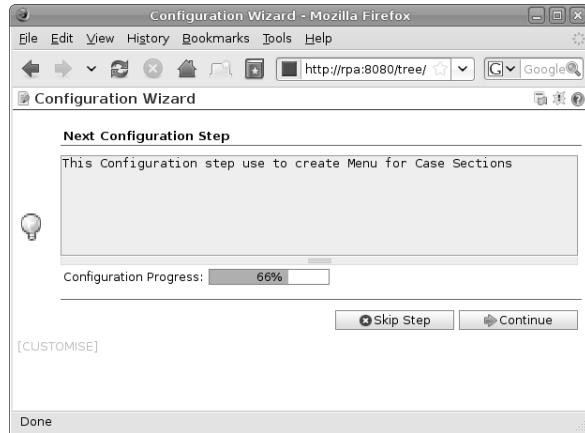


Figure 3.8: Selecting the CRM functionality to install

- managing employment offers,
- managing technical service,
- tracking bugs and new functional requests.

You see that Open ERP's CRM module isn't limited just to Customer relationships but is designed to generate all types of relations with a partner: such as suppliers, employees, customers, prospects. This book will describe just customer relationships. The other CRM functions are similar to use, so you shouldn't have huge problems with understanding those functions.

The following cases will be looked at for this chapter

- Prospect management,
- Opportunity management,
- Management of the company calendar,
- Management of phone calls.

The figure *Organizing Prospects* (which can be found in a companion volume to this book and in the online book) shows the CRM module configuration screen after selecting some functions to install.

### 3.1.1 Organizing Prospects

If you have installed the management of prospects and opportunities, Open ERP implements the following workflow for the qualification of prospects and future opportunities.

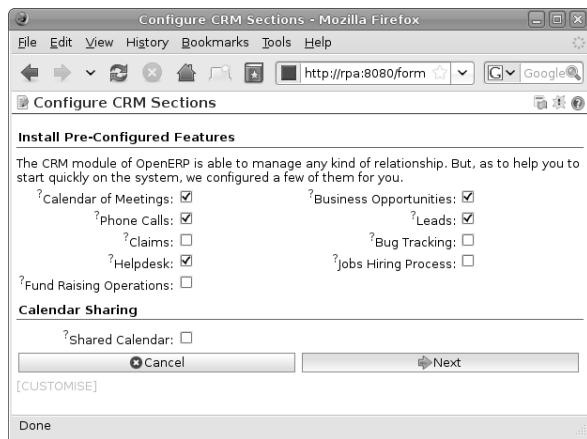


Figure 3.9: Selecting parameters for CRM modules for the reader of this chapter

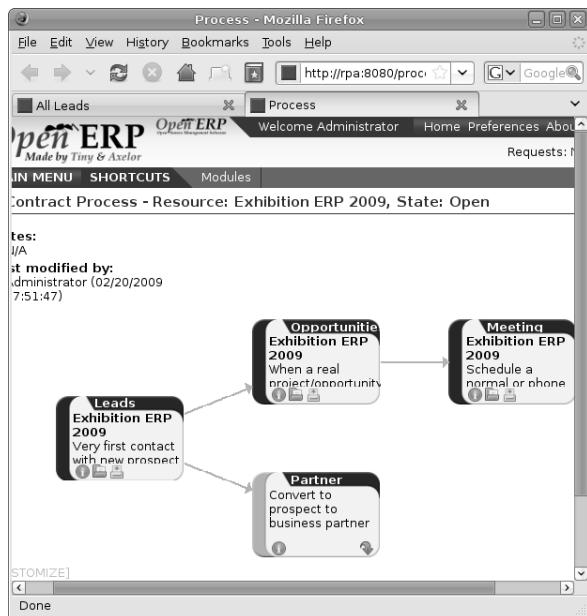


Figure 3.10: Process of converting a prospect into a customer or opportunity

## 3.2 Leads

A lead represents a potential customer or a possible future business or sales opportunity. They aren't usually qualified yet and they aren't yet assigned to an individual person for following up. When a lead needs to be followed up, it's converted to a partner and/or a sales opportunity.

For example, the following events could result in the creation of one or several leads:

- A business card from a prospective customer met briefly at an exhibition: you must contact him again to qualify the lead and to know if there is any possibility of a key sales opportunity,
- A database of potential customers in a given sector and region. The potential customers must be contacted again individually or using a mass mailing to determine which contacts need to be followed up,
- A contact that you've been given by a friend. You must then qualify it before starting to assign a salesperson to the contact,
- A form completed on your website directly integrated into Open ERP. Before converting the form into a sale proposition or opportunity, you should read and handle the person's request.



### Separation of sales services

In companies of a certain type, you often distinguish between the sales department and the presales department. The role of the presales department is to acquire and qualify new leads, and the role of the sales department is to crystallize the sales opportunities or work with existing customers.

System users in the pre-sales department will usually work on leads. Once these leads are converted into customers or sales opportunities the sales department pays individual attention to each opportunity.

### 3.2.1 Entering prospects into the system

New prospects are usually entered as a lead in the system. This means that you don't create a partner form or sales opportunity until you have qualified whether the lead is interesting or not. If the new contact is indeed interesting you then enter the data on into a partner form and, eventually, a sales opportunity.

To enter a lead manually use the menu *CRM & SRM → Sales → Leads → New Lead*. A form opens to let you enter data about this new contact.

Leads have a status that depends on the qualification work that's been carried out:

- **Draft** : the lead data has been entered, any work has not yet been done and a salesperson has not yet been assigned to the request,
- **Open** : the lead is being handled,
- **Closed** : the lead has been converted into a partner and/or a sales opportunity,
- **Waiting** : the lead is waiting for a response from the customer,

The screenshot shows the 'New Lead' creation form in the OpenERP web interface. The top navigation bar includes links for Home, Preferences, About, Logout, and a note that there are no requests. The main menu has 'New Lead' selected. The form itself has tabs for 'Prospect Information' and 'Lead Details'. Under Prospect Information, fields include Prospect Name, Phone, Prospect Email, Partner, Priority, Contact Name, and Mobile. Under Lead Details, there is a large text area for notes and a status dropdown with options: Open, Done, Cancel, Pending, and Escalate.

Figure 3.11: Creating a new lead

- **Cancelled** : the lead has been cancelled because the salesperson has decided that it's not worth following up.

When a new lead has been created it's automatically put into the open state.

You can also import a huge list of leads. That's useful if you've bought a database of potential prospects and you want to load them all into the system to handle them all at the same time.

To do that you should start with a list of leads in CSV format. If your prospects are provided in another format it's easy to convert them to the CSV format using Microsoft Excel or OpenOffice Calc. Open the leads list using the menu **CRM & SRM → Sales -> Leads -> My Leads**. At the bottom of the list click on the **Import** link. Open ERP opens a form for importing the data.

The screenshot shows the 'Import Data' dialog box. It has two main sections: 'All fields' on the left and 'Fields to import' on the right. The 'All fields' section lists various lead-related fields: Active, Campaign Type, Channel, Contact, Contact Name, Date, Lead Source, Lead Subject, Mobile, Note, and Partner. The 'Fields to import' section contains a subset of these: Campaign Type, Contact Name, Date, Partner, and Lead Subject. Below these sections are buttons for 'Add', 'Remove', 'Nothing', and 'Auto Detect'. There is also a 'File to import' field with a 'Browse...' button, and an 'Options' section with fields for 'Separator' (set to ','), 'Delimiter' (set to '|'), 'Encoding' (set to 'UTF-8'), and 'Lines to skip' (set to '1'). At the bottom are 'Import' and 'Close' buttons.

Figure 3.12: Importing leads into the system

You then define which columns are present in your CSV file in the correct order. Then select your file and

click on **Import**. Check in the chapter about system administration, *Configuration & Administration* (which can be found in a companion volume to this book and in the online book), for more information on import and export.



### Various Imports

Importing and Exporting data in Open ERP is a generic function available to all resources. So you can import and export such lists as partners, sales opportunities, accounting entries, products and pricelists.

There are other methods of importing leads automatically or semi-automatically:

- Using the Outlook or Thunderbird plugin to insert new leads directly from an email client after a sales-person sees promising emails,
- Using the email gateway for each incoming email from a certain address (such as info@mycompany.com) creating a lead automatically from the contents of the email,
- Using Open ERP's XML-RPC web-services to connect to a form on your website.

These different methods are described in the next CRM chapter, *Customer Relationship Management* (which can be found in a companion volume to this book and in the online book).

### 3.2.2 Organizing leads

To help the users organize and handle leads efficiently, Open ERP provides several menus in the CRM system that can be used depending on the needs of each:

- *Leads → New Lead* opens an entry form directly onto a new lead. This menu can usefully be put into your shortcuts,
- *Leads → My Leads* gives a list of all the leads (both open and not) which you're linked to,
- *Leads → My Leads → My Current Leads* gives a list of all your leads that you still need to handle (your open, draft and waiting leads),
- *Leads → My Leads → My Current Leads → My Pending Leads* gives a list of all your leads that are still waiting for a customer response. This enables you to check periodically on your work to do,
- *Leads → All Leads* is a list of all the leads assigned to different salespeople. This menu as those beneath it are used by managers to check on each person's work.

Leads are prioritized. Salespeople should ideally start at the top of the list. They then open a form to describe the lead. At this stage they contact the suspected customer by email or phone and enter the result of the contact on the lead form.

They can then change the status of the lead to a state that depends on the response from the suspect:

- *Cancelled* : not to be followed as a lead,
- *Waiting* : waiting for a response from the suspect.

All Leads - Mozilla Firefox								
OpenERP Made by Tiny & Axelor								
MAIN MENU    SHORTCUTS    Modules								
All Leads								
<input type="button" value="Search"/>	<input type="button" value="Form"/>	<input type="button" value="Calendar"/>	<input type="button" value="Gantt"/>	<input type="button" value="Graph"/>	<input type="button" value="Process"/>			
<input type="button" value="Basic Search"/> <input type="button" value="Advanced Search"/>								
Description: <input type="text"/> Date: <input type="text"/> - <input type="text"/> Partner: <input type="text"/> Responsible: <input type="text"/> Status: <input type="text"/> ID: <input type="text"/> - <input type="text"/>								
<input type="button" value="Filter"/> <input type="button" value="Delete"/> <input type="button" value="Edit"/> <input type="button" value="New"/>								
<< First < Previous [1 - 7 of 7] Next > Last								
<input type="checkbox"/>	ID	Name	Phone	Email	Stage	Lead Source	Campaign Type	Responsible Status
<input type="checkbox"/>	9	Exhibition (079) ERP 2009	Mike 681-2139	Gardner	Converted	Partner	Web	Demo User Close
<input type="checkbox"/>	13	Wendi Baltz	(282)	Will 603-7489	Smith	Converted	Partner	Newsletter Administrator Close
<input type="checkbox"/>	12	Tina Pinero	(373)	Benoit 907-1009	Mortier	Dead	Other	Email Administrator Cancel
<input type="checkbox"/>	11	Carrie Helle	(855)	Sam 924-4364	Stone	In Process	Website	Print Administrator Pending
<input type="checkbox"/>	10	Exhibition (514) ERP 2009	(514)	698-4118	New	Existing Customer	Newsletter	Administrator Draft
<input type="checkbox"/>	7	Exhibition (769) ERP 2009	(769)	Michel 703-274	Lafont	New	Website	Telesales Administrator Open
<input type="checkbox"/>	8	Exhibition (956) ERP 2009	(956)	Luc 293-2595	Latour	Assigned	Self Generated	Television Administrator Open
<input type="button" value="Import"/> <input type="button" value="Export"/>								
<< First < Previous [1 - 7 of 7] Next > Last								
<a href="#">[CUSTOMISE]</a>								
<input type="button" value="Done"/>								

Figure 3.13: List of leads to be handled

### 3.2.3 Converting leads into customers or opportunities

If a lead is interesting you convert it into a partner in the system. To do that, push the button **Convert to Partner**. Open ERP opens a partner form with the information from the lead entered into it. At this stage you can add more information such as the exact partner address and the contact details.

The created partner is automatically attached to the lead, which enables you to keep complete traceability from the lead. To do that look at the second tab in the lead **History**.

If the salesperson thinks that there is a real opportunity with the lead, following the contact, he can convert it into a sales opportunity using the button **Convert to Opportunity**. Open ERP then opens a window asking the title of the opportunity, the estimated revenue and the percentage success of converting to a sale.

Some companies have more advanced processes for the qualification of a lead. They pass through several steps, such as first call, renewing contact, waiting for a verbal agreement. You can then use the field **Step** that is found up to the right of the lead definition. To move it automatically through the next step, you can use the button that looks like a right arrow.

## 3.3 Sales Opportunities

While a lead represents the first contact with a prospect yet to be qualified, a sales opportunity represents a potential contract. Each opportunity must be followed up by a salesperson spending time to make a quotation or the cancellation of the opportunity.

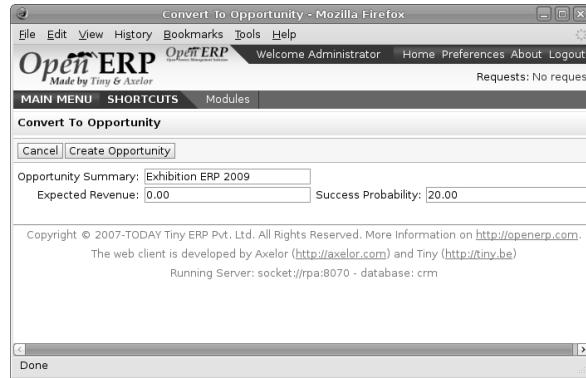


Figure 3.14: *Converting a lead into a sales opportunity*

Leads are generally handled en masse, with the automation of certain responses or emails. Opportunities, in contrast, are usually tracked one by one by the salespeople because that involves a process of negotiation.

### 3.3.1 Ensuring that you track opportunities

Just like leads, Open ERP provides several menus to handle sales opportunities efficiently. All the menus for opportunities are under the menu *CRM & SRM* → *Sales* → *Opportunities*.

To quickly create a new opportunity, use the menu *CRM & SRM* → *Sales* → *Opportunities* → *New Opportunity*. You usually use this menu in the case where the opportunity is direct and doesn't come first from a lead. It can also be useful to create a shortcut to this menu so that you can quickly open a new opportunity form when you need to – after a phone call, or an email, that needs followup.

The salesperson uses the menu *CRM & SRM* → *Sales* → *Opportunities* → *My Opportunities* → *My Open Opportunities* to track their opportunities. After various customer contacts, the salesperson can enter the information into the form to describe the activity. The history tab provides a history of all the information about the activity throughout its life. The activities are automatically reported on the partner form of the associated customer. To see this, open the events tab when you open the partner form.

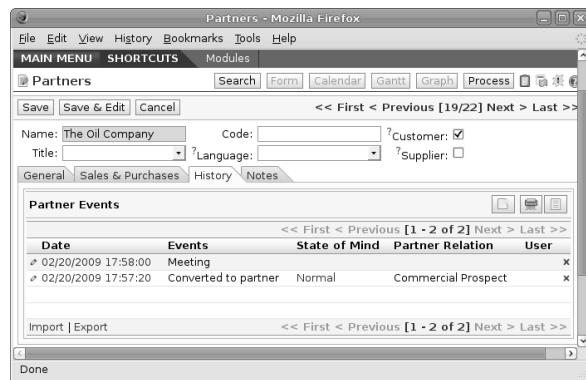


Figure 3.15: *History of events in a partner form*

When the leads have been converted into opportunities, the opportunities can be assigned to any salesperson. Then you designate an opportunity manager in the company who is responsible for assigning the new opportunities to different salespeople to suit their speciality, location or availability.

The manager can use the menu *Opportunity* → *All Opportunities* → *Unassigned Opportunities* to do this. This gives you a list of all opportunities that haven't yet been assigned to a salesperson. The manager can enter the salesperson responsible for the opportunity into the field **Responsible**.

### 3.3.2 The company calendar

There are several methods for entering a new meeting with a partner. The first method is to enter the meeting directly in the company calendar. To do that, use the menu *CRM & SRM* → *Calendar* → *All Meetings*.

You can use the monthly, weekly or daily views to plan a meeting. To move between one mode and another use the buttons above and to the right of the calendar.

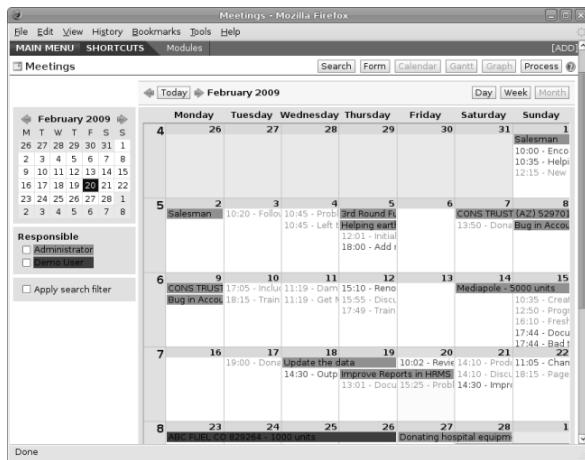


Figure 3.16: *Meetings calendar in monthly view*

In the calendar you distinguish between multi-day events and events that last only for a few hours. Multi-day events have a colored background whereas single events have a colored font. Each event has a color that represents the user that created the meeting. You can filter the different users by selecting them from the list at the left of the screen.

To enter a new meeting into the system you can click the day and the hour for a new meeting. In the weekly and daily views you can also press the mouse left button on the calendar and slide the mouse along to create an event of several hours. Open ERP then opens an entry screen for a new meeting.

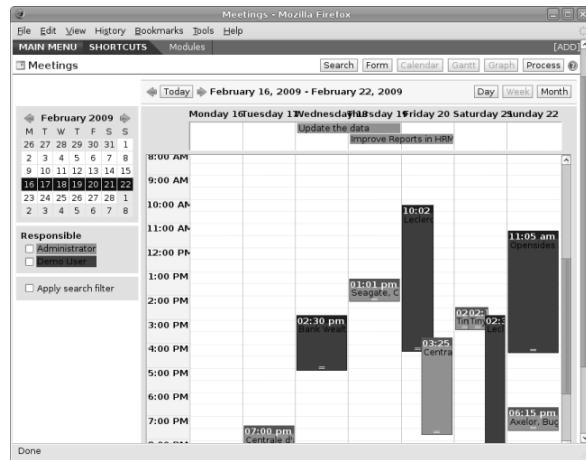


Figure 3.17: *Meetings calendar in weekly view*

Figure 3.18: *Entering a new meeting*



### Consolidated Calendar

The advantage of integrated management is that the enterprise calendar will group several system events. Then in the Open ERP calendar you'll automatically find both these meetings and such information as business opportunities, technical interventions, and requests for staff meetings.

### 3.3.3 Tracking phone calls

Open ERP has functions to manage a telephone call centre. If, when you installed the CRM module, you selected the option for calls you'll be able to manage incoming and outgoing calls.

Call management can be used for two particular needs:

- Entering customer calls so that you keep a record of the communication attached to a partner or a sales opportunity,
- Managing a call centre with operators who handle lists of calls to carry out one after another.

To enter details of a phone call, use one of the two following menus:

- *CRM & SRM → Sales → Phone Calls → Inbound*,
- *CRM & SRM → Sales → Phone Calls → Outbound*.

The phone call will then be visible on the partner form to give you complete visibility of the events about that customer or supplier.

### 3.3.4 Managing a Call Center

You can manually encode calls that happen or you can pass them into Open ERP. But for mass campaigns, you can import a list of phone calls to make. To do this, click on the import link at the bottom of the list of phone calls. On the GTK client use the toolbar button *Form → Import* at the top.

Phone calls that have occurred in the open state. The different operators can be assigned calls and handle them one by one using the menu *CRM & SRM → Phone Calls → Outbound → New Outgoing Call*.

The operator can open the calls one by one. For each call, after having contacted the customer, the operator can click on one of the following buttons:

- **Cancel:** you cancel the call. For example you could cancel the call if you've tried to call them more than three times.
- **Held:** you've spoken to the customer by phone. In this case the operator can change the case section and send it to sales opportunities, for example. You could alternatively leave it in this state if you don't need to carry out any more actions with this customer.
- **Not Held:** the customer hasn't been called, you'll try to call him again later.

### 3.3.5 Advanced Customer Relations

Open ERP also supplies several tools to improve and automate relationships with partners. They won't be described extensively here, just introduced briefly. The supplier/customer portal gives you the ability to provide your suppliers and customers with constrained access to Open ERP. They will then be able to view or enter sets of information directly online to Open ERP. For example they could enter their orders, reprint their invoices, or work on communal projects. To activate the portal you should install the modules that start with the string `portal_`.

The email gateway lets you interface the CRM with incoming and outgoing emails. The scripts used for the email gateway are available in the `crm` module in the `scripts` subdirectory.

Outlook and Thunderbird plugins let you synchronize your contacts between your email client and your ERP. They both enable you to create sales opportunities based on exchanges you have with the customer.

The rules for automating actions enable you to send emails automatically based on the event, such as assigning opportunities to the most appropriate person. To access the CRM rules, use the menu *CRM & SRM* → *Configuration* → *Cases* → *Rules*. The segmentation tools let you create partner groups and act on each segment differently. For example you could create pricelists for each of the segments, or start phone marketing campaigns by segment. To enable the management of segmentation you should install the module `crm_profiling`. The `base_report_designer` module enables you to create letter templates in OpenOffice and automate letters for different prospects. Open ERP also has plugins for MS Word to simplify the creation of mass mailing.

# Customer Relationship Management

*It's often said that the customer is king. You would treat all your customers as royalty, at the center of your attention if you had a way of keeping your eyes on them at all times. Open ERP's CRM module is designed to make this aim a reality, helping employees of the business understand their customers' needs better, and automating their communication efforts.*



## CRM & SRM

CRM is the abbreviation for Customer Relationship Management, and SRM is Supplier Relationship Management.

If you want to focus on your customers, you need tools to make that focus easy. Tools that will capture all the knowledge you have available, tools that will help you analyze what you know, and tools that will make it easy to use all of that knowledge and analysis.

A crucial advantage that Open ERP gives you over the more specialist CRM applications is that Open ERP knows more about your customers and your ability to supply them because it's handling all of your accounting, sales, purchases, manufacturing and fulfilment as well as linking to all of your internal staff. Open ERP's CRM module uses that information and offers several significant features that enable you and your staff to monitor and control your supplier and customer relationships effectively, such as delegating issues to the most appropriate people, keeping a history of communications and events, qualifying prospects and detecting problems.

It also uses several statistical tools that can analyze relationships quantitatively – your customer service performance and the quality of your suppliers, for example. Using performance analysis, you can easily put a policy of real continuous improvement in place by developing an automatic rules-based system in Open ERP.

To minimize re-typing work, Open ERP provides an email gateway that links your emails to the databases. This is a significant feature – many of your staff will then use Open ERP automatically through email without ever logging into it themselves and having to learn a new system.

Finally, at the end of this chapter you'll see an efficient method of qualifying prospects or customers that enables you to offer a service tailored to the potential value of different prospects.

For this chapter you should start with a fresh database that includes demo data, using the **CRM profile** and no particular chart of accounts configured.

## 4.1 Partners

In Open ERP, a partner represents all the entities that you can do business with. Some possible different types of partners are:

- suppliers,
- manufacturers,
- customers,
- clients,
- employees,
- prospects.

The concept of a partner here is much more flexible than in many other management applications because a partner can correspond to one type or a combination of several of these types. This avoids double data-entry and provides greater flexibility in the features available.

So a partner can be both your supplier and your customer at the same time. This feature is particularly important when you have subsidiaries or franchises since transactions between the parent and its subsidiaries in these cases will generally be two-way.

To get a list of partners using demonstration data, use the menu *Partners → Partners*.

The screenshot shows a web-based application for managing partners. The main area contains a form with fields for 'Nom Agence' (set to 'Agence'), 'Titre' (set to 'Madame'), 'Prénom' (set to 'Sylvie'), 'Nom de famille' (set to 'Lefèvre'), 'Type adresse' (set to 'Téléphone'), 'Rue' (set to '66 rue du Commerce'), 'Code postal' (set to '75030'), 'Ville' (set to 'Paris'), 'Pays' (set to 'France'), 'Téléphone' (set to '+33 6 12 12 12'), 'Fax' (empty), and 'E-Mail' (empty). Below this is a 'Catégories' section with a dropdown menu. On the right, a sidebar titled 'ACTIONS' lists options such as 'Structure de l'entreprise', 'Envoyer un SMS', 'Mailing', 'LIENS', 'Recouvrables & payables', 'Toutes les entrées de compte', 'Lectures ouvertes', 'Ordres d'achat', 'Cas ouverts', and 'Ventes'.

Figure 4.1: A partner form

To the right of the partner form you'll find all of the actions, reports and shortcuts available to the selected partner. This enables you to quickly send an SMS message, for example, or review a partner's order history, or print a reminder letter.



### Send an SMS message

To send an SMS message from standard Open ERP you'll have to place an order with the bulk SMS gateway operator Clickatell™<http://clickatell.com>.

You'll then receive an API number, a login and a password which you can use in Open ERP to send SMS messages to your partners.

Or you can just develop a new module based on the inbuilt SMS functions, targeted at any of the other SMS service suppliers, and use that instead.

To send an SMS message to a partner or a selection of several partners, first select the partners then click the **Send SMS** Action icon.

To create a company in Open ERP (that is – a new partner) you should at a minimum enter the company's **Name** in the partner form.

#### 4.1.1 Contacts

You can have several contacts for one partner. Contacts represent company employees that you're in contact with, along with their address details. For each address you can indicate their type (**Default** , **Invoice** , **Delivery** , **Contact** or **Other** ). Based on this, Open ERP can supply an address that matches the contact's function when generating documents at various stages through an Order process.

Contacts can be entered into the first (**General**) tab of the **Partners** form, or you can get direct access to the list of addresses through the *Partners* → *Partner Contacts* menu.

You can search for a subset of Partners and Contacts using their company **Name** or **Contact name** or part of the address, or any of the other search fields in either the **Basic Search** or the **Advanced Search** tab.



#### Independent partners or physical people

If you want to represent a physical person rather than a company, in Open ERP, that person's name can be typed directly into the **Name** field on the Partner form. In this case don't put in any Contact Name.

#### 4.1.2 Partner Categories

Open ERP uses hierarchical categories to organize all of its partners. To reach the list of available partner categories, use the menu *Partners* → *Partners by Category*.

Double-click one of the categories in the partner category structure to get a list of the partners in that category. If you click on a category that has sub-categories you'll get a list of all of the partners in the main category and in all of its subcategories.

Because categories are structured in a hierarchical manner, you can apply an action at any level of the structure: a marketing promotion activity, for example, can be applied either to all customers, or selectively only to customers in one category and its subcategories.

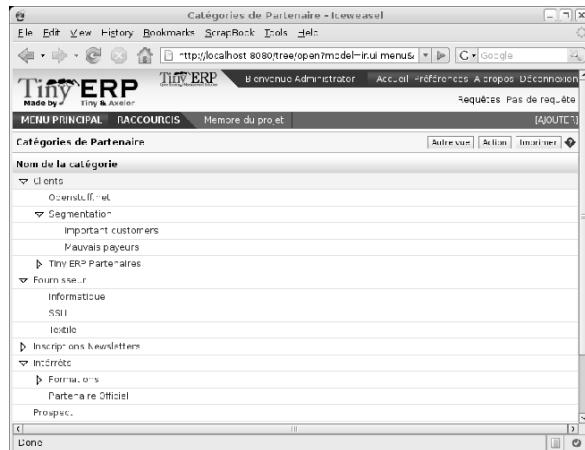


Figure 4.2: Example Partner Category structure

The tree structure is also very useful when you're running the various statistical reports. You can structure reports at any level of the hierarchy using this partner segmentation.

In the following sections you'll see how to assign partners to categories manually (perhaps for a newsletter subscription or as a hot prospect), or automatically using segmentation rules.

Use the menu *Partners* → *Configuration* → *Categories* → *Edit Categories* to define a new category.

To try Open ERP's partner capabilities described here for yourself, log into your database as `admin/XXXXX` then click *Partners* → *Configuration* → *Categories* → *Edit Categories* and create a new category of Small Suppliers whose parent is Suppliers . Then create a new **Partner** whose **Name** is Susan Trent ``\ and category is \ ``Small Suppliers .

Click *Partners* → *Partners by Category* and then click *Suppliers* → *Small Suppliers* to find just Susan Trent . Do this again but now click the **Suppliers** category in **Partners by Category** and you'll find that both Plumbing Component Suppliers and Susan Trent are in the higher-level category: Susan Trent is there because she's in a child category.

Add new contact Graham Strong to Plumbing Component Suppliers . Graham's **Address Type** is **Invoice** . Click *Partners* → *Partner Contacts* and see that both Susan and Graham appear on that list.

## 4.2 Case management

The following sections describe the steps you might use to implement an effective customer relationship management policy. The policy is implemented by basing new types of case on the built- in Open ERP case handling system.



### Case

Case is a generic term that refers to a discussion with a partner about a specific subject. This subject could be in any category – the monitoring of responses to a job advert, perhaps, or a purchase or sales order, or an after-sales quality problem.

A case is used for following the history of the messages on a topic and for automating some operations in response to certain conditions. Interfaces are available for OpenOffice.org and for email such as Microsoft Outlook Express and Microsoft Outlook, so that you can make productive use of the case system from your existing tools.

Case statistics generated by the system can be used by your managers to improve their handling of supplier and customer interactions.

## 4.2.1 CRM configuration

Case management is a generic system that can be configured to your more precise needs. You'll develop three case types here, to see how to build the following systems:

1. A system to manage business opportunities.
2. A system for managing support contracts on two levels.
3. A system for managing supplier quality.

### Sections

To handle each of these case types in a different way, you must create different sections in Open ERP using the menu *CRM & SRM* → *Configuration* → *Case* → *Sections*. Do this as user `admin` in your database to try it for yourself.

You'll define the following four sections:

- Sales
- Support Level 2
  - Support Level 1
- Quality.

Put the name in the field **Case Section**. You construct a tree structure for sections is constructed using the **Parent Section** field in the Section form. So here you'd say that Support Level 2 is the parent of Support Level 1. Open ERP doesn't restrict the order you use to define these two – you can save the parent while defining the child (try it by starting with Support Level 1).

A manager can then be assigned to each section (from the list of Open ERP system users), and an email address can optionally be added. Cases in this section are then automatically connected to this email address – case messages are emailed out automatically from this address and emails to this address are automatically logged in this section of the CRM system. This functionality is based on the email gateway referred to in detail further on in this chapter.

Click the menu *CRM & SRM* → *Cases* → *Cases by Section* to get the sections in a hierarchical list, then click a section name to list the cases that have been assigned to that section.



### Cases by Section – with data

Click the menu *CRM & SRM* → *Cases* → *Cases by Section* to get the sections in a hierarchical list, then click a section name, such as **Helpdesk** or **Support**, to list the cases that have been assigned to that section.

## Categories

Once you've defined the different sections you can create Categories, which are used to differentiate the cases in a section. You create categories using the menu *CRM & SRM* → *Configuration* → *Cases* → *Categories*. Create the following in your database:

Table 4.1: Categories assigned to the different sections

Category	Section
Installation Requests	Sales
Potential Distributor	Sales
Interest in Training	Sales
Fault Fix	Support Level 1
Functional Problem	Support Level 1
Corrective Actions	Quality
Preventative Actions	Quality

## Menu

Once the sections and the categories are defined you can generate some menus to make it easier to use these cases. Select the menu *CRM & SRM* → *Configuration* → *Create Menus* for a New Section<sup>4</sup>.

The procedure is to create the name of the new menu in **Menu base name**, select the name of a suitable **Parent menu** for the menu and the **Case Section** name, then click **Create menu Entries**. Following this procedure, create the following menus:

Table 4.2: Example of creating menus that make it easier to use cases

Menu base name	Case Section	Parent menu
Business Opportunities	Sales	Sales Management
Support L1	Support Level 1	CRM & SRM
Support L2	Support Level 2	CRM & SRM
Quality Problems	Quality	Purchase Management

Each time you run this utility (that is, for each line in the table above), Open ERP generates a menu structure like *Using cases* (which can be found in a companion volume to this book and in the online book).

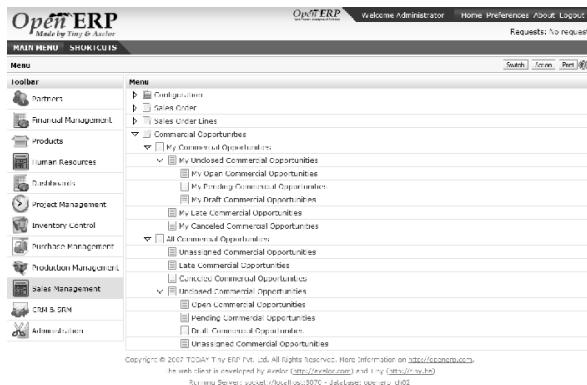


Figure 4.3: *Business Opportunities* menu automatically generated

### Case sections



Open ERP enables you to select the view mode you want when the menu is opened to display the cases for each section such as Sales, Helpdesk, and Support Request.

Your selection of view determines the type of form that opens when showing a case in each section. So the form following a support request case could differ from the form for a business opportunity.

If you're working in a different language from the default, you can define the labels in that language after you've created the new menus.



### Personalizing menus

You can rename menus if you don't like the way they've been generated by the system. To do this, select the menu line by single-clicking on the line (but not on the menu text itself) and then clicking the **Switch** icon.

You'll see a form view of the menu definition. If it's in edit mode you can change its name and position in the hierarchy, and you can select a different icon for it. You can also choose a different action for when the menu is clicked. If you've saved or cancelled the menu form so that it's not in edit mode you can duplicate it or delete it completely. Duplicating it can sometimes be helpful, placing a copy somewhere else in the menu hierarchy and perhaps making it accessible to different groups of users.

## 4.2.2 Using cases

Although you've created special menu trees for each of the types of case you defined, you can continue using the generic case system reached through *CRM & SRM → Cases*. The new case types are just versions of the generic case.



### Transferability of cases

It's quite useful to base the whole management of customer relationships on a generic system, as Open ERP does. Since each section is just a specialization of the generic system you can transfer requests from one section to another, and this means that you don't lose cases in the system as you delegate work to other staff in your company.

For example you can imagine a support request becoming a business opportunity. Or an after-sales service request becoming a supplier quality issue where a fault is found in a purchased product.

You can also track items across the whole company.

To enter a new business opportunity, you can use the menu that you've just created: *Sales Management → Business Opportunities*. Or you could have used the generic menus *CRM & SRM → Cases → Cases by section*, or *CRM & SRM → Cases → All cases*.

Create a case from *Sales Management → Business Opportunities* by entering information about the request, namely:

- a **Description** of the case,
- its **Section** will already be completed with **Sales**,
- a **Priority**,
- the **Partner**,

Figure 4.4: An entry following a business opportunity

- the **Partner Contact** (which will be completed automatically when the Partner is filled in but can be overwritten),
- the **Partner Email** address (which will be completed from the Partner Contact's email address but can be overwritten),
- the person in your own company who will be the **User Responsible** for the case.



### The email gateway

You'll see later in this chapter that cases can be generated automatically from emails. If the email gateway is configured properly you'll no longer have to enter cases manually through the menu system – they'll just be created from incoming emails.

A case starts in the **Draft** state once it's been created. You can then open it to indicate that you're working on it by clicking the **Open** button.

To enter text about the request or about actions taken to satisfy it, type an entry in free text. To save the history of your comments, click **Historize**. If you click **Send Partner and Historize** the partner will also receive a copy of your comment as you save it.

While the case is open you can click **Close** if it's been completed or **Cancel** if it's to go no further. If you want the case to wait for a response from a partner click **Pending**.

Add some text for this example case in the database, then close it.

If you've organized the sections in a hierarchical structure you can click on **Escalate**. The case then escalates into the parent section. You can't do that with the Business Opportunity that you just defined, which is single-level but you could with a Support L1 case. For example if a developer on level 1 can't handle a customer problem then she can escalate the request to level 2 where it can be handled by a more experienced user.



### Assigning a case

Two approaches are available to you for assigning a case to a suitable manager. Any case can be assigned by the user who creates the original case, or this field can be left blank. If it's blank you'd review the resulting list of unassigned cases and pick one up and assign it to yourself.

You can also imagine a mixed method: all cases arrive unassigned and a user is responsible for the division of work to the relevant section.

You can look up the history of comments and actions on the request at any time by looking at the case **History**, which is in its own tab.

Users can create their own shortcuts from menus such as *My Support Requests* and *My Business Opportunities* to quickly list cases that they're personally responsible for.

### 4.2.3 Generating calendars

The Open ERP web client can display any type of resource in the form of a timetable. You can generate calendar views for each of your cases as you create menus for those cases.

So if you want to implement a shared calendar for your calendar in Open ERP all you need to do is:

1. Create a section **Meeting Calendar**
2. Create menus for this section while specifying that you want a calendar view from *CRM & SRM* → *Configuration* → *Create Menus for a New Section*.

You'll get menus enabling you to manage calendars for each employee, and you'll also get a shared calendar for the company. This calendar view is totally dynamic. You can move an event or change its duration just using your mouse.

You can change the view and return to the list view, forms or graphs by using the buttons at the top right. Open ERP's usual search tools and filters enable you to filter the events displayed in the calendar or, for example, to display the calendar for only some employees at a time.



### The generic calendar

Unlike traditional CRM software, Open ERP's calendar view is not limited to displaying appointments. It's available for any type of resource.

So in addition to the cases handled here, you could obtain calendars of tasks, deliveries, manufacturing orders, sales or personal leave.

This view is very useful for planning or to get a global overview of a list of dated elements.

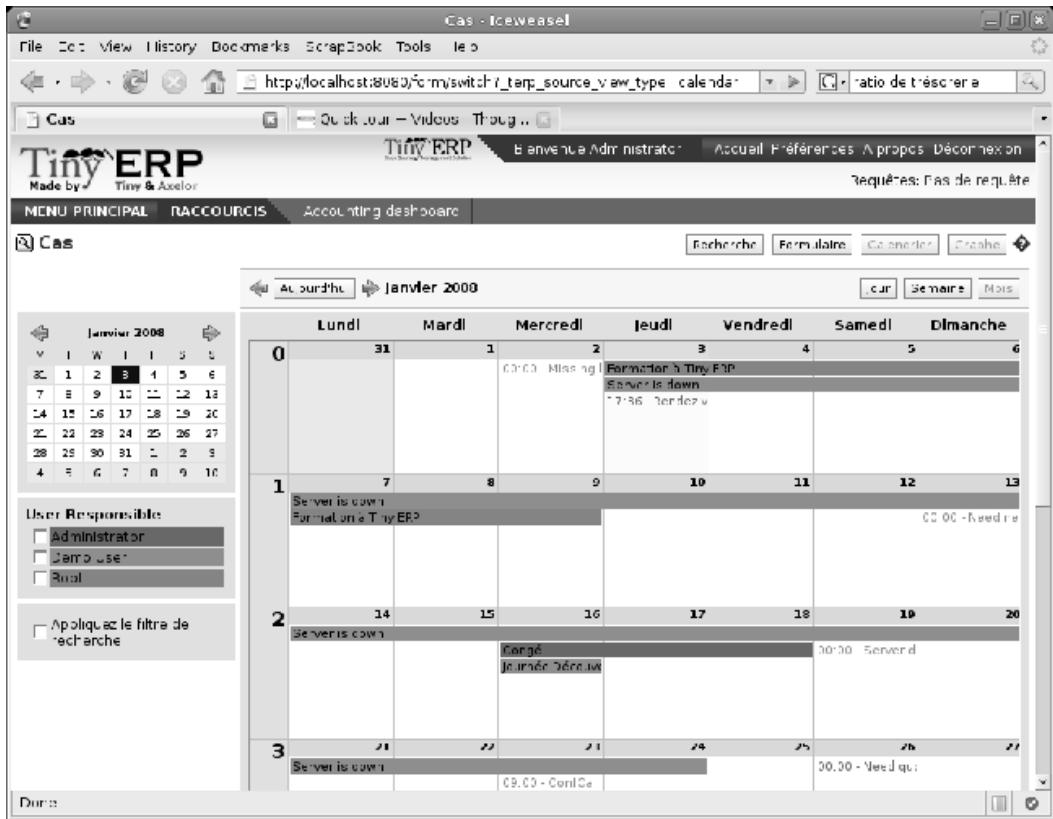


Figure 4.5: Monthly view of the meeting calendar for cases

#### 4.2.4 Analyzing performance

Since all of your customer communications are integrated into the Open ERP system, you can analyse the performance of your teams in many ways. Open ERP has a module that helps handle this – `report_crm`. It's not part of the core Open ERP so you must first download it to your desktop from Open ERP's modules repository, then into your server using *Administration → Modules Management → Import module*. Then install it into the database.

Once you've installed it you can use menu *CRM & SRM → Reporting* to create different reports.

If you want to analyze the performance of your service and support group, for example, use the graph from *CRM & SRM → Reporting → All Months → Cases by User and Section*. Click the menu to obtain a list view, then click the **Graph** button to the top right of the list. The system shows you statistics per user and it's possible to filter on each section and use other criteria for searching. For example, you can type in a date range, click **Filter**, and see the graph change to reflect the new data.

By default, the system provides a list containing the following information for each month, user and section, and an indication of the state of each set of information:

- number of cases,

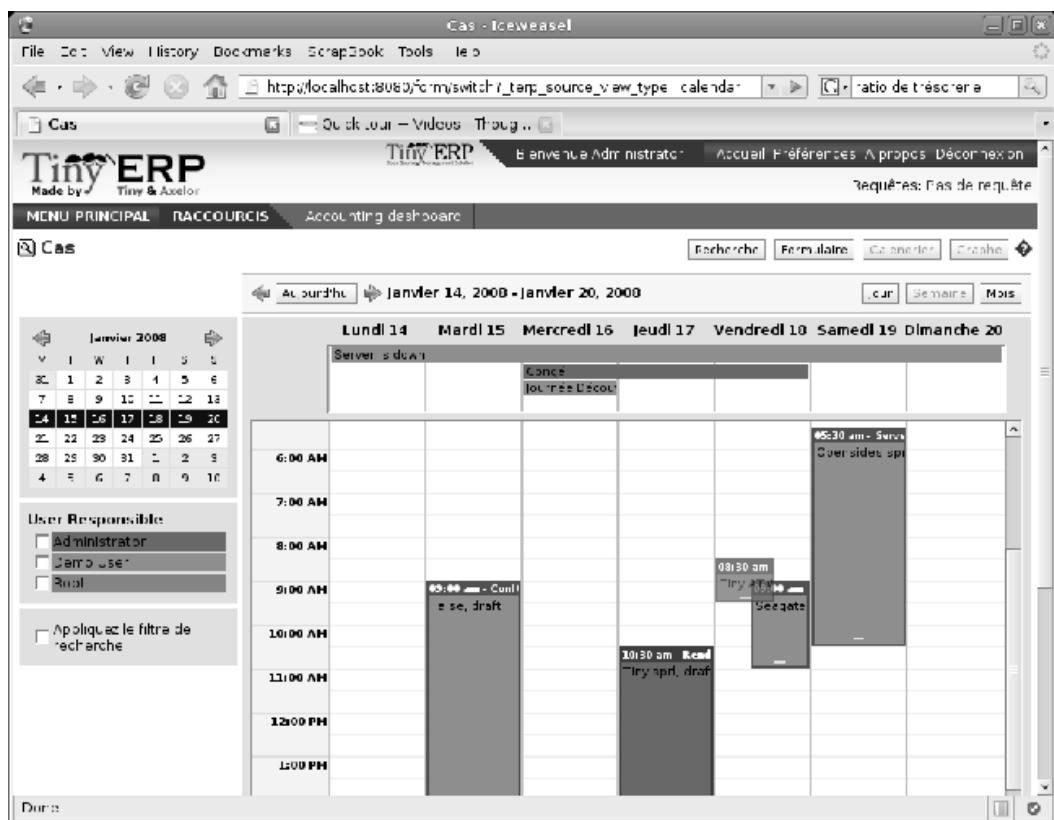


Figure 4.6: Weekly view of the meeting calendar for cases

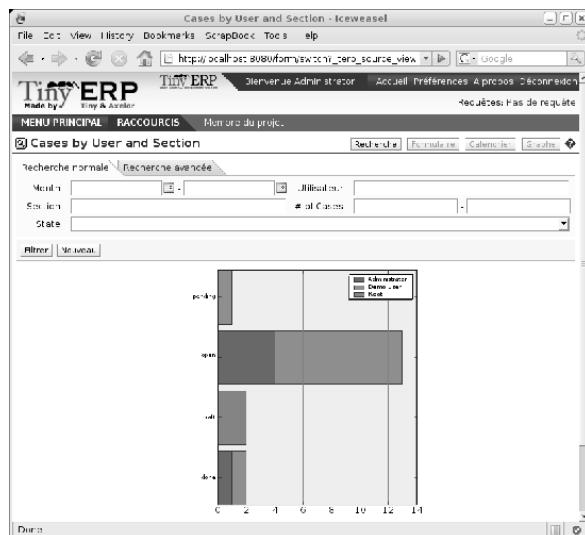


Figure 4.7: Analyzing the performance of your support team

- **average delay for closing** the request,
- **estimated revenue** for a business opportunity,
- **estimated cost**,
- estimate of revenue multiplied by the probability of success, to give you an **estimated weighted revenue** figure.



### Navigating through the statistics

You can obtain more information about a user or a case section from these reports, drilling down into the data displayed.

In the web client you click the appropriate text string on one of the lines (such as **Demo User** or **Helpdesk and Support**) to open a form for it, and then click one of the buttons in the **Action** toolbar to the right of the User or Section form that is displayed.

In the GTK client you'd right-click over the text instead – this brings up a context menu with the same options as the web client would give you.

You can specify that the graph view, say, appears by default so that you can consistently present the information more visually.

## 4.2.5 Automating actions using rules

Analyzing figures gives you a better basis for managing all of your services and customer and supplier relationships. But you can do more than just display the figures graphically from time to time.

If the performance of a section, a user or a category of a case is beginning to cause concern then you can use Open ERP's rules system to monitor the situation more closely. Rules enable you to automatically trigger actions depending on criteria you define for each case. They provide a good way of implementing a proper continuous improvement policy for your customer relations and quality of service.

Using these rules you could:

- automatically send emails to the client during different phases of a support request, to keep the client up to date with progress,
- assign the case to another person if the the case manager is on holiday,
- send a reminder to the supplier if their response is delayed too long,
- always mark a case as urgent if it's from a major client,
- transfer the case to technical services if the request is about a technical fault.

To define new rules use the menu *CRM & SRM → Configuration → Cases → Rules*.

The criteria for activating this rule are defined on the main part of the screen. These criteria are:

The screenshot shows a web-based application window titled 'Règle pour le cas - Bureau envoi'. At the top, there's a menu bar with 'Edition', 'View', 'History', 'Documents', 'Général', 'Help', and a URL 'http://localhost:8083/form/valid/1/case/rule'. Below the menu is a header with 'TINY ERP' and 'Bureau envoi'. A sub-header says 'Bureau envoi Admin strator Accueil Préférences À propos Démarrer'. The main content area has tabs: 'Règle pour le cas' (selected), 'Recherche', 'Formulaire', 'Calendrier', and 'Gérez'. Under 'Règle pour le cas', there are sections for 'Infos générales' (General info) and 'Critères à vérifier' (Criteria to verify). In 'Critères à vérifier', fields include 'Etat initial du cas' (Initial state), 'Etat de destination' (Destination state), 'Responsable' (Responsible), 'Partenaire' (Partner), 'Date de déclenchement' (Trigger date), and 'Actions à exécuter' (Actions to execute).

Figure 4.8: Screenshot of a rule

- a condition about the initial state (for example during the creation of a case – initial state: `None` , eventual state: `Draft` ),
- a condition about the destination state (for example at the closure of a case to send a confirmation or thank you email),
- the case section to which the rule applies,
- the category for the case,
- a condition about the manager of the case (for example to send copies of case progress to a manager if the client request is handled by a trainee),
- a condition about the priority level (for example to provide different types of reaction depending on the urgency of the request),
- a partner or a category to be applied to the rule,
- a date for the trigger
  - reporting by the date of creation
  - reporting by date of the last action
  - reporting by the length of time that it's been active.

If you have defined several criteria Open ERP will apply the rule only if all of the criteria are valid.

You define the action that will be taken if the rule is met in the second tab of the lower part of the setup window. The following actions are included:

- change the state of the case,

- move the case to a new section,
- assign the case to a system manager,
- change the priority of a case,
- send a reminder to the case manager or a partner,
- attach information (or not) to a reminder,
- send copies of the case discussion to specified email addresses,
- send a predefined email.



### **Example 1 Improvement in the quality of support**

For example, on the graph that analyses the performance of team support in Figure 4-6 you can see that the Demo User takes an average time of 3 days and 4 hours to close a customer support request. This is too long. After analyzing the data in depth, you can see that most cases were closed in less than two days, but some may take more than ten days.

If you think that the quality of service should be improved you can automate certain actions. You could send copies of the discussion to a technical expert if the case remains open for longer than two days, defined by the following rule:

- **Rule Name** : Copy to an expert after 2 days,
- **Case state from** : Open,
- **Case state to** : Open,
- **Responsible** : Demo User,
- **Trigger Date** : Creation date,
- **Delay after trigger date** : 2 days,
- **Add watchers (cc)** : expert@mycompany.com ,
- **Remind responsible** : Yes.

After the rule has been defined, the expert will receive a copy of the whole discussion between the Demo User and the customer for every case that remains unclosed after two days. He'll be able to interact with the discussion to avoid lengthy delays on complex problems.

Some companies use several support levels. The first level is handled by the least qualified support people and the higher levels by users who have the advantage of more experience. A user on level 1 can escalate the case to a higher level when necessary.

To systematically train employees at level 1 you can create the following rule: when the case has been escalated they will continue to be copied on the progress of the case. If a user at support level 1 can't handle a request he can escalate it to level 2. Then when an expert at level 2 answers the customer's request, the level 1 support person also receives the answer to the problem that he couldn't originally handle. So your team can be educated automatically from listening in to the passage of live support calls.

Suppose that you supply two types of support contract to your customers: Gold and Normal. You can then create a rule which raises the priority of a case automatically if the partner is in the Gold Support Contract category.

Define the case this way:

- **Rule Name** : Priority to Gold Partners,
- **Case state from** : /,
- **Case state to** : Open,
- **Partner Category** : Support Contract / Gold,
- **Set priority to** : High.

Improved client relations can flow from using such rules intelligently. With the statistical control system you can manage certain SLAs (Service Level Agreements) with your customers without a great deal of effort on your part. So you can be selective in replying to those of your partners based on the specific quality of service that you are contracted to supply.



### **Example 2 Tracking supplier quality**

Remember that an Open ERP partner can be a supplier as much as a customer. You can use the same mechanism for the management of supplier quality as you do for customer support.

If any of your staff detect a quality problem with a product from a supplier they should create a new case in the Quality section. If the email gateway is installed all you need to do is copy an email to a specified address (for example complaints@mycompany.com) while sending your email of complaint to the supplier. The case is automatically created in Open ERP and the supplier's email response will close the case and be placed automatically in the case history.

In this case the user can add corrective or preventative actions to conform to ISO 9001, without having to enter every action into Open ERP – most of the information comes just from the emails.

The system's statistics provide analyses about the number and the cost of quality problems from different suppliers.

If certain suppliers don't offer the service quality that you expect you can automatically create rules that:

- send a reminder to the supplier after a few days if the case still remains open
- remind the production manager to call the supplier and resolve the situation if the case hasn't been closed within a week
- select and qualify your suppliers on the basis of their quality of service



### **The CRM portal**

Open ERP's `portal_service` module enables you to open parts of your CRM functionality to suppliers and customers. They can then connect to your system using their own login and follow their orders or requests online. For example the customer could make a support request directly in your system, perhaps avoiding a lengthy process of data entry.

## **4.2.6 Using the email gateway**

To automate the creation of current cases you can install the email gateway.

The email gateway enables you to use Open ERP's CRM without necessarily using the Open ERP interface. Users can create up-to-date cases just by sending and receiving emails. This system works with the major current email clients such as Microsoft Outlook and Outlook Express, Thunderbird and Evolution.

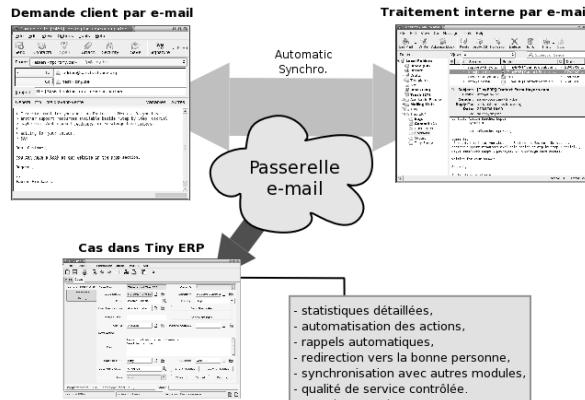


Figure 4.9: Schematic showing the use of the email gateway

## Installation and Configuration

To use the email gateway you must install it on your server. You can use a variety of methods to configure it. Described here is a simple and generic approach using the Fetchmail program under Linux. You'll need a system administrator to carry out this work.

To start with you have to create an email account (POP3 or IMAP) for each Section that you'll want to connect an email to. If you have the support email address `support@pop.mycompany.com` you'd use the following entries:

- **POP server** : `pop.mycompany.com`,
- **User** : `support`,
- **Password** : <mypass> .

You'll also need to choose an Open ERP user that the gateway will use to access your database, such as:

- **User Id** : 3 ,
- **Password** : `support` .



### Identifying a resource

Each resource on the Open ERP system has a unique identifier number. This corresponds to an identifier in the underlying PostgreSQL database table, in the ID column for that resource.

With the web client you can usually find this number by going to the form view of a resource and clicking the **View Log** button to the top right of the form. The ID is shown at the top of the **Information** dialog box. (This didn't work in some of the earlier versions prior to 4.2.3.3.)

You can also use the GTK client for this. Viewing any resource, such as a User, you can directly see its ID at the bottom left of the form.

Then specify the case section in Open ERP that you'll use when this user is connected by email, for example, the **Helpdesk and Support** section.

Install Fetchmail on your Open ERP server. You can download it from the address <http://fetchmail.berlios.de/>.



### Fetchmail

Fetchmail is a Free / Open Source software utility used on Unix-like operating systems to retrieve e-mails with the remote protocols POP, IMAP, ETRN and ODMR on the local system. It's downloadable from this address: <http://fetchmail.berlios.de/>.

Create a fetchmailrc file that contains the following rules:

```
# fetchmailrc

poll pop.mycompany.com proto pop3:

username support password mypass mda "/path/to/terpmg/openerp-mailgate.py -u3 -padmin
-ssupport -esupport@mycompany.com"
```

Then start the fetchmail program, giving it a link to the configuration file that you just created:

```
fetchmail -f fetchmailrc
```



### Error detection

If you're executing fetchmail for the first time you should use the **-v** argument. This makes its output verbose so you can easily see what's happening as the program executes.

## **Creating and maintaining cases**

Each time you start fetchmail it downloads all the emails and creates or updates the cases in CRM. You can turn fetchmail into a daemon to check all new emails every five minutes by using the command:

```
fetchmail -d 300
```

If you want to receive customer requests by email you must first create a rule that automatically assigns new cases to a specified user. You must then verify that this user possesses a suitable email address in the **Address** field within Open ERP.

To find out if the new email should create a new case or update an existing case, Open ERP analyzes the subject line of the email. Existing cases are identified by the case number in the subject line, for example

Re: [101] Problem with ...

When a customer sends a new request by email the case is automatically created and the email is transferred by the gateway to the user responsible for new cases, changing the subject line to add the case identifier. The user can then respond by emailing or by using the Open ERP interface to the case. If the user responds by email the case can be automatically closed in Open ERP, keeping the responses in the history list. If the partner responds again, the case is reopened.

## **4.3 Profiling**

### **4.3.1 Establishing the profiles of prospects**

During presales activities it's useful to qualify your prospects quickly. You can pose a series of questions to find out what product to offer to the customer, or how quickly you should handle the request.



#### **Profiling**

This method of rapidly qualifying prospects is often used by companies who carry out presales by phone. A prospect list is imported into the Open ERP system as a set of partners and the operators then pose a series of questions to each prospect by phone.

Responses to these questions enable each prospect to be qualified automatically which leads to a specific service being offered based on their responses.

As an illustration, take the case of the Tiny company which offers a service based on the Open ERP software. The company goes to several exhibitions and encounters dozens of prospects over a few days. It's important to handle each request quickly and efficiently.

The products offered by Tiny at these exhibitions are:

- training on Open ERP – for independent people or small companies,
- partner contract – for IT companies that intend to offer an Open ERP service,
- Open ERP as SaaS – for small companies,

- a meeting in conjunction with a partner to provide a demonstration aimed at providing a software integration – for companies that are slightly larger.

The Tiny company has therefore put a decision tree in place based on the answers to several questions posed to prospects. These are given in the following figure *Using profiles effectively (which can be found in a companion volume to this book and in the online book)*:

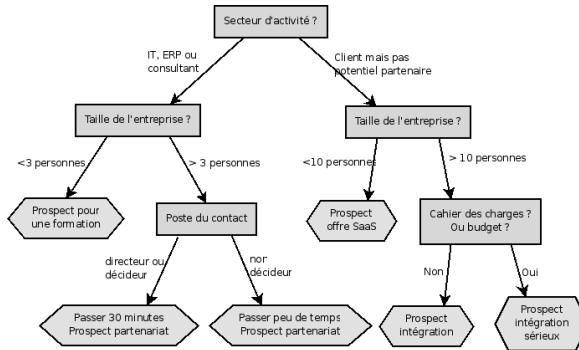


Figure 4.10: Example of profiling customer prospects by the Tiny company

The sales person starts by asking the questions mentioned above and then with a couple of minutes of work can decide what to propose to the prospective customer.

At the end of the exhibition prospects' details and their responses to the questionnaire are entered into Open ERP. The profiling system automatically classifies the prospects into appropriate partner categories.

This enables your sales people to follow prospects up efficiently and adapt their approach based on each prospect's profile. For example, they can send a letter based on a template developed for a specific partner category. They'd use Open ERP's report editor and generator for their sales proposition, such as an invitation to a training session a week after the show.

### 4.3.2 Using profiles effectively

To use the profiling system you'll need to install Open ERP's `crm_profiling` module. It's part of the core Open ERP system in version 5.0.0 so you don't have to download it separately from `addons-extra`.

Once the module is installed you can create a list of questions and the possible responses through the menu `CRM & SRM → Configuration → Segmentation → Questions`.

To obtain the scheme presented earlier you can create the following questions and responses:

Table 4.3: Questionnaire for defining profiles

Questions	Possible Responses
Journalist ?	Yes / No
Industry Sector ?	IT / ERP Consultant / Services / Industry / Others
Number of Staff ?	1 / 2-20 / 21-50 / 51-100 / 101-500 / 500+
Contact's job function ?	Decision-maker / Not decision-maker
Already created a specification for the work ?	Yes / Soon / No
Implementation budget ?	Unknown / <100k / 101-300k / >300k

For instance, a sales person specializing in large accounts for the service sector could have a profile defined like this:

- Budget for integration: Unknown , 100k-300k or >300k ,
- Already created a specification for the work? Yes ,
- Industry Sector? Services .

When entering the details of a specific prospect, the prospect's answers to various questions can be entered in the new fifth tab of the partner form. Open ERP will automatically assign prospects to the appropriate partner category based on these answers.



### Sales targets

The module `report_invoice_salesman` enables you to set up regular business targets. These can be based on sales turnover or sales margins.

With this module you can compare the performance of each sales person with their targets for the period. Sales people can view their own performance against target in real time through a dashboard.

This module is totally integrated with the rest of accounting so there's no need to extract any data from another system to get the sales figures against objectives by sales person or sector – it's just available all the time in real time.

Customers corresponding to a specific search profile can be treated as a priority. The sales person can access the profile of the large active accounts from the menu *Partners* → *Partners by category*.

# Communications Tools

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*Open ERP provides all the information you need to pursue your company's business opportunities effectively. But to stay productive with all the information you have to handle it's essential that you can keep using your normal communications tools by interfacing them with Open ERP, and not be limited just to Open ERP's interface.*

Open ERP can do most things you need to pursue your business opportunities. But there can be quite a bit to learn, which reduces your efficiency while you're learning. And if that's true for a heavy user of the system, it's doubly true for an occasional user or someone who already makes heavy use of standard Office applications and can't easily change.

So for those who need to continue using their traditional Office applications to maintain their efficiency, Open ERP can be fitted out with interface adapters to some of the most common. Your users can participate in many Open ERP-maintained processes without ever leaving their familiar Office-based environment, and can avoid double data-entry yet link into Open ERP's database automatically.

The three following modules are described:

- Mozilla Thunderbird interface,
- Microsoft Outlook interface,
- Microsoft Word interface.

These three modules were developed by the Axelor company (<http://axelor.com/>, located in Paris) and are available through the official Open ERP site in the modules section.

The chapter is a mix of installation and configuration instructions, and basic interaction exercises.

For this chapter you should start with a fresh database that includes demo data, with `sale` and its dependencies installed and no particular chart of accounts configured.

You will also need to have administrator access to your Windows PC to install the Outlook and Word interface adapters described in the chapter.

## 5.1 Microsoft Outlook interface

The Microsoft Outlook plugin enables you to carry out a series of Open ERP operations directly from the Outlook email client:

- create a contact or partner from an email,
- archive an email and its attachments in Open ERP,
- send any file attached to an Open ERP document (such as proposals, projects, and tasks).



### Outlook versions

The Microsoft Outlook plugin works with Microsoft Outlook 2003 and 2007 but not with Outlook Express

## 5.1.1 Installing the Outlook plugin

To start, you must install the `email_interface` module in Open ERP. It's the same module as used by the Thunderbird extension. Don't install it again if it's already there (which it might be because you can use both Outlook and Thunderbird simultaneously to get the same Open ERP functionality – so some of your staff may use one and other may use the other).

Once you've installed the module all you need is to run the Windows auto-installer `tiny_outlook_plugin-X.exe` where X corresponds to the version number downloaded. This file can be found in the list of modules on the official Open ERP site.

Installation is then automatic.

## 5.1.2 Using the Outlook plugin

Using the Microsoft Outlook plugin is quite similar to using the Thunderbird extension. In Outlook find the menu `Tools → Open ERP Options`.

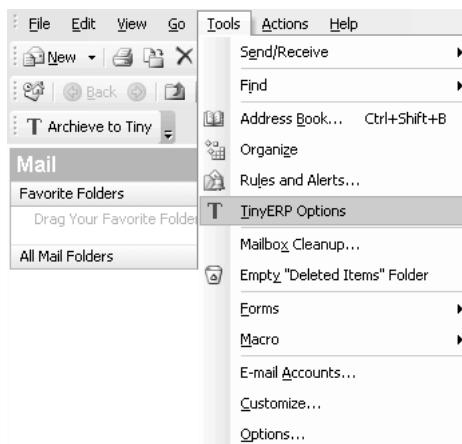


Figure 5.1: Configuration menu for the interface between Outlook and Open ERP

In the window that you use for configuring the Outlook plugin you can enter parameters for accessing the Open ERP server, with various options for:

- how to handle attachments,
- which color to give emails transferred to Open ERP.

Once the server data entry is completed, click **Test the Connection** to check that your parameters make it function correctly.



Figure 5.2: Configuring access to Open ERP from Word

When Outlook is configured, archiving an email and its attached files in Open ERP can be done in several ways:

- directly from the toolbar,
- from the context menu by right-clicking on an email,
- from the page while looking at the email.

You can select an existing contact or create a new contact on the fly in the Open ERP database. Then you can send the email and its attachments and also save it in Open ERP.

It's possible to send attachments to all types of Open ERP objects. For example this might be useful for:

- sending documents about a customer project into the corresponding project in Open ERP,
- attaching the documents about an order (such as proof of payment and order receipts),
- attaching documents to an employee file (such as their CV or annual appraisal).

Once the email is sent into Open ERP it's marked with another color in Outlook to help remind you not to archive it again.

 **Testing the Outlook adapter**

If you install the Outlook adapter as described, explore its functionality with the database as described in this section.

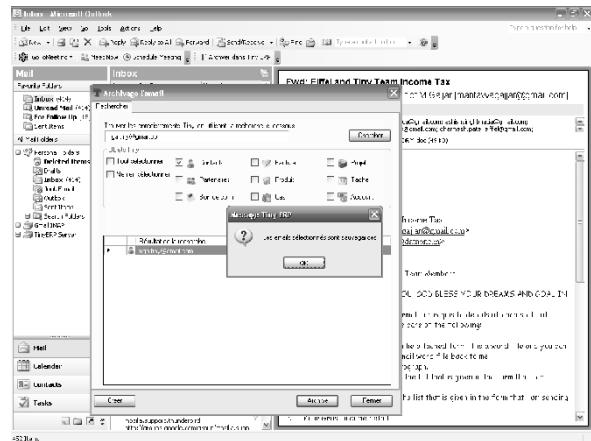


Figure 5.3: Saving an Outlook email in Open ERP

## 5.2 Mozilla Thunderbird interface

Everything that you can do with the Outlook plugin you can also do with the Mozilla Thunderbird plugin – enabling you to carry out a series of Open ERP operations directly from Thunderbird, such as:

- create a contact or partner from an email,
- save an email and its attachments in Open ERP,
- send any file attached to an Open ERP document (such as proposals, projects, and tasks).

### 5.2.1 Installing the Thunderbird extension

To be able to use the Thunderbird plugin you first have to install the Open ERP module `thunderbird`. It may not be loaded in the core of the Open ERP Server so you might have to load it using one of the methods described at the end of *Installation and Initial Setup* (*which can be found in a companion volume to this book and in the online book*). Once you've got it into your server's filesystem it's installed the same way as all of the other modules you've handled so far.

You'll then have to install the Thunderbird extension. To do that, use the file `tiny_plugin_2.0.xpi` which is found in the `plugins` directory of the `thunderbird` module. Don't install it again if it's already there (which it might be because you can use both Outlook and Thunderbird simultaneously to get the same Open ERP functionality – so some of your staff may use one and other may use the other).

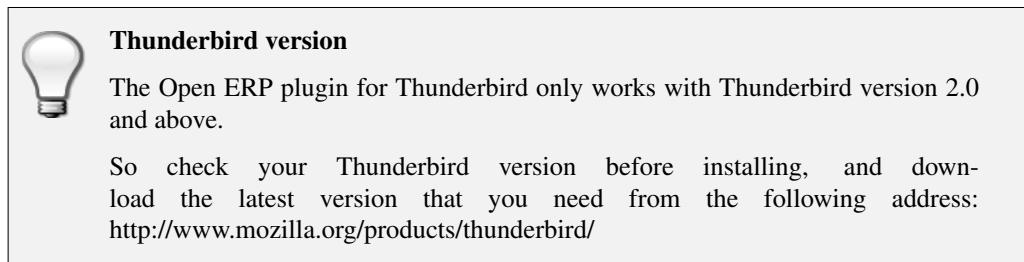
Then take the following steps:

1. From Thunderbird, open the menu `Tools → Complementary Modules`.
2. Click the **Install** button.
3. Select the file `tiny_plugin-2.0.xpi`.

4. Click **Install Now** then restart Thunderbird.

Once the extension has been installed, you have only to create a shortcut in your Thunderbird toolbar for the function **Archive to Open ERP**. Do it like this:

1. Click the right mouse button on the toolbar and select **Personalize**,
2. Place the icon **Archive to Open ERP** in your toolbar in the place of your choice.



## 5.2.2 Thunderbird user interface

When you've installed the module the first thing to do is connect it to Open ERP from Thunderbird. To do this use the menu *Tools → Open ERP Plugin*.

A configuration window appears enabling you to enter configuration data about your Open ERP server.

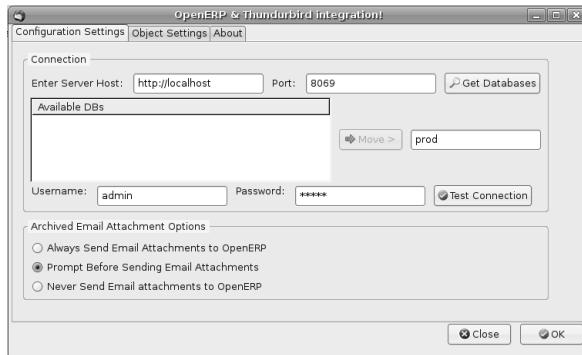


Figure 5.4: Configuration for accessing Open ERP from Thunderbird

To archive an email in Open ERP from Thunderbird select the email and click on the icon **Archive in Open ERP**. Alternatively you could right-click the mouse: either opens a search dialog box.

This allows you to select an object that you'd like to add to your email and its attachments. You can select a partner, a task, a project, an analytical account, or any other object and attach selected mail as .eml file in attachment of selected record.

You can create new case in crm using Create Case button. Select a section for which you want to create case.

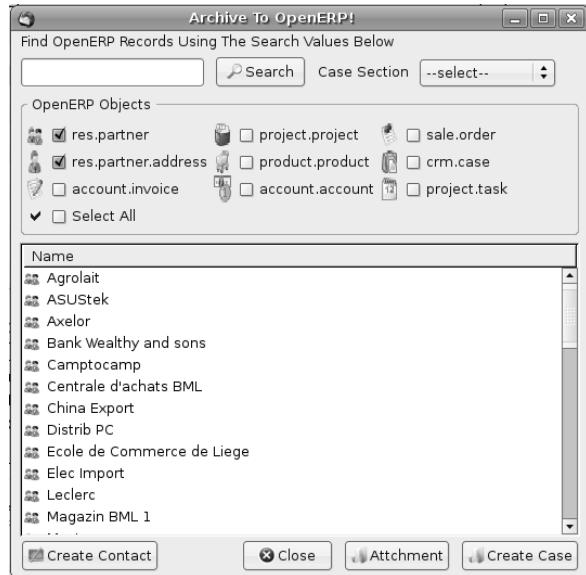


Figure 5.5: Selecting Open ERP objects from Thunderbird



### Document Management

The Thunderbird plugin is compatible with Open ERP's document management. So if you install the module document you could:

- search through the content of your company's documents (those that have the type .doc, .pdf, .sxw and .odt) and also in archived emails,
- have a shared filesystem that's connected to various Open ERP documents to share information and access it with your favorite browser,
- organize and structure your documents (such as projects, partners and users) in Open ERP's system.

If you can't find a partner or contact to correspond with your email in Open ERP it's possible to create one on the fly simply by using the information contained in the email and clicking the **Create** button.

To access archived data from different documents in Open ERP you can use the **Email Thunderbird** interface that appears over Open ERP documents.



### Testing the Thunderbird adapter

If you install the Thunderbird adapter as described, explore its functionality as described in this section using the database you installed.

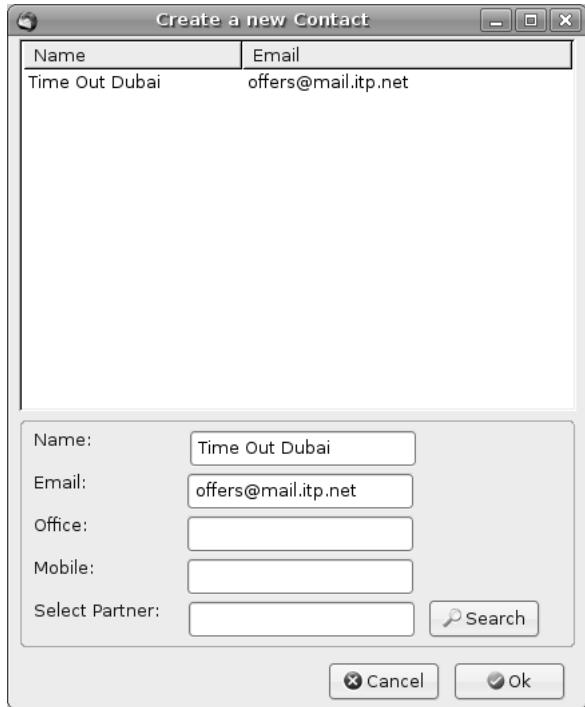


Figure 5.6: *Creating a contact on the fly from Thunderbird*

## 5.3 Microsoft Word interface

Open ERP supplies a Microsoft Word plugin that enables you to create your own document templates. What's more you can use the merge tool *Tools → Merge documents* to insert data from Open ERP while you generate different business documents.

So you can create templates for a number of needs, such as proposals, business letters of agreement, or price requests. Each user can create his or her own document and use the plugin to obtain data from Open ERP. The plugin is very helpful for easily automating business actions.

### 5.3.1 Installing the Word plugin

The module for connecting Microsoft Word is also found in the list of Open ERP modules at <http://openerp.com>. Once it's been downloaded install the file `tiny_word_plugin-X.exe`.

When the program is installed, you must run Microsoft Word and configure the parameters that enable you to access the Open ERP server from Word. Click the menu *Tools → Open ERP options*.

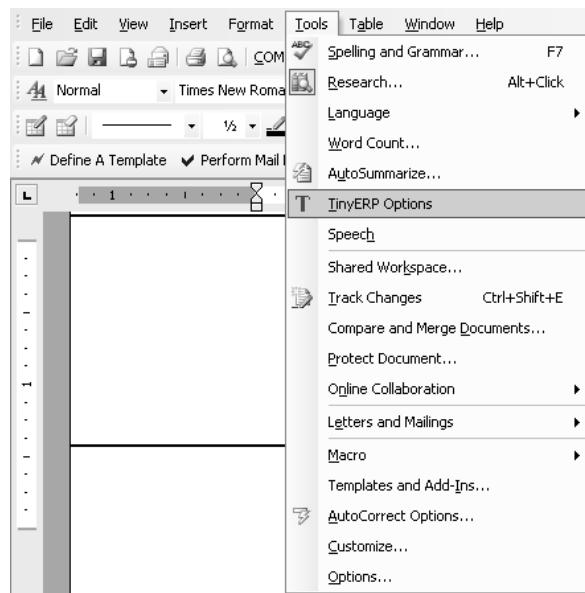


Figure 5.7: *Menu for accessing the configuration of the plugin*

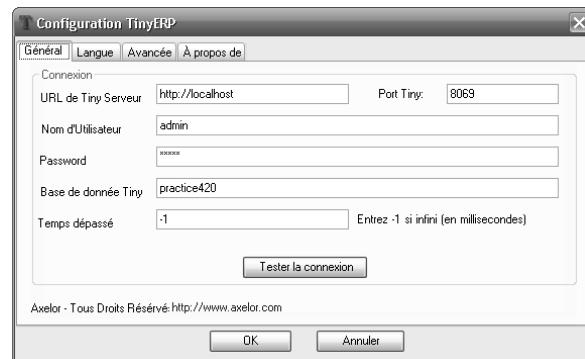


Figure 5.8: *Configuration of the Word plugin for accessing Open ERP*

### 5.3.2 Using the Word interface

Start by selecting the module from which you want to make a report, for example a Sales Order. From Word you can access all the fields in an Open ERP Order, and all of the fields linked to that order such as from Order Lines, and from Products in those Order Lines.

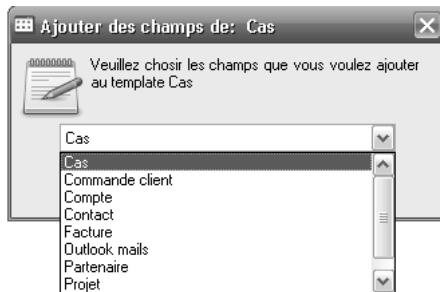


Figure 5.9: Select the module that will generate the report

Complete your document and insert Open ERP fields into the appropriate places.

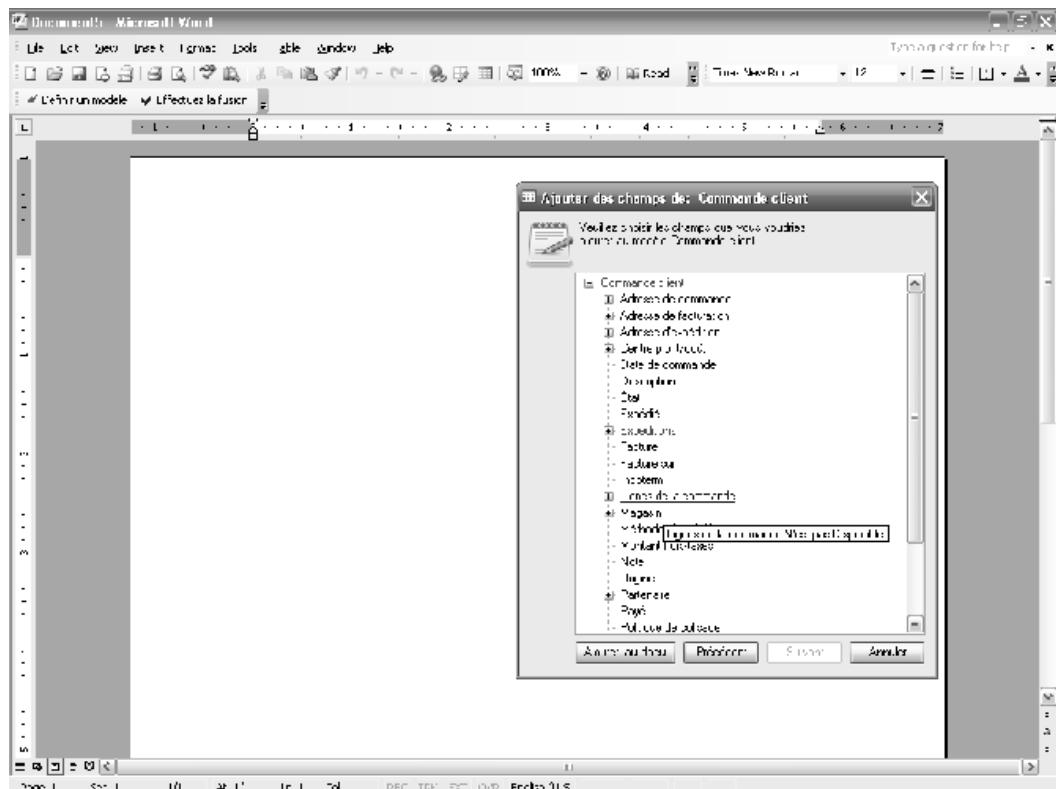


Figure 5.10: Add Open ERP fields into a Word document



### Fields in red

When you've selected some fields and added them into your Word document, some of them appear in red. This color indicates that you can't use that particular field because it has a complex data relationships that can only be discovered when you start to use the field.

Select the merge tool from by clicking **Perform Mail Merge** from the toolbar. This connects Microsoft Word to Open ERP, at which point it searches for data to insert into the document. This tool enables you to select which documents must be included in the report. Make your selection and click **Start Merge** to run the tool that produces your different documents.

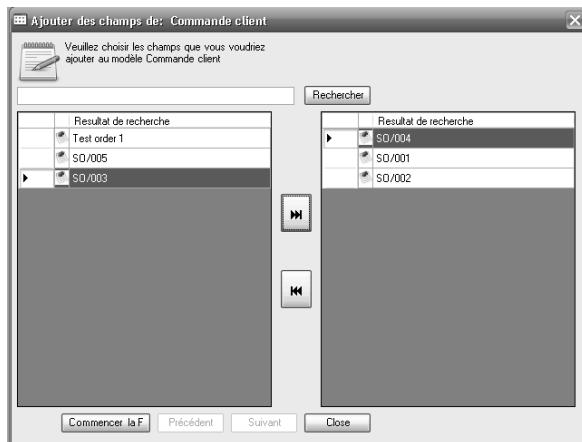


Figure 5.11: Selecting the Open ERP documents to use in the merge

Word then generates the documents by inserting the Open ERP data. You get one page for each selected document.



### Testing the Word adapter

If you install the Word adapter as described, explore its functionality using the database as described in this section.

In *Configuration & Administration* (which can be found in a companion volume to this book and in the online book) you'll see another, more powerful, module that enables you to create complete reports in OpenOffice.org through an interface added directly in Open ERP. So you can create your own templates, such as fax and invoice templates.

These reports can then be exported in PDF by leaving Open ERP, or can be edited before sending to a customer. So you can also personalize the details of your faxes and invoices as needed, even though they are based on your templates.

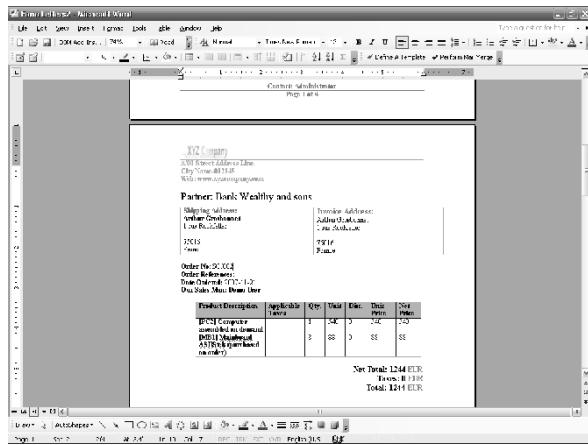


Figure 5.12: Result of merging a Word document with data from Open ERP



## **Part III**

# **Sales**

These two chapters are about selling and purchasing products and services.



# Management of Sales

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*This chapter describes Open ERP's sales management, following the complete sales order process from quotation to customer order, including the management of deliveries and of invoicing. It doesn't look at customer relations and pre-sales, which are handled by the CRM (Customer Relationship Management) modules described in an earlier part of the book.*

*It also describes the management of carriers, margin control and reporting, and price management and the handling of various types of sales discount campaign.*

For this chapter you should start with a fresh database that includes demonstration data, with `sale` and its dependencies installed and no particular chart of accounts configured.

## 6.1 Sales Quotations

In Open ERP a quotation and an order are handled by the same underlying object, but in different states. You can consider an order to be a quotation that has evolved because it has been confirmed by the customer. Or, conversely, that a quotation is an order that hasn't yet been validated or cancelled. All of the orders and quotations in the system can be reached using the menu *Sales Management → Orders*.

### 6.1.1 Entering Quotation details

To enter details of a new quotations you can use the menu *Sales Management → Orders → New Quotation*. Open ERP then opens a new window so that you can enter data into new blank quotation form.

Some information is automatically completed by the system:

- an internal reference for the quotation or order,
- the sale point that the order will be delivered from,
- the order date.

You can modify any of that information before validating the quotation. The customer reference is shown in the header of the order. This optional field if for the customer's own reference number – if the customer doesn't supply one then just leave it empty.

You then enter all the data about the order in the **Sale Order** tab. Start by entering the customer name, selecting the correct customer from the list of customers in the system. You can create a new customer on the fly at this stage if necessary – press **<F1>** in the empty **Customer** field to do that.

Once the customer name has been selected, different fields of the order become completed automatically, based on the configuration of the partner form for that customer:

Sales Orders - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Welcome Administrator Home Preferences About Logout Requests: 1 request(s)

**MAIN MENU** SHORTCUTS Production dashboard Modules

**Sales Orders** Search Form Calendar Gantt Graph Process

Save Save & Edit Cancel << First < Previous [5/5] Next > Last >>

Order Reference: S0001 Customer Ref: Picked:

Shop: Tiny sprl Date Ordered: 02/02/20 Paid:

Sale Order Other data History

Customer: Agrolait ? Ordering Contact: Tiny sprl

Invoice Address: Tiny sprl Shipping Address: Tiny sprl

Pricelist: Public Pricelist Analytic Account:

**Sales order lines**

Description	Qty	UoM	Discount (%)	Unit Price	Net Price	Subtotal
New server config + material	1.00	PCE	0.00	123.00	123.00	123.00
[PC1] Basic PC	3.00	PCE	0.00	450.00	450.00	1,350.00
[PC1] Basic PC	3.00	PCE	0.00	450.00	450.00	1,350.00
[MB1] Mainboard ASUSTek A7N8X	5.00	PCE	0.00	88.00	88.00	440.00

Import | Export << First < Previous [1 - 4 of 4] Next > Last >>

Untaxed Amount: 3,263.00 Taxes: 0.00 Total: 3,263.00 Compute

?Order State: Quotation Confirm Order Cancel Order

[CUSTOMISE]

Done

Figure 6.1: Data entry for a new quotation

- **Order Address** : person handling the order at the customer. By default, Open ERP proposes the Contact Address at the selected partner.
- **Delivery Address** : address used on the delivery order. By default, Open ERP proposes the Delivery address from the partner form. If nothing is defined in that slot, it uses the default address instead.
- **Invoice Address** : address used to send the invoice to the customer. By default, Open ERP proposes the address labelled **Invoice** from the partner form. If nothing is defined there, it uses the default address instead.
- **Price List** : will determine both the currency of the quotation and the price that will be used for each product.
- **Payment Conditions** : shows the payment method that the customer will follow, for example 50% on order, 50% on delivery .
- **Delivery Method** : for example Post – Express Mail .

You can modify any of these fields on the order as you go.

You can also set an analytic account for your order. This account will be used during invoicing to generate accounting entries corresponding to the invoice automatically. This is extremely useful for assigning revenues to the project or case specified by this order.

**Analytic Accounts**



If you're managing by task, the analytic account to be selected is the one that corresponds to the project for the order. The sale carried out by the order can be allocated to the project so that profitability calculations can be made.

Once the information has been entered, you can enter data for the order lines. To do that, create a new order line as shown in the figure *Margin Control* (which can be found in a companion volume to this book and in the online book):

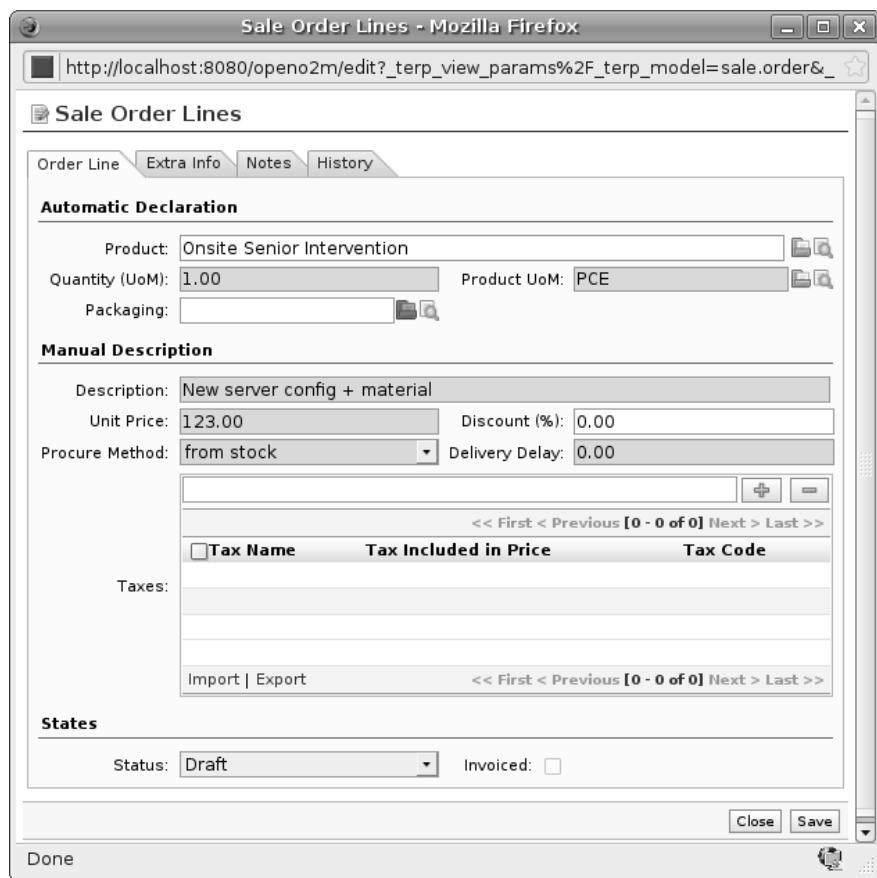


Figure 6.2: Entering a new customer order line

First of all select the product that is to be sold to the customer. Open ERP shows some useful information in

the list of products to help you during your sale:

- **Real stock** : physically present in your warehouses. This value depends on the sale point selected in the order header. Different sale points can be linked to different warehouses, giving different stock levels, or can use the same warehouse.
- **Virtual stock** : shows a salesperson the quantity that can be sold, taking into account both stock reserved for other orders and amounts that could arrive in the short term.
- **Customer Price** : (May not be shown, depending on the installed modules). depends on the conditions attached to the customer, calculated on the list price. This is the price that's proposed by default in the customer quotation, unless it's been modified by the salesperson.
- **List Price** : the base sale price for the given product. It provides a base for the salesperson to be able to judge whether to offer a discount to the customer, and how much any discount should be.
- **Cost Price** : shows the cost price of the product. If the salesperson sells at less than this amount, then the company loses money.

Code	Name	Variants	Real Stock	Virtual Stock	Customer Price	List Price	Cost Price	Status
Onsite Senior Intervention			0.00	0.00	38.25	38.25	25.50	
Onsite Intervention			0.00	0.00	30.75	30.75	20.50	
OPC1	Basic PC		14.00	14.00	450.00	450.00	300.00	
OPC2	Basic+ PC (assembly on order)		0.00	0.00	750.00	750.00	500.00	
OPC3	Medium PC		8.00	8.00	900.00	900.00	600.00	
OPC4	Customizable PC		0.00	0.00	1,200.00	1,200.00	800.00	End of Lifecycle
OMB1	Mainboard ASUSTek A7NRY		18.00	6.00	88.00	88.00	54.00	

Figure 6.3: Selecting a product in a Sales Order

When the product that's to be sold to the customer has been selected, Open ERP automatically completes all the other required fields: price, unit of measure, description, discount, lead times, applicable taxes, default packaging and the product description. All of this information comes from the product form.



### Visible Discount

If a discounted price is taken from a price list then by default that figure is shown as the sale price to the customer. He'll see a discount of 0% along with unit price that is different from the list price. If you install the module `product_visible_discount` from addons-extra you can configure whether you want to make the discount explicitly visible on an order form as a percentage difference from the list price, or just show a reduced unit price as it does by default.

In the form, the selected product is presented in the language of the user so that he can see what he's selling. The description of the product sold can also be expressed in the customer's language. The translation to the customer's language is used on the quotation or order when it's printed.

The screenshot shows a Firefox browser window displaying the OpenERP web interface. The main window is titled 'Products - Mozilla Firefox' and shows a product creation form for a 'Basic PC'. The form includes fields for Name (Basic PC), Code (PC1), and a checkbox for 'Can be sold' which is checked. Below the form is a link to 'Add Translations'. A second window, titled 'Add Translations - Mozilla Firefox', is open over the main window. This dialog is titled 'Add Translation' and has a dropdown menu 'Add Translation for: Fields'. It contains a table with two columns: 'Field' and 'English'. Under 'Field', there are four entries: 'Description', 'Name', 'Purchase Description', and 'Sale Description'. Under 'English', there are four corresponding input fields. At the bottom of the dialog are 'Save' and 'Close' buttons, and a 'Done' button at the very bottom.

Figure 6.4: Sale of a product in a partner language that differs from the user language



### One-off Sales

If a product's only sold to a customer once, you don't have to enter data into a complete new product form just for that sale. You can manually complete all the information in the order without putting it into a product: description, price, quantity, lead time, taxes. In this case Open ERP won't generate a delivery note because the product isn't held in stock.

When all of the products are entered, you can print the quotation and send it to the customer. To do this, click

on the report **Quotation / Order** in the **REPORTS** links to the right. Open ERP opens the quotation in PDF to enable to you to see it before printing.

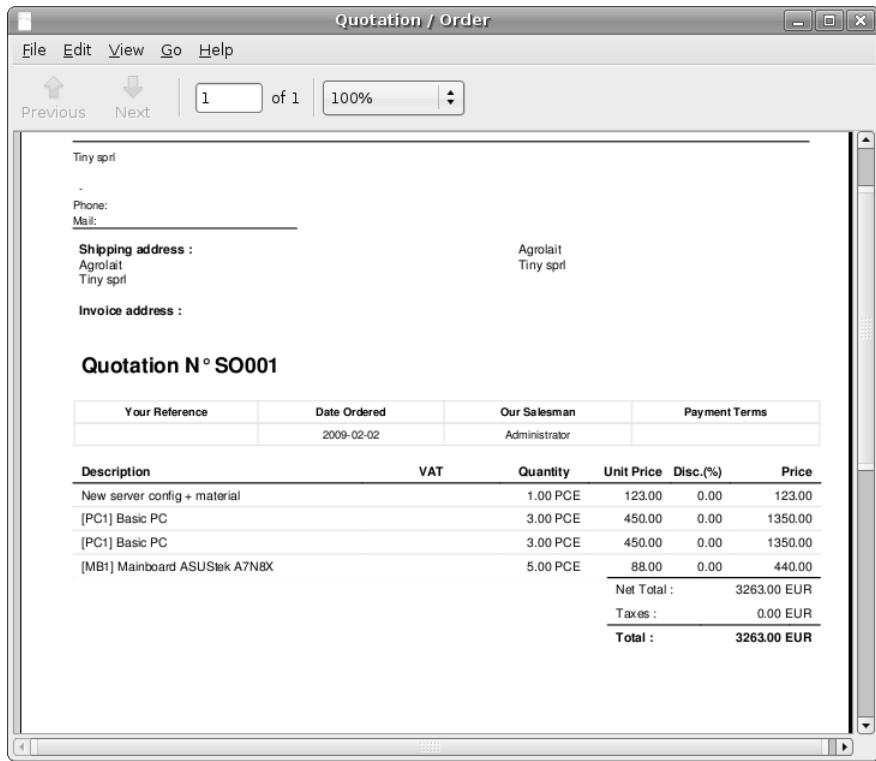


Figure 6.5: Printing a customer quotation

You can then confirm the quotation to move it on to an order if the order is confirmed by the customer, or just cancel the window without confirming the order to leave it in quotation state. To find all of the current quotations, you can use the menu *Sales Management → Orders → My Orders → My Quotations*.

To follow the process for your order, you can click on the process view from the order form. Open ERP shows you an interactive process view of that order. For more information about its use, look at *Process (which can be found in a companion volume to this book and in the online book)*.

## 6.2 Management of Packaging

Products can be managed in several different packaged forms. For example if you sell batteries you can define the following packages for a given battery product:

- by Piece: a battery
- Blister pack: a pack of 4 batteries
- Pack of 100 blisters: 400 batteries

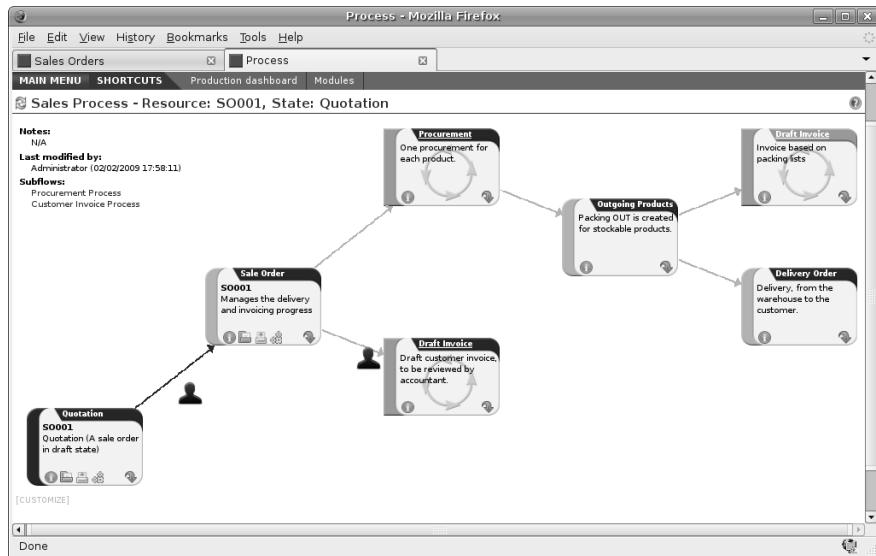


Figure 6.6: *Process view from following a customer order*

- Palette, containing 40 packs for a total of 16,000 batteries.

Open ERP's packaging management enables you to sell the same product in several different forms. The salesperson could sell, separately, one battery or a palette of batteries. In the order, you can select the default packaging type as a function of the quantities ordered.

For example, if the customer wants to buy 30,000 batteries, the salesperson can select the package palette. Open ERP will then propose the sale of 32,000 batteries, which corresponds to two palettes. Or the salesperson can select 75 packs.

The available packages are defined in the product form, in the **Packaging** tab. The first item on the list is the one that will be used by default.

Once a package has been defined on the order, Open ERP will throw up an alert if the ordered quantities don't correspond to the proposed packages. The quantity must be a multiple of the field **Quantity by Package** defined on the packaging form.

Don't confuse the management of packaging with the management of multiple units of measure. The Units of Measure are used to manage the stock differently in its different units. With packages, the stock is always managed by individual item but information about the package to use is supplied to the storesperson along with that item.

Even if the effects are the same, the printed documents will be different. The two following operations have the same effect on stock movement levels but will be printed differently on the sales order and the packing order:

- 32,000 batteries, delivered on two palettes,
- 2 palettes of batteries, with no information about packaging.

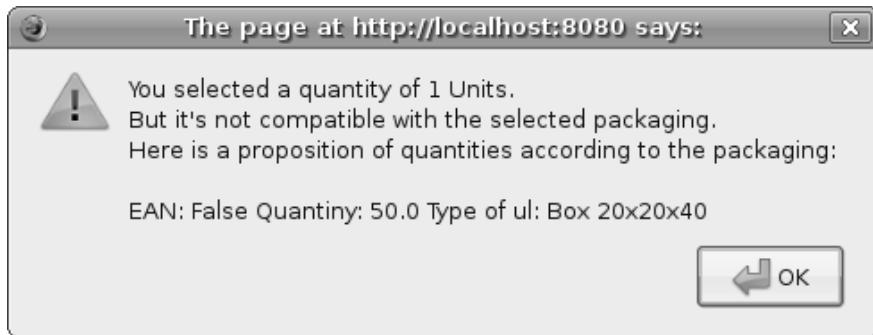


Figure 6.7: Alert on the quantities sold compared with the packaging

If the customer wants to order a palette and 10 packs, the salesperson can put two order lines on the sales order using the same product but different units of measure.

### 6.2.1 Example Packing and different products

It's sometimes more useful to define different products than to define several possible packages for the same product. A case of beer in a supermarket is a good example. A case holds 24 bottles, plus the empty case itself. The customer can buy bottles by the piece or a case of 24 bottles at one go.

You could define two packages for the product `Bottle of beer : PCE` and `case`. But this representation doesn't let you manage the stock and price of empty cases. So you might instead prefer a Bill of Materials for the sale, defining and using three different products:

- the empty case for the beer,
- the bottle of beer,
- the case of 24 bottles of beer.

You also define the bill of materials below which determines the make-up of the case of 24 beers:

- Case of 24 bottles of beer: 1 unit,
- Bottle of beer: 24 units,
- Empty case of beer: 1 unit.

Each of these three products has a different price. The products `Bottle of beer` and `Empty case of beer` have a stock level that needs to be managed. The `Case of 24 bottles of beer` has no stock because, if you sell the product, Open ERP automatically moves the stock in two lines, one for the empty case and the other for the 24 individual bottles of beer. For more information on bills of material for sale, see chapter *Manufacturing* (which can be found in a companion volume to this book and in the online book).

## 6.3 Management of Alerts

To manage alerts on products or partners, you can install the warning module. Once that is installed, you will be able to configure a series of alerts on the partners or products by setting parameters in the new **Warnings** tab on each of the forms.

The screenshot shows the Odoo Partners form in Mozilla Firefox. The top menu bar includes File, Edit, View, History, Bookmarks, Tools, and Help. Below the menu is a toolbar with Save, Save & Edit, and Cancel buttons, along with navigation links: << First < Previous [1/22] Next > Last >>. The main form area has tabs: General, Sales & Purchases, History, Notes, Accounting, and Warnings. The Warnings tab is currently selected, displaying three sections: "Warning on the sale order", "Warning on the purchase order", and "Warning on the picking". Each section contains a checkbox labeled "Sale Order:", "Purchase Order:", and "Stock Picking:" respectively, all of which are checked. To the right of the main form is a sidebar with several sections: Overdue Payments, Labels, ACTIONS (Mass Mailing, Send SMS, Company Architecture), and LINKS (Sales, Purchase orders, Invoices, All account entries, Receivables & Payables, Events). The sidebar also features a "Done" button at the bottom.

Figure 6.8: Management of alerts on partners

You can activate alerts for a series of events. For each alert you should enter a message that will be attached to the person setting off the event. The different available events on the partner form are:

- Entering a customer order for the partner,
- Entering a supplier order for the partner,
- Sending a delivery to the partner (or receiving an item),
- Invoicing a partner.

The alerts that can be configured on a product form are:

- The sale of that product,
- The purchase of that product.

The screenshot shows the OpenERP product management interface. On the left, there's a sidebar with 'MAIN MENU' and 'SHORTCUTS' sections, and a 'REPORTS' section containing links like 'Product Cost Structure', 'Future Stock Forecast', 'Price List', and 'Products Labels'. Below that is an 'ACTIONS' section with 'Create Procurement' and a 'LINKS' section with various stock-related links. The main area is titled 'Products' and shows a form for a 'Basic PC' with code 'PC1'. It includes fields for 'Name', 'Code', 'Variants', and 'EAN13'. Under 'Product Type', there are checkboxes for 'Can be sold', 'Can be Purchased', and 'Rentable Product'. Below the form are tabs for 'Information', 'Procurement & Locations', 'Prices & Suppliers', 'Descriptions', 'Packaging', 'Accounting', and 'Warnings'. The 'Warnings' tab is active, showing a warning message: 'Sale Order Line: This is Test Warning.....'. Another 'Warnings' section below it shows 'Purchase Order Line:'. The top right of the screen shows 'Welcome Administrator' and 'Logout'.

Figure 6.9: Management of alerts on products

For example, if you enter an alert for the invoicing of a customer, for an accountant entering an invoice for that customer, the alert message will be attached as shown in the figure *Price management policies* (which can be found in a companion volume to this book and in the online book):

## 6.4 Control of deliveries and invoicing

### 6.4.1 Configuration of orders

Depending on the configuration of the order, several different possible consequences can follow. Three fields determine the future behaviour of an order:

- **Packing Policy**: Partial Delivery or Complete Delivery,
- **Shipping Policy**: Shipping & Manual Invoice, Payment Before Delivery, Invoice on Order After Delivery, and Invoice from the Packing,
- **Invoice on**: Ordered Quantities or Delivered Quantities.



#### Simplified view

If you work in the Simplified View mode, only the **Shipping Policy** field is visible in the second tab on the order. To get to the Extended View mode, assign the group **Usability – Extended View** to the current user.



Figure 6.10: Alert from invoicing a customer

#### 6.4.2 Packing mode

The packing mode determines the way that the storesperson will do the packing. If the order is put into **Partial Delivery** mode, the packing order will appear in the list of things for the storesperson to do as soon as any of the products on the order is available. To get the list of items to be done you can use the menu *Stock Management → Outgoing Products → Available Packing*.

The storesperson will then be able to make a partial delivery of the quantities actually available and do a second packing operation later when the remaining products are available in stock.

If the packing mode is **Complete Delivery**, the packing list won't appear in the list of packings to do until all of the products are available in stock. This way there will only be a single delivery for any given order.

If the storesperson wants, the delivery mode can be modified on each packing list even after the order has been confirmed.

In the case of invoicing on the basis of packing, the cost of delivering the products will be calculated on the basis of multiple deliveries. This risks incurring a higher cost because of each delivery. If invoicing is on the basis of the orders, the customer will only be invoiced once for the whole delivery, even if the delivery of several items has already been made.

## 6.5 Management of Carriers

To manage deliveries in Open ERP, install the `delivery` module. (If you have installed the `profile_manufacturing` profile this is installed by default during configuration of the database.) This module enables you to manage:

- the different carriers with whom you work,
- the different possible modes of transport,
- cost calculation and invoicing of each delivery,
- the modes of transport and their tariffs.

Once the `delivery` module has been installed, the first thing to do is to configure the different modes of delivery accepted by your company. To do that use the menu *Stock Management → Configuration → Delivery → Delivery Method*.

For each delivery mode, you should define the following elements:

- Name of the delivery mode,
- The partner associated with the transport (which can be yourselves),
- The associated product.

For example you can create the following modes:

Table 6.1: Example Delivery Modes

Delivery Mode	Partner	Associated Product
Express Track	Mail Office	Express Track Delivery
Priority Courier	Mail Office	Courier Express Delivery
EFG Standard	EFG Inc	Delivery EFG
EFG Express	EFG Inc	Delivery EFG Express

Information about the invoicing of transport (such as accounts, applicable taxes) are entered in the product linked to the delivery mode. Ideally the product should be configured as **Product Type** Service and **Procure Method** Make to Stock.

You can use the same product for several delivery modes. This simplifies the configuration but you won't be able to separate out your sales figures by delivery mode.

### 6.5.1 Tariff grids

Unlike ordinary products, delivery prices aren't given by pricelists but by delivery grids, designed specifically for this purpose. For each delivery mode, you enter one or several tariff grids. Each grid is used for a given region/destination.

For example, for the postal tariffs for Priority Courier, you generally define the three tariff grids for Mail Office:

- Courier National,
- Courier Europe,
- Courier Outside Europe.

To define a new delivery grid, use the menu *Stock Management → Configuration → Deliveries → Delivery Pricelist*. You then give a name to your delivery grid and define the region for which the tariffs in the grid will be applicable. To do this, use the second tab **Destination**. There you can set:

- A list of countries (for UK or Europe, for example),
- A list of states,
- A range of post codes (for Paris you might have 75000 – 75900).

You must then set the rules for calculating the price of transport in the first tab **Grid definition**. A rule must first of all have a name. Then set the condition for which this rule is applicable, for example `Weight < 0.5kg`.



### Weights

Weights are expressed in kilograms. You can define a number with a decimal point or comma, so that to set 500g you'd put 0.5 in the weight rule.

Then set the sale price and the cost price. The price can be expressed in different ways:

- a fixed price,
- a variable price, as a function of weight, or volume, or weight x volume or price.

For example, mailing within France using 2008 tariffs would be defined as shown in the table.

Table 6.2: Example Tariff Rules

Rule Title	Condition	Price	Type of Price
S	Weight < 3 kg	6.9	Fixed
M	Weight < 5 kg	7.82	Fixed
L	Weight < 6 kg	8.53	Fixed
XL	Weight < 7 kg	9.87	Fixed

You can also define rules that depend on the total amount on the order. For example to offer fixed price delivery if the order is more than 150 USD, add the following rule:

Table 6.3: Additional Tariff Rule

Rule Title	Condition	Price	Type of Price
Franked > 150 USD	Price > 150 USD	10	Fixed

## 6.5.2 Using delivery modes

Once the delivery modes and their tariffs have been defined you can use them in a Sales Order. There are two methods for doing that in Open ERP.

- Delivery based on order quantities,
- Delivery based on delivered quantities.

## 6.5.3 Delivery based on order quantities

To add the delivery charges on the quotation, use the action **Delivery Costs** available to the right of the form. A dialog box opens, asking you to select a delivery mode from one of the preconfigured available ones.

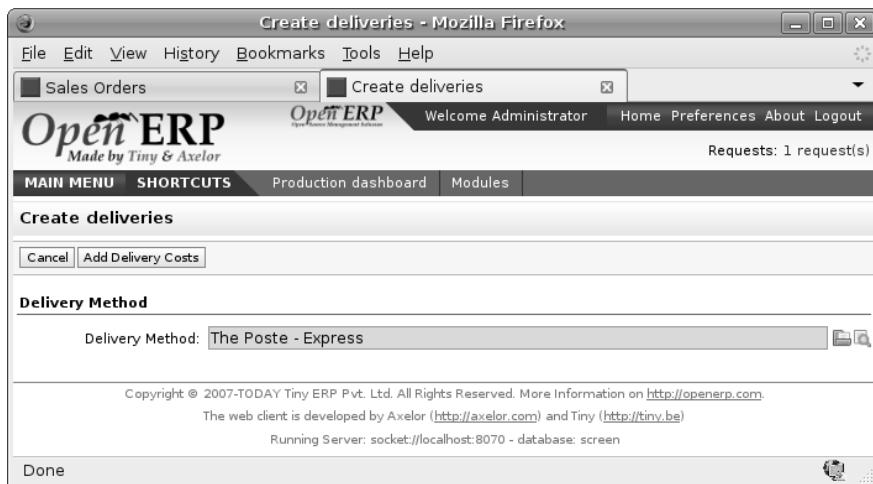


Figure 6.11: Adding a delivery charge to an order

Once the delivery mode has been selected, Open ERP automatically adds a line on the draft order with the amount calculated by the delivery function. This technique enables you to calculate the delivery charge based on the order and then, separately, how the products will really be delivered to the customer.

If you want to calculate the exact delivery charges depending on the actual deliveries you must use invoicing based on deliveries.

## 6.5.4 Delivery based on the packed items

To invoice the delivery on the basis of items packed you set the delivery mode in the **Delivery method** field on the second tab of the order, **Other data**. Don't add delivery lines to the Sales Order but to the Invoices after they have been generated for the delivered items.

For this to work properly, your order must be set to the state **Invoice from the Packing**. You can then confirm the order and validate the delivery.

When the manager has generated the invoices corresponding to the deliveries carried out, Open ERP automatically adds a line on each invoice corresponding to the delivery charge, calculated on the basis of the items actually sent.

## 6.6 Margin Control

It's important to keep good control of margins in every company. Even if you have a good level of sales it won't guarantee company profitability if margins aren't high enough. Open ERP provides a number of systems for monitoring margins. The main ones are:

- Margins on a sales order,
- Margins by product,
- Margins by project,
- Using price lists.

### 6.6.1 Margins on sales orders

If you want to check your margins on sales orders you can install the `sale_margin` module from `addons-extra`. This will add margins calculated on each order line and on the order total.

The screenshot shows the OpenERP web interface for managing sales orders. At the top, there's a navigation bar with links for Welcome, Administrator, Home, Preferences, About, and Logout. It also displays "Requests: 1 request(s)". Below the header, there's a main menu with "MAIN MENU" and "SHORTCUTS" tabs, and a "Modules" dropdown. A "REPORTS" section contains a link to "Quotation / Order". An "ACTIONS" section contains a link to "Advance Invoice".

The main content area is titled "Sales Orders" and shows a list of sales orders. One specific order, SO006, is selected. The order details include:

- Order Reference: SO006
- Customer Ref: (empty)
- Picked:
- Shop: Tiny sprl
- Date Ordered: 02/04/2009
- Paid:

Below the order details, there are tabs for "Sale Order", "Other data", and "History". Under "Sale Order", there's a section for "Customer" (Agrolait), "Invoice Address" (Sylvie Lelitre, 69 rue), "Shipping Address" (Sylvie Lelitre, 69 rue), "Pricelist" (Public Pricelist (EUR)), and "Analytic Account" (empty).

The "Sales order lines" section shows one line item:

Description	Qty	UoM	Discount (%)	Unit Price	Net Price	Subtotal
[PC1] Basic PC	10.00	PCE	0.00	450.00	450.00	4,500.00

At the bottom of the order screen, there are buttons for "Import | Export", "Untaxed Amount: 4,500.00", "Taxes: 0.00", "Total: 4,500.00", "Compute", "Margin: 1,500.00", and dropdowns for "Order State: Quotation", "Confirm Order", and "Cancel Order".

Figure 6.12: An order with the module `sale_margin`

The margin on each line is defined as the quantity sold multiplied by the sale price for the customer less the cost price of the products. By default, products are managed using standard price in Open ERP (cost price fixed manually and reviewed once per year). You can change that to Average Weighted Price, meaning that the product cost fluctuates with purchases from suppliers. After product receipt you can add fixed costs, such as delivery costs, in the cost of each product. Open ERP supports a third method of updating the cost price of products using the module `product_extended`, also in `addons-extra` at the time of writing. This adds a button to the product form which lets you automatically recalculate the cost price for the selected products. The cost price is calculated from the raw materials and the operations carried out (if the products have been manufactured internally so that you have set their costs).

## 6.6.2 Margins by product

To track margins by product, install the module `product_margin`. Once the module is installed you can see the margins by product by using the menu *Products → Reporting → Margins by Product*.

When you've clicked on the menu, Open ERP asks for an analysis period and the state of invoices. If no period is given, Open ERP will calculate margins on all of the operations without restriction. By default, however, Open ERP proposes a period of the last 12 months for analysis.

You can also filter the analysis on certain types of invoice:

- All invoices, including draft invoices not yet validated,
- All open and/or paid invoices,
- Paid invoices only.

You then get a margin analysis table. The following fields are given by product for sales:

- **Avg. Unit Price** : the average unit sale price,
- **Catalog Price** : the list price based on this product,
- **# Invoiced** : the number of sold products that have been invoiced,
- **Sales Gap** : the difference between the revenue calculated from list price and volume, and the actual sales,
- **Turnover** : the actual sales revenue for the product selected,
- **Expected Sales** : the number of products sold multiplied by the list price.

The following fields are given by product for purchases:

- **Avg. Unit price** : the average unit purchase price,
- **Standard price** : the standard cost price of the product for the company,
- **# Invoiced** : the number of purchased products,
- **Purchase gap** : the difference between the total actual cost and the standard cost multiplied by the number of units purchased,

Product Margins - Mozilla Firefox												
OpenERP Made by Tiny & Axelor												
MAIN MENU   SHORTCUTS   Production dashboard   Modules												
Product Margins												
Basic Search	Advanced Search	Search	Form	Calendar	Gantt	Graph	Process	?				
Name:	Code:											
Category:												
<a href="#">Filter</a>	<a href="#">Delete</a>	<a href="#">Edit</a>	<a href="#">New</a>									
<< First < Previous [1 - 29 of 29] Next > Last >>												
<input type="checkbox"/>	Name	Code	Avg. Unit Price	Invoiced #	Turnover	Sales Gap	Total Cost	#Purchased	Total Margin	Expected Margin (%)	Total Margin (%)	Expected Margin (%)
	Onsite											
<input type="checkbox"/>	Onsite Senior Intervention		123.00	1.00	123.00	-84.75	0.00	0.00	123.00	38.25	100.00%	100.00%
	Onsite Intervention		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
<input type="checkbox"/>	Basic PC	PC1	450.00	6.00	2,700.00	0.00	0.00	0.00	2,700.00	2,700.00	100.00%	100.00%
<input type="checkbox"/>	Basic+ PC	PC2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
<input type="checkbox"/>	(assembly on order)											
<input type="checkbox"/>	Medium PC	PC3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
<input type="checkbox"/>	Customizable PC	PC4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%
	Mainboard											
<input type="checkbox"/>	ASUSTek A7N8X	MB1	88.00	5.00	440.00	0.00	0.00	0.00	440.00	440.00	100.00%	100.00%
	Mainboard											
<a href="#">«</a> <a href="#">»</a> <a href="#">...</a>												
<a href="#">Done</a>												

Figure 6.13: Screen showing product margins

- **Total cost** : the total cost of purchases for the product under consideration,
- **Normal cost** : the number of products sold multiplied by the standard cost price.

The following fields are given by product for margins:

- **Total Margin**,
- **Expected Margin**,
- **Total Margin in percent**,
- **Expected Margin in percent**.

### 6.6.3 Margins by Project

To manage margins by project you must install the analytical accounts with management by task. Use of these accounts is described in *Analytic Accounts (which can be found in a companion volume to this book and in the online book)*. Install the module `account_analytic_analysis` and all of its dependencies. This module adds a tab on the analytic account form to handle the different margins in an analytic account representing a project or a case, and several new reports on those accounts.

**Product Margins - Mozilla Firefox**

File Edit View History Bookmarks Tools Help

MAIN MENU SHORTCUTS Production dashboard Modules

Product Margins Search Form Calendar Gantt Graph Process

Name: Basic PC Code: PC1

<< First < Previous [3/29] Next > Last >>

Margins

**Analysis Criteria**

From Date: 01/01/2009 To Date: 12/31/2009

Invoice State: Draft, Open and Paid

**Sales**

?Avg. Unit Price: 450.00	?Catalog Price: 450.00
?# Invoiced: 6.00	?Sales Gap: 0.00
?Turnover: 2,700.00	?Expected Sale: 2,700.00

**Purchases**

?Avg. Unit Price: 0.00	?Standard Price: 300.00
?# Invoiced: 0.00	?Purchase Gap: 0.00
?Total Cost: 0.00	?Normal Cost: 0.00

**Margins**

?Total Margin: 2,700.00	?Expected Margin: 2,700.00
?Total Margin (%): 100%	?Expected Margin (%): 100%

[CUSTOMISE]

Done

**REPORTS**

- Product Cost Structure
- Future Stock Forecast
- Price List
- Products Labels

**ACTIONS**

- Create Procurement

**LINKS**

- Product sales
- Bill of Materials
- Product BoM Structure
- Minimum Stock Rules
- Stock by Lots
- Stock by Location
- Future Stock Moves
- All Stock Moves

Figure 6.14: Detail of margins for a given product

**Analytic account - Mozilla Firefox**

File Edit View History Bookmarks Tools Help

http://localhost:8080/form/view?mode=account.analytic.account

Welcome Administrator Home Preferences About Logout Requests: No requests

Getting Started BBC Headlines

**OpenERP** Made by Tiny & Axelor

MAIN MENU SHORTCUTS Accounting cashaccr

Analytic account Search Form Calendar Graph

New Edit Duplicate Delete << First < Previous [2/39] Next > Last >>

Account Data Analysis summary Stats by month Stats by user

**Work done stats**

Total cost: -4590.00	Remaining revenue: 0.00
Invoiced amount: -3000.00	Theoretical revenue: 600.00
Hours tot: 5.00	Invoiced hours: 4.00
Remaining Hours: 0.00	

**Analysis stats**

Revenue per hours (real): -75.00	Real margin: -7580.00
Theoretical margin: -3990.00	Real margin rate (%): 39.53

**Key dates**

Last invoice date:	Last invoiced worked date:
Last worked date: 2008-09-24	

**To be Invoiced**

Uninvoiced hours: 13.00	Uninvoiced amount: 0.00
-------------------------	-------------------------

Done

**REPORTS**

- Analytic Balance
- Inverted Analytic Balance
- Cost Ledger (Only quantities)
- Cost Ledger

**ACTIONS**

- Final invoices

**LINKS**

- Invoice lines
- Costs & revenues
- Lines to Invoice
- Timesheets

Figure 6.15: Detail of margins for a case

Start by opening a project's analytic account through the *Project Management → Financial Project Management → Analytic Accounts → All Analytic Accounts* and selecting one of them. In the new analytic account **Analysis summary** tab you'll find the following information:

- The total costs for the analytic account,
- The total amount of invoiced sales,
- The number of hours worked,
- The number of hours remaining to be worked,
- The remaining income,
- The theoretical income (hours worked multiplied by their sale price),
- The number of hours invoiced,
- The real income per hour,
- The real margin,
- The theoretical margin taking into account everything yet to be invoiced,
- The real margin rate in percent,
- The last invoicing date,
- The last worked hours,
- The number of hours remaining to be invoiced,
- The amount remaining to be invoiced.

For detailed information on the analytic account you can use any of the several reports available in the toolbar to the right.

## 6.7 Price management policies

Some companies are notorious for their complicated pricelists. Many forms of price variation are used, such as end-of-year refunds, discounts, changes of terms and conditions with time, various prepayments, cascaded rebates, seasonal promotions, and progressive price reductions.



### Rebate, Refund, Reduction

In some accounting jurisdictions you have to differentiate between the three following terms:

- Rebate: reimbursement to the client, usually at the end of the year, that depends on the quantity of goods purchased over a period.
- Refund: reduction on the order line or invoice line if a certain quantity of goods is purchased at one time or is sold in a framework of a promotional activity.
- Reduction: a one-off reduction resulting from a quality defect or a variation in a product's conformance to a specification.

Intelligent price management is difficult, because it requires you to integrate several conditions from clients and suppliers to create estimates quickly or to invoice automatically. But if you have an efficient price management mechanism you can often keep margins raised and respond quickly to changes in market conditions. A good price management system gives you scope for varying any and all of the relevant factors when you're negotiating a contract.

To help you work most effectively, Open ERP's pricelist principles are extremely powerful yet are based on simple and generic rules. You can develop both sales pricelists and purchase pricelists for products capable of accommodating conditions such as the date period, the quantity requested and the type of product.



### Don't confuse the different price specifications

Don't confuse the sale price with the base price of the product. In Open ERP's basic configuration the sale price is the list price set on the product form but a customer can be given a different sale price depending on the conditions.

It's the same for purchase price and standard cost. Purchase price is your suppliers' selling price, which changes in response to different criteria such as quantities, dates, and supplier. This is automatically set by the accounting system. You'll find that the two prices have been set by default to the same for all products with the demonstration data, which can be a source of confusion. You're free to set the standard cost to something different.

Each pricelist is calculated from defined policies, so you'll have as many sales pricelists as active sales policies in the company. For example a company that sells products through three sales channels could create the following price lists:

1. Main distribution:

- pricelist for Walbury,
- pricelist for TesMart,

2. Postal Sales.
3. Walk-in customers.

A single pricelist can exist in several versions, only one of which is permitted to be active at a given time. These versions let you set different prices at different points in time. So the pricelist for walk-in customers could have five different versions, for example: Autumn, Summer, Summer Sales, Winter, Spring. Direct customers will see prices that change with the seasons.

Each pricelist is expressed in a single currency. If your company sells products in several currencies you'll have to create as many pricelists as you have currencies.

The prices on a pricelist can depend on another list, which means that you don't have to repeat the definition of all conditions for each product. So a pricelist in USD can be based on a pricelist in EUR. If the currency conversion rates between EUR and USD change, or the EUR prices change, the USD rates can be **automatically** adjusted.

### 6.7.1 Creating pricelists

To define a pricelist use the menu *Products → Pricelists → Pricelists*.

For each list you should define:

- a **Name** for the list,
- a **Type** of list: **Sale** for customers or **Purchase** for suppliers,
- the **Currency** in which the prices are expressed.



#### Customer Price

If you install the module `edi` (in `addons-extra` at the time of writing) a third type of list appears – the **Customer Price** - which defines the price displayed for the end user. This doesn't have to be the same as your selling price to an intermediary or distributor.

### Pricelist versions

Once the list is defined you must provide it with at least one version. To do that use the menu *Products → Pricelists → Pricelist Versions*. The version contains all of the rules that enable you to calculate a price for a product and a given quantity.

So set the **Name** of this associated version. If the list only has a single version you can use the same name for the pricelist and the version. In the **Pricelist** field select the pricelist you created.

Then set the **Start date** and **End date** of this version. The fields are both optional: if you don't set any dates the version will be permanently active. Only one version may be active at any one point, so bear this in mind when creating them. Use the **Active** field in the versions to activate or disable a pricelist version.



### Automatically updating the sale pricelist

You can make any sale pricelist depend on one of the other pricelists. So you could make your sale pricelist depend on your supplier's purchase pricelist, to which you add a margin. The prices are automatically calculated as a function of the purchase price and need no further manual adjustment.

## Rules for calculating price

A pricelist version is made up of a set of rules that apply to the product base prices.

The screenshot shows the OpenERP web interface for managing pricelists. The top navigation bar includes File, Edit, View, History, Bookmarks, Tools, Help, and a user dropdown for 'Administrator'. Below the header is the OpenERP logo and a 'Welcome' message. The main menu bar has 'MAIN MENU' and 'SHORTCUTS' options, along with links to 'Production dashboard' and 'Modules'. A toolbar below the menu bar includes buttons for 'Search', 'Form', 'Calendar', 'Gantt', 'Graph', 'Process', and others. The central content area is titled 'Pricelists' and shows a form for creating a new pricelist. Fields include 'Pricelist Name' (set to 'Public Pricelist'), 'Active' (checkbox checked), 'Pricelist Type' (set to 'Sale Pricelist'), and 'Currency' (set to 'EUR'). Below this is a section titled 'Pricelist Version' with a table showing one entry: 'Default Public Pricelist Version' with 'Active' set to 'Yes'. At the bottom of the screen are 'Import | Export' and 'Done' buttons, along with navigation links for 'First', 'Previous', 'Next', and 'Last'.

Figure 6.16: Detail of a rule in a pricelist version

You define the conditions for a rule in the first part of the definition screen labeled **Rules Test Match**. The rule applies to the **Product** or **Product Template** and/or the named **Product Category**. If a rule is applied to a category then it is automatically applied to all of its subcategories too (using the tree structure for product categories).

If you set a minimum quantity in **Min. Quantity** the rule will only apply to a quantity the same as or larger than that set. This lets you set reduced rates in steps that depend on the quantities ordered.

Several rules can be applied to an order. Open ERP evaluates these rules in sequence to select which to apply to the specified price calculation. If several rules are valid only the first in sequence is used for the calculation. The **Sequence** field determines the order, starting with the lowest number and working up.

Once a rule has been selected, the system has to determine how to calculate the price from the rule. This operation is based on the criteria set out in the lower part of the form, labeled **Price Computation**.

The first field you have to complete is labeled **Based on**. Set the mode for partner price calculation, choosing

between:

- the **List Price** set in the product file,
- the **Standard Cost** set in the product file,
- an **Other Pricelist** given in the field **If Other Pricelist**,
- the price that varies as a function of a supplier defined in the **Partner section of the product form**.

Several other criteria can be considered and added to the list, as you'll see in the following section.

Next, various operations can be applied to the base price to calculate the sales or purchase price for the partner at the specified quantities. To calculate it you apply the formula shown on the form:  $\text{Price} = \text{Base Price} \times (1 - \text{Field1}) + \text{Field2}$ .

The first field, **Field1**, defines a discount. Set it to 0.20 for a discount of 20% from the base price. If your price is based on standard cost, you can set -0.15 to get a 15% price uplift compared with the standard costs.

**Field2** sets a fixed supplement to the price, expressed in the currency of the pricelist. This amount is just added (or subtracted, if negative) to the amount calculated with the **Field1** discount.

Then you can specify a rounding method. The rounding calculation is carried out to the nearest number. For example if you set 0.05 in this example, a price of 45.66 will be rounded to 45.65, and 14,567 rounded to 100 will give a price of 14,600.



#### Swiss special situation

In Switzerland, the smallest monetary unit is 5 cents. There aren't any 1 or 2 cent coins. So you set Open ERP's rounding to 0.05 to round everything in a Swiss franc pricelist.

The supplement from **Field2** is applied before the rounding calculation, which enables some interesting effects. For example if you want all your prices to end in 9.99, set your rounding to 10 and your supplement to -0.01 in **Field2**.

Minimum and Maximum margins enable you to guarantee a given margin over the base price. A margin of 10 USD enables you to stop the discount from returning less than that margin. If you put 0 into this field, no effect is taken into account.

Once the pricelist is defined you can assign it to a partner. To do this, find a Partner and select its **Properties** tab. You can then change the **Purchase Pricelist** and the **Sale Pricelist** that's loaded by default for the partner.

## 6.7.2 Case of using pricelists

Take the case of an IT systems trading company, for which the following product categories have been configured:

All products

1. Accessories

- Printers
- Scanners
- Keyboards and Mice

## 2. Computers

- Portables
- Large-screen portables
- Computers
- Office Computers
- Professional Computers

In addition, the products presented in the table below are defined in the currency of the installed chart of accounts.

TABLE

Table 6.4: Examples of products with their different prices

Product	List Price	Standard Price	Default supplier price
Acclo Portable	1,200	887	893
Toshibishi Portable	1,340	920	920
Berrel Keyboard	100	50	50
Office Computer	1,400	1,000	1,000

## Default pricelists

When you install the software two pricelists are created by default: one for sales and one for purchases. These each contain only one pricelist version and only one line in that version.

The price for sales defined in the Default Public Pricelist is set by default to the Public Price of the product in the product file, which is the Sale Price in the Product file.

The price for purchases defined in the Default Purchase Pricelist is set by default in the same way to the Standard Cost of the product in the product file.

## Example of a trading company

Take the case of a trading company, where the sale price for resellers can be defined like this:

- For portable computers, the sale price is calculated from the list price of the supplier Acclo, with a supplement of 23% on the cost of purchase.
- For all other products the sale price is given by the standard cost in the product file, on which 31% is added. The price must end in .99 .

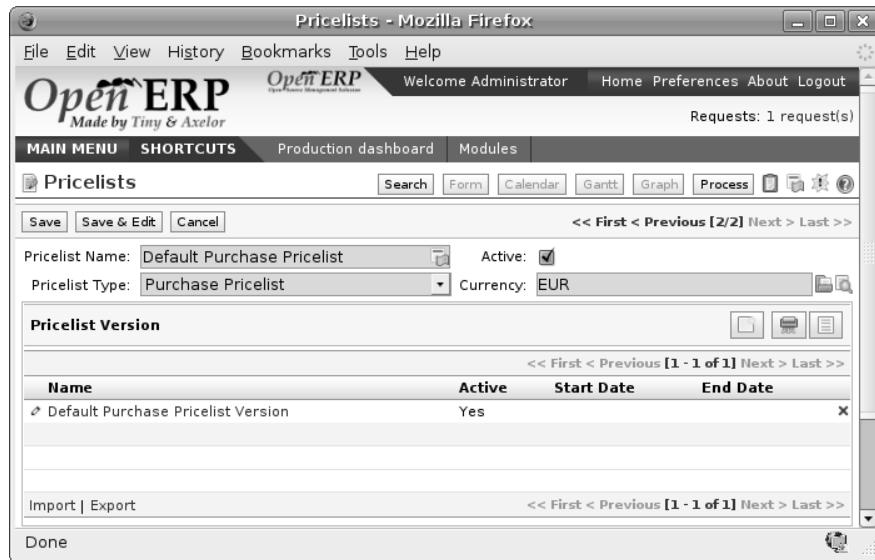


Figure 6.17: Default pricelist after installing Open ERP

- The sale price of Berrel keyboards is fixed at 60 for a minimum quantity of 5 keyboards purchased. Otherwise it uses the rule above.
- Assume that the Acclo pricelist is defined in Open ERP. The pricelist for resellers and the pricelist version then contains three lines:

1. Acclo line:

- Product Category**: Portables ,
- Based on**: Other pricelist ,
- Pricelist if other**: Acclo pricelist ,
- Field1**: -0.23 ,
- Priority** : 1 .

2. Berrel Keyboard line:

- Product Template**: Berrel Keyboard ,
- Min. Quantity** : 5 ,
- Field1** : 1.0 ,
- Field2** : 60 ,
- Priority** : 2 .

3. Other products line:

- Based on**: Standard Price ,
- Field1** : -0.31 ,
- Field2** : -0.01 ,
- Rounding** : 1.0 .
- Priority** : 3 .

It's important that the priority of the second rule is set below the priority of the third in this example. If it were the other way round the third rule would always be applied because a quantity of 5 is always greater than a quantity of 1 for all products.

Also note that to fix a price of 60 for the 5 Berrel Keyboards, the formula `Price = Base Price x (1 - 1.0) + 60` has been used.

### Establishing customer contract conditions

The trading company can now set specific conditions to a customer, such as the company TinAtwo, who might have signed a valid contract with the following conditions:

- For Toshiba portables, TinAtwo benefits from a discount of 5% of resale price.
- For all other products, the resale conditions are unchanged.

The list price for TinAtwo, called `TinAtwo contract`, contains two rules:

1. Toshiba portable:

- **Product**: Toshiba Portable,
- **Based on**: Other pricelist,
- **Pricelist if other**: Reseller pricelist,
- **Field1**: 0.05,
- **Priority**: 1 .

2. Other Products:

- **Product**:
- **Based on**: Other pricelist,
- **Pricelist if other**: Reseller pricelist,
- **Priority**: 2 .

Once this list has been entered you should look for the partner form for TinAtwo again. Click the **Properties** tab to set the **Sale List Price** field to *TinAtwo Contract*. If the contract is only valid for one year, don't forget to set the **Start Date** and **End Date** fields in the **Price List Version**.

Then when salespeople prepare an estimate for TinAtwo the prices proposed will automatically be calculated from the contract conditions.

### 6.7.3 Different bases for price calculation

Open ERP's flexibility enables you to make prices that depend not only on prices on the product form, but in addition to the two predefined ones – Cost Price and Public Price.

To do this use the menu *Products → Definitions → Price Types*. Create a new entry for the new price type. Enter the field name, the field on the product form that this type of price corresponds to and the currency that

will be expressed in this field. The operation works just as well on new fields added to the product form to meet specific developments.

Once this operation has been carried out you can make pricelists depend on this new price type.

Then, adding the weight and/or volume field, the price of a product by piece can vary by its weight and/or volume. This is different from defining a price by weight – in that case the default unit of measure is weight and not piece.

### 6.7.4 Pricelists and managing currencies

If your trading company wants to start a product catalog in a new currency you can handle this several ways:

- Enter the prices in a new independent pricelist and maintain the lists in the two currencies separately,
- Create a field in the product form for this new currency and make the new pricelist depend on this field: prices are then maintained separately but in the product file,
- Create a new pricelist for the second currency and make it depend on another pricelist or on the product price: the conversion between the currencies will then be done automatically at the prevailing currency conversion rate.

## 6.8 Rebates at the end of a campaign

If you want to provide discounts on an order, use the pricelist system in Open ERP. But it's better to work with end-of-campaign rebates or year-end rebates. In this case the customer pays a certain price for the whole of the campaign or the year and a rebate is returned to him at the end of the campaign that depends on the sales he's made throughout the year.

### 6.8.1 Example: Using returns for the end of a campaign

Take the case of a contract negotiations with a wholesaler. To get the best selling price, the wholesaler will ask you for a good deal and will sign up to a certain volume of orders over the year.

You can then propose a price based on the volume that the wholesaler agrees to sell. But then you don't have any control over his orders. If at the end of the year the wholesaler hasn't taken the agreed volumes then you can't do anything. At most you can review his terms for the following year.

Rebates at the end of a campaign can help you avoid this sort of problem. You can propose a contract where the price is dependent on the usual wholesaler's terms. You can propose a rebate grid which will be assigned at the end of the year as a function of the actual sales made. Install the `discount_campaign` module (in `addons-extra` at the time of writing) to generate rebates at the end of the campaign. Once the modules have been installed you can configure your campaign using the menu *Sales Management → Configuration → Discount campaign*.



## Year-end rebate

Most companies use the term *year-end rebate*, where rebates are applied at the end of the year. But if you're using rebates at the end of a campaign, this would only actually be the case if the campaign lasts exactly one year.

The screenshot shows the 'Discount Campaign' module in OpenERP. At the top, there's a navigation bar with 'File', 'Edit', 'View', 'History', 'Bookmarks', 'Tools', and 'Help'. To the right of the navigation bar are links for 'Welcome Administrator', 'Home', 'Preferences', 'About', and 'Logout'. A note indicates there is 1 request(s). Below the navigation is a main menu with 'MAIN MENU' and 'SHORTCUTS', followed by tabs for 'Production dashboard' and 'Modules'. The current tab is 'Discount Campaign'. Underneath are buttons for 'Save', 'Save & Edit', and 'Cancel'. Navigation controls include '<< First < Previous [1/2] Next > Last >>'. The main content area is titled 'Discount Campaign Lines'. It contains a table with two rows:

Name	Sequence	Category	Product	Min. Quantity	Discount
Second	1 ↕	All products	[PC2] Basic+ PC (assembly on order)	10.00	5.00 ✘
First	5 ↕	All products	[PC1] Basic PC	5.00	1.00 ✘

Below the table are buttons for 'Import | Export' and 'State: Done'. There's also a '[CUSTOMISE]' link and a 'Done' button at the bottom.

Figure 6.18: Configuring a year-end rebate

A campaign must have a name, a start date, and an end date. After entering this information, you should describe the lines of the campaign. Each line can be applied to a product or a category of products. Then set the quantity of products sold from which the discount is applied, and the amount of the rebate as a percentage of the actual sales volume.

When you've defined the campaign you can active it by clicking the **Open** button. The figure *Management of Sales* (which can be found in a companion volume to this book and in the online book) shows a campaign with a rebate on computers which is between 10% and 20% depending on the sales volume.

Once the campaign has been defined you can assign a given campaign to various partners. To do that set a **Discount Campaign** in the second tab **Sales and Purchases** of the partner form.

Finally at the end of the campaign you should close it and Open ERP will automatically generate invoices or credit notes for your partner associated with this campaign. Open ERP opens credit notes in the **Draft** state that you can modify before validating them. To calculate the amount on the credit note, Open ERP uses all of the invoices sent out during the period of the campaign as its basis.

You can also reach all of the draft credit notes using the menu *Financial Management → Invoices → Customer Refunds*.

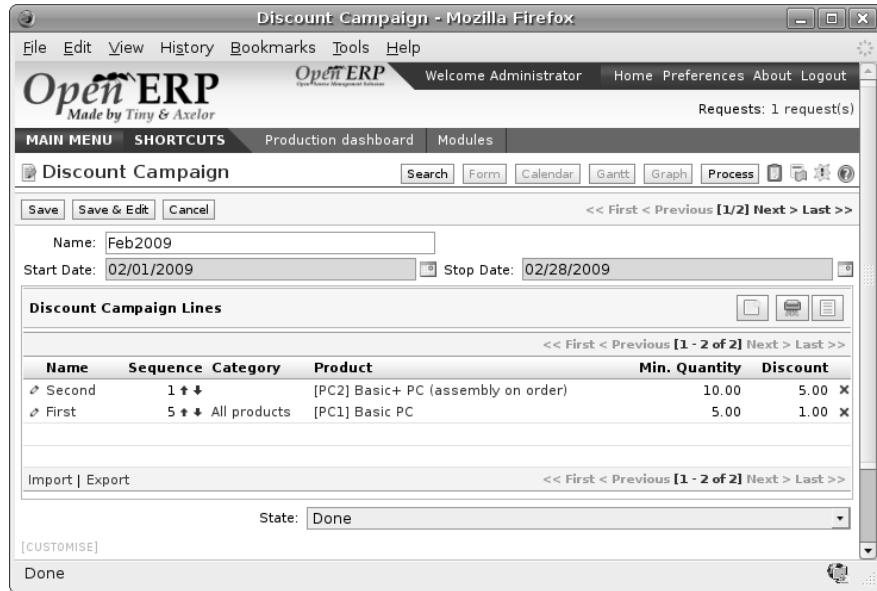


Figure 6.19: Configuring a discount campaign for computers

## 6.9 Open orders

In some industries, customers commonly place orders for a certain volume of product and ask for regular deliveries from an order up to the total amount on it. This principle, called open orders, is managed by the `sale_delivery` module in Open ERP.

Open ERP handles open orders easily. An open order is an order for a certain quantity of products but whose deliveries are planned for various dates over a period of time.

To do that you must install the `sale_delivery` module (in `addons-extra` at the time of writing). A Sales Order is entered as a normal order but you also set the total quantity that will be delivered on each order line.

Then you can use the new tab **Deliveries** on the order to plan the quantities sold and enter your delivery planning there.

In the order lines, Open ERP shows you the quantity planned in addition to the quantity sold so you can verify that the quantities sold equal the quantities to be delivered. When you confirm the order, Open ERP no longer generates a single delivery order but plans scheduled despatches.



### Invoicing Mode

If you work with Open Orders, you should set the order into the mode **Invoice from the Packing**. Then the storesperson will be able to replan and change the quantities of the forecast deliveries in the system.

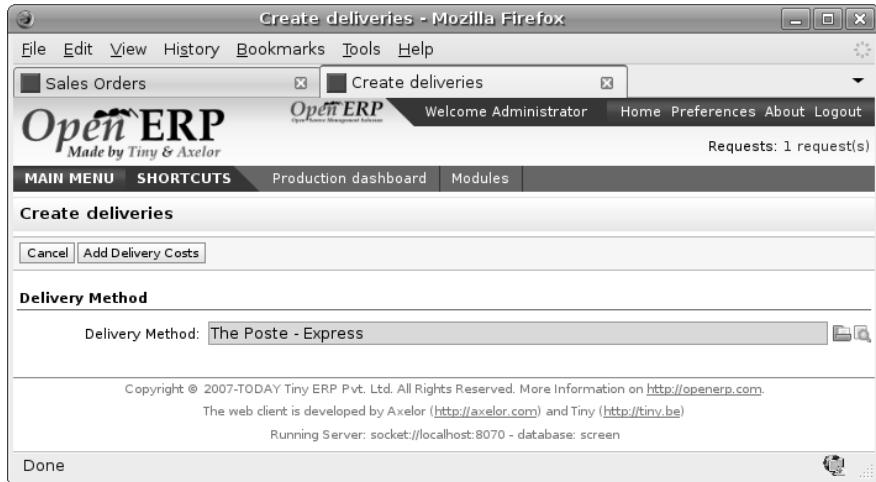


Figure 6.20: *Managing open orders, planning forecasts*

## 6.10 Layout templates

The `sale_layout` module enables you to have a more elaborate template than the standard order forms. For example you could put the following in the order lines:

- a horizontal separator line,
- titles and subtitles,
- subtotals at the end of the section,
- comments,
- a page break.

This enables you to lay out a more elaborate professional-looking quotation page. There's also the module `account_invoice_layout` which gives you the same functionality for invoice templates.

The two figures *Control of deliveries and invoicing* (which can be found in a companion volume to this book and in the online book) and *Control of deliveries and invoicing* (which can be found in a companion volume to this book and in the online book) show an invoice template in Open ERP and the resulting printed invoice.

**Invoice Line**

<b>Line</b>	<b>Notes</b>	
Product:	Unit of Measure:	
Quantity: 0.00	Unit Price: 0.00	
Discount (%): 0.00	Type: Separator Line	
Sequence Number: 0		
Description:		
?Origin:		
?Account:	Analytic Account:	
Subtotal: 0.00		
<< First < Previous [0 - 0 of 0] Next > Last >		
TAX NAME	TAX INCLUDED IN PRICE	TAX CODE
Taxes:		
Import   Export		<< First < Previous [0 - 0 of 0] Next > Last >

**Close** **Save**

Figure 6.21: Template for an invoice in Open ERP using the account\_invoice\_layout module

**Administration**

File	Edit	View	Go	Help													
Previous	Next	1	of 1	100%													
Tiny spt - Phone: Mail: _____																	
Maxtor M. Wong 56 Beijing street 23540 Hong Kong China																	
<b>Draft Invoice</b>																	
Document : SO007 Invoice Date: False Customer Ref: /																	
<table border="1"> <thead> <tr> <th>Description</th> <th>Taxes</th> <th>Quantity</th> <th>Unit Price</th> <th>Disc. (%)</th> <th>Price</th> </tr> </thead> <tbody> <tr> <td colspan="6" style="text-align: right;"><b>Sub Total</b> <b>0.00 EUR</b></td> </tr> </tbody> </table>						Description	Taxes	Quantity	Unit Price	Disc. (%)	Price	<b>Sub Total</b> <b>0.00 EUR</b>					
Description	Taxes	Quantity	Unit Price	Disc. (%)	Price												
<b>Sub Total</b> <b>0.00 EUR</b>																	
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Tax	Base	Amount	Total (excl. taxes)	Taxes	Total (incl. taxes)												
			352.00 EUR	0.00 EUR	352.00 EUR												
Thanks for your Transaction With Us.																	

Figure 6.22: The resulting printed invoice



# **Part IV**

# **Document Management**



# Integrated Document Management

---

*Information management has become a major strategic factor in companies' development. It's important to get the right information circulated to the right people as efficiently as possible yet still keep it secure. Documentation management provides a way for companies to organize their information, in all its forms, in one place.*

The objectives of document management include easier archiving, access, and reference, intelligent classification, and distribution of documents and the information they contain. It concerns sets of all sorts of company documents such as work procedures, meeting reports, documents received from customers and suppliers, documents sent to customers, faxes, sales presentations, and product datasheets.

For this chapter you should start with a fresh database that includes demo data, with sale, document and their dependencies installed and no particular chart of accounts configured.

## 7.1 The importance of good document management

Globalization means that workplaces are ever more geographically dispersed. This means that documents are also used more than ever by people in several countries and continents for communicating and collaborating.

You'll see communication problems even between employees in the same office because they don't have easy access to the documents that they need. You find some documents kept by someone in the accounts office, shared directories that serve everybody, some documents in paper form, others in electronic form – quite a free-for-all.

An explosion in the number of documents that a company needs doesn't help. If their storage and indexation are badly organized, these documents become useless because they're almost impossible to find.

The results of poor document management can lead to a significant loss of time. Ask yourself how often you find yourself looking for:

- A supplier catalogue that's been sent to a purchasing manager,
- A customer contract signed several months ago,
- The final set of Terms and Conditions offered to a specific customer,
- The documents required for employing a new member of staff,
- An order confirmation sent by a customer to one of your salespeople or, perhaps even more common when the relevant salesperson has gone on vacation, if you ever received such an order confirmation,
- A procedure from your quality manual if there's been a process fault,
- An email which was sent to one of your colleagues,

- A document that you need to be a template for a specific type of contract,
- A complete history of communications between yourselves and a supplier about a given contract.

Even worse than the loss of time, perhaps, the lack of good document management is bad for the quality of your organization and the service provided by your company. In such a company it's likely that:

- sets of documents don't follow a standard layout,
- all the salespeople prepare quotations in their own way and gradually change the way they do it for themselves but not for the group,
- a correction to a type of contract stays with a small group of people and doesn't percolate back into the rest of the company to benefit other users,
- version management is chaotic or even non-existent.

So a good integrated document management system can be a powerful tool to help in day-to-day company management. With it you could also easily:

- Continue the work started by a colleague if she's gone on vacation, and respond to her customers if needed,
- Get hold of examples of all document types with just a few clicks, so that you can follow company standards in such areas as order confirmation, price requests, meeting minutes, customer deliverables, contract examples, and models for faxes and letters,
- Retrieve procedures and other associated documents if you don't know how to do a certain task – such as things you should do when hiring a new employee, organizing a conference, or how to structure meeting minutes,
- Very easily reuse work done by a colleague to meet similar needs and build on all the individual work done in your own company,
- Find all the orders for a customer or from a supplier in just a few seconds to answer questions or two continue a discussion when the initial contact point in your company is not available,
- Build on your working methods and enable your colleagues to benefit from each improvement in a document type or a procedure.

From these examples you can see the importance of a good document management system, and what it might contribute to the improvement of productivity and the quality of the output from each employee.

## **7.2 Classic document management solutions**

Faced with the need to organize documents, companies have looked at a number of document management solutions that are promoted today, from simple email archiving to complete electronic management systems dedicated to arbitrary documents.

Unfortunately these solutions haven't always been very useful because they're too little integrated in companies' management systems. Most solutions that we've come across are underused by the employees – often used by some of them but not by all.

The primary reason for this is that a document management system that's not integrated imposes extra work on an employee. For example a salesperson should ideally save each customer confirmation in the document management system. Only that means quite a heavy additional workload just for an order confirmation:

1. Receive and read the email from the customer,
2. Save the email and its attachments on the desktop,
3. Connect to the ERP and confirm the order,
4. Connect to the document management system,
5. Look for the best place to store the document,
6. Create a directory for the customer and the order if it doesn't yet exist,
7. Copy the files from the desktop to the right place in the document management system.

This is obviously a lot of operations just to handle a simple order confirmation. You can understand why many companies hardly use their document management system even if they've gone to the cost and effort of purchasing and installing one.



### **Free document management systems**

A number of free document management applications exist. The most well known are:

- Alfresco: <http://www.alfresco.com>
- Quotero: <http://www.quotero.com>

It's very difficult to keep the information in the company's management system synchronized with that in the document management system. For example when a customer changes his address, users will modify the details in the management software but usually not in the document management system.

Furthermore, since users should create the same storage structure in both systems, you quickly find after only a few months that the information in the document management system is quite disconnected from that in the company's management system if the two are separate. For example, how do you know where to store your least-frequently used documents such as (perhaps) employee car-leasing documents? Also, document management systems are typically very complex because they must manage user access rights in just the same way as those that are available in the company management system. This means that you have to enter the same sort of data about access rights twice for the system administrators.

You'll see that the total integration of Open ERP's document management system with the main company management system, and plugins to Outlook and Thunderbird email clients, offers an elegant solution that addresses these problems.

## 7.3 The Open ERP solution

Open ERP's management of documents is unique and totally innovative in its integrated approach. Its complete integration with the company's management system solves most of the problems that are encountered when you use independent document management systems:

- Login and the management of access rights is integrated with that of Open ERP for controlling access to different document types,
- Ultra-rapid access to documents, which are directly accessible through your email client or through the company management software,
- Automatic assignment of meta-information comes directly from information contained in your Open ERP login registration,
- Document workflow which automatically follow Open ERP's documentation process provide complete synchronization between the systems,
- Document classification is determined by Open ERP itself so that the structure that is created is always synchronized between the systems,
- Automatic indexation and classification of all documents produced by Open ERP for maximum efficiency.

### 7.3.1 Getting Started

This section is about how to get started with the document management system from its installation to advanced use with FTP access.

#### Installation

To install Open ERP's document management system you just need is to install the document and board\_document modules through *Administration → Modules Management → Modules → Uninstalled modules*. After installing the module the system automatically proposes that you configure the document management system.

Once the module has been installed you'll see a new entry in the main menu called *Document Management*.

## 7.4 Internal and external access using FTP

The first configuration step is to create a directory structure that will be used to classify your document set. You can use the structure automatically proposed by Open ERP from the menu *Document Management → Directory Structure*.

In addition to the usual access to documents through Open ERP, you will be able to connect to them directly through the file system using the FTP protocol. To connect to the FTP server, use the following address:

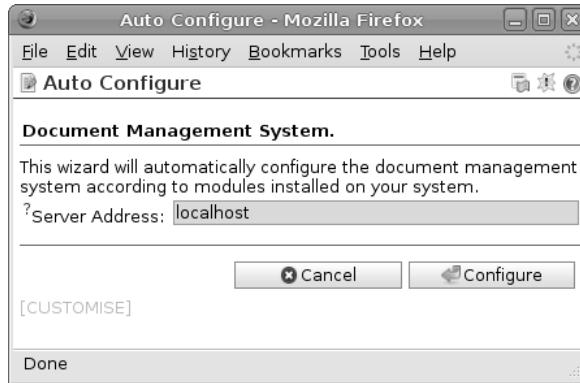


Figure 7.1: Screen for configuring document management

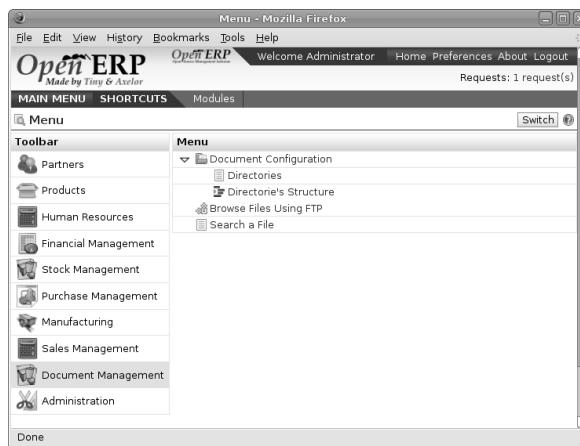


Figure 7.2: The document management menu

Directorie's Structure - Mozilla Firefox						
Toolbar	Name	Type	Owner	Date Created	Date Modified	
Documents	My Folder	Static Directory	Administrator	02/02/09 15:11:56		
	Partners by Category	Other Resources	Administrator	02/02/09 15:11:56		
	Personal Folders	Other Resources	Administrator	02/02/09 15:11:56		
	Products	Other Resources	Administrator	02/02/09 15:11:56	02/02/09 15:15:36	
	Sales Order	Static Directory	Administrator	02/02/09 15:11:56		
	All Sales Order	Other Resources	Administrator	02/02/09 15:11:56	02/02/09 15:15:36	
	Quotations	Other Resources	Administrator	02/02/09 15:11:56	02/02/09 15:15:36	
	Projects	Other Resources	Administrator	02/02/09 15:11:56	02/02/09 15:15:36	

Copyright © 2007-TODAY Tiny ERP Pvt. Ltd. All Rights Reserved. More information on <http://openerp.com>.  
The web client is developed by Axelor (<http://axelor.com>) and Tiny (<http://tiny.be>)  
Running Server: socket://localhost:8070 - database:trunk

Figure 7.3: Structure of directories when the document module has been installed

Parameter	Value
Server	Your Open ERP server, for example 127.0.0.1
Port	8021
Path	The '/' character, for the root
User	Your user account in Open ERP
Password	Your Open ERP password



### FTP server

These comments about an FTP server may appear a bit technical, but it's just a general standard for getting hold of files without worrying too much about the platform standards (Windows, Mac, Linux, or other Unix-like system). So FTP is just a way of getting access to files without needing to use an Open ERP client. There could have been other ways, but FTP proved itself to the developers to be the one that performed best at lowest cost.

Once you're connected using FTP you get to the root of a directory for the document management system. Once you enter that directory you find a structure that matches the structure defined in Open ERP.

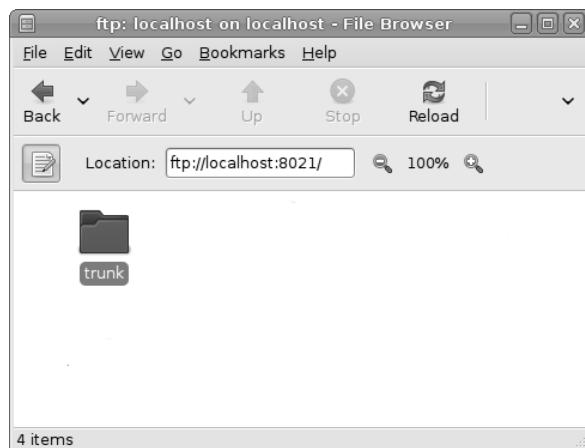


Figure 7.4: Root of the database directory seen through FTP

## 7.5 Mapping between Open ERP resources and directories

Each directory can either have the type `Static` or be linked to another resource. A static directory, as with Operating Systems, is the classic directory that can contain a set of files. The directories linked to systems resources automatically possess sub-directories for each of resource types defined in the parent directory.

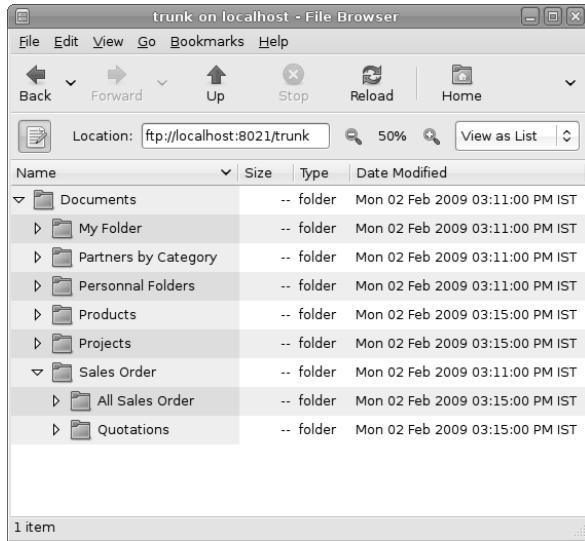


Figure 7.5: Structure of the directories in the document management system



### Directories in English

To keep them synchronized to the working language, directory names are not translatable. But Open ERP's demonstration data automatically creates directories in English. You can rename them through the menu *Document Management → Configuration → Directories*.

For example you can look at the directory shown in *Main Repository → Sales Orders → All Sales Orders*. You'll see the directory for all the orders present in Open ERP that was created automatically by the system.

Date Ordered	Reference	Customer	Shipping Address	Picked Invoiced	Untaxed Order Amount	State
02/02/2009	S0005	China Export	Zen52 Chop Suey	0.00% 0.00%	3.000.00	Manual In Progress
02/02/2009	S0004	Ecole de Commerce de Liege	Karine Lesbroutre	0.00% 0.00%	5.400.00	Manual In Progress
02/02/2009	S0003	Agrolait	Sylvie Leltre, 69 rue de Chimay 5478 Wave	0.00% 0.00%	3.600.00	Manual In Progress
02/02/2009	S0002	Bank Wealthy and sons	Arthur Grosbonnet, 1 rue Rockfeller 75016 Paris	0.00% 0.00%	1.244.00	Quotation
02/02/2009	S0001	Agrolait	Tiny sprl	0.00% 0.00%	3.263.00	Quotation

Figure 7.6: Orders in Open ERP

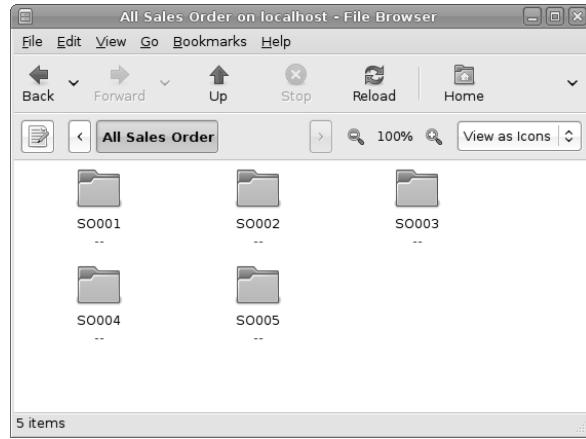


Figure 7.7: Directories representing all the orders in the document management system

Directories can follow a tree like the tree of resources in Open ERP. For example if you go to the directory *Main Repository → Projects* you'll see the structure of the analytic accounts.

To define a directory containing a specific type of resource you have to define parameters when you define the directory itself:

- **Type** : Other Resources
- **Child Models** : Choose one of the system objects
- **Domain** : an event filtered so that it sees only a subset of the resources
- **Tree structure** : to show the resources hierarchically

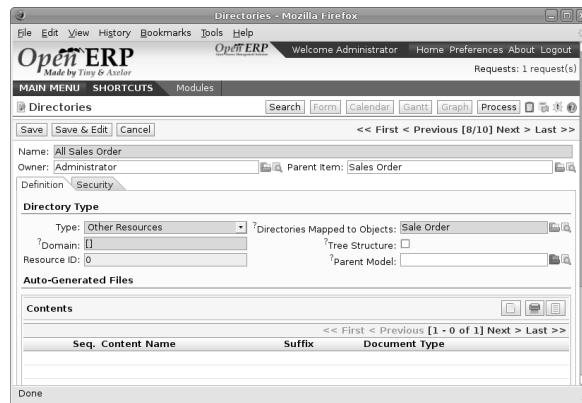


Figure 7.8: Configuration of the directory containing quotations (draft orders)

This is a very flexible approach because any modification of the resource in Open ERP is automatically reflected in the document management system. So when the quotation gets confirmed in Open ERP the directory no longer appears as a quotation through FTP access.

Here are some examples of directories linked to Open ERP resources that could be helpful when configured in the document management system:

- Quotations and Order: storing documents that relate to orders,
- Products: for storing products' technical datasheets,
- Users: to automatically define a directory owned by each user of the system,
- Employees: to store documents about employees, such as their CVs, your interview notes, contract details, and their annual assessments,
- Support Requests: storing items about requests or about technical support responses,
- Analytic accounts or project: to store project management and tracking documents.

## 7.6 Managing Attachments

As you see, you can connect any directory in the document management system to an Open ERP resource. The system then manages its creation and keeps the directory synchronized with the reports generated by Open ERP from its own data. You don't have to create or rename these directories because Open ERP does all this automatically as it resynchronizes with its own database.

You can then copy the files in the directories that correspond to any of the resources. The files are automatically attached to Open ERP's documents through attachment management. Conversely, if you attach a document to one of Open ERP's resources then that document will automatically become visible over FTP in the document management system.



**File storage**

If you don't install the document management system then the files that are attached to an Open ERP resource are stored directly in the database. Once the document management system has been installed, the contents of the files are no longer stored in the database but are stored instead on the Open ERP server filesystem in a directory named 'filestore'.

You can then read and add attachments to Open ERP resources quite independently of the Open ERP interface or the FTP server using simple drag and drop.

## 7.7 Virtual Files

The most well-organized companies keep track of all the documents they've sent to customers in their document management system. It's very useful to be able to retrieve every document about a customer or a project. But the work of storing these documents can itself often take up quite a bit of time for staff. Each report must be saved in the document management system as well as simply being sent by email to the customer.

That's not the case in Open ERP. To automatically make Open ERP reports available in the FTP server, Open ERP automatically uses *virtual files*. You can put virtual files into directories that have the special type of *linked resource* and link the virtual files to Open ERP's reports.



### Virtual Files

Virtual files don't actually exist in Open ERP but are made visible with a size of 0 in the FTP server. Once these files have been read by the client software, Open ERP prints the document related to this file and returns a PDF document linked to the resource.

When you copy or open a virtual file you print the selected resource. You don't then have to go and print a document through Open ERP – you just open the file containing that document in the document management system. The PDF file is then created in real time by Open ERP by reading the relevant data.

The screen *Managing Attachments* (*which can be found in a companion volume to this book and in the online book*) shows the parameters of the virtual files in Orders. You define the virtual files using the name ORDER-*NUM*\_print.pdf, where ORDERNUM represents the reference to the order. To do this you must complete the section **Descriptive Contents** of the file for a directory. You can then find a virtual file for each report associated with an order.

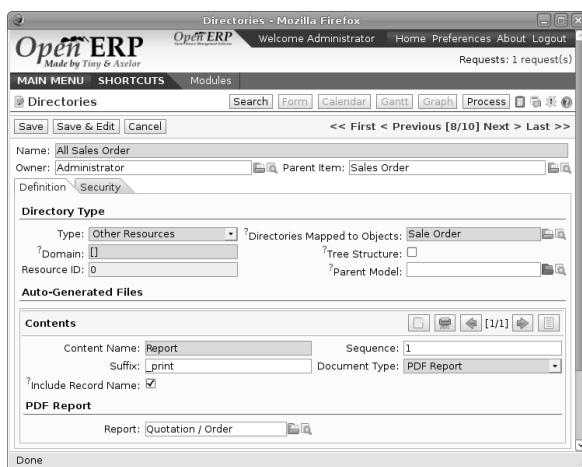


Figure 7.9: Virtual files for Sales Orders in Open ERP

To see the effect of this configuration, connect to the FTP server and go into a directory for an order such as *Main Repository → Sales Orders → All Sales Orders → SO003*. You can then just double-click the file **SO003\_print.pdf** to get a printout of Order SO003. You can attach it to an email or put it on your desktop.

This system of virtual files is very useful in a lot of situations. For example if you must quickly re-send a quotation to a customer you don't have to open Open ERP, you can just attach the relevant virtual file to your email.

Importantly, once files have been read or copied they become real files, taking up real space, rather than just

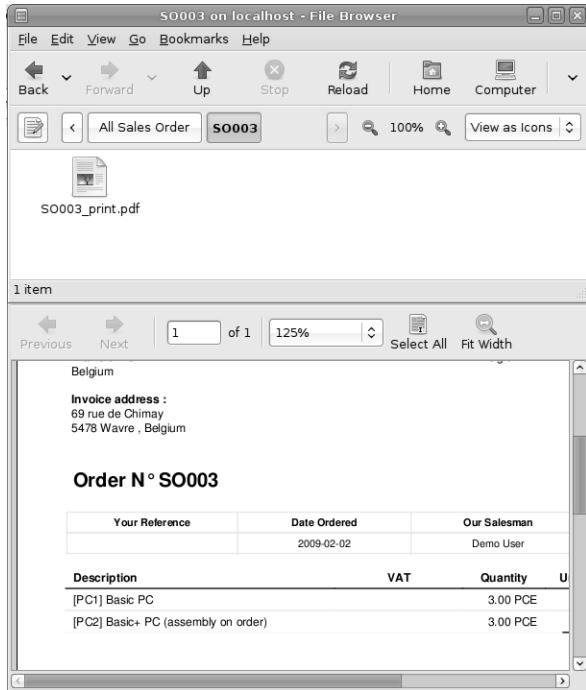


Figure 7.10: *Virtual files for Sales Orders through FTP*

virtual. This means that you can keep a legal record of all documents that have been created and sent to customers and suppliers.

## 7.8 Standardizing Structures

You now have a configuration that enables you to automatically get a directory structure linked to Open ERP for each resource, such as for projects and orders. The ideal situation would now be to automatically structure the documents about projects, say. For example, you could classify them depending on their type:

- Quotations,
- Meeting Minutes,
- Delivery Documents,
- Documentation.

Open ERP provides you with a system that lets you create a structure type for each type of a given document. It then provides that classification for all documents in the directories structured in that type.

So create the structure above for your project management system. To do that, create the four directories above and give them the following data:

- **Type** : Static Directory,
- **Linked Model** : Analytic Account.

Then in each project (represented by analytic accounts) you'll get this substructure for organizing your documents efficiently.

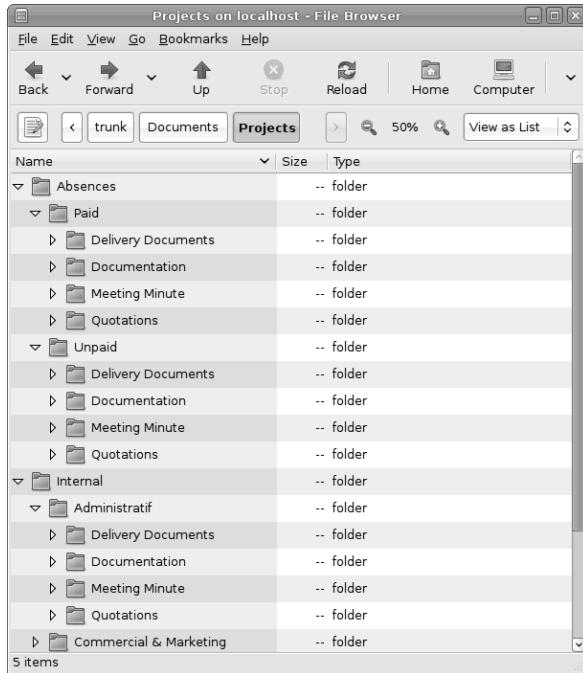


Figure 7.11: Substructure common to all projects



### Mapping

In practice, Open ERP doesn't create directories or files for every resource. It actually manages this by mapping between Open ERP resources and the FTP interface

This approach gives a lot of flexibility because there's no synchronizing to do, nor any redundancy. Changes in either the document management system or in Open ERP will automatically be reflected over in the other side.

And system resources are obviously not used up by storing things twice.

Once a new project has been defined in Open ERP, the system automatically creates a directory corresponding to the project in the right place in the document management system, and creates a structure type there for classifying documents.

## 7.9 Searching for documents

You've seen several methods of accessing documents quickly:

- From attachments to an Open ERP resource,
- Through FTP access to Open ERP,
- Using the menu *Document Management → Structure of Directories*.

But if you don't know where a specific document can be found, Open ERP also has a search tool integrated into its document management. To search for a file use the menu *Document Management → Search for a file*. You get to a document search screen that lets you search amongst all the attachments and all the documents in the FTP server.

You can search for a file using various different criteria:

- The filename,
- The owner of a file,
- The title of the resource that the file is attached to,
- The partner that the document is about,
- The directory that it's found in,
- Its creation and modification dates.

Notice here an important advantage for an integrated document management system. Information such as which partner is associated with a document is automatically detected by Open ERP when the document has been stored in a directory. This information is never input by the user – it's detected automatically using the information about the resource when it's being saved as a file.

But your search isn't limited to these few fields. You can also search on the content in the files. Each file is automatically indexed by the system to give you a search engine rather like Google's on the whole set of company documents.



## Supported file formats

The Open ERP document management system can index the following file formats:

- **TXT** : text files,
- **PDF** : PDF files,
- **SXW** : Open Office V1 files,
- **ODT** : Open Office V2 files,
- **DOC** : Microsoft Word files.

The other file formats are properly handled in the document management system but their content is not indexed automatically.

This functionality is very significant. All you need to do is search for a partner name or an order number to automatically get all the documents that are referenced there. And you can use a fragment of text to find the document you need from within that subset.

## 7.10 Integration with emails

### 7.10.1 Using Outlook and Thunderbird

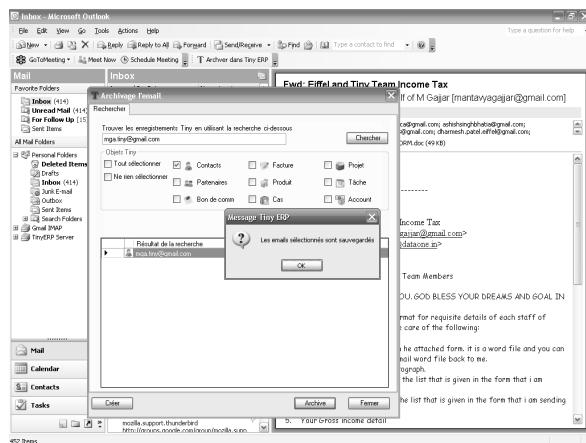


Figure 7.12: *Sending an attachment that's in the document management system from Outlook*

## 7.11 Working with users' changes

To make the document management system's use as unobtrusive as possible the system's users should easily be able to store all the documents that they produce or receive from their customers and suppliers. So Open ERP supplies dashboards to help system users approve their acceptance of such documents.

So you'll find two dashboards in the menu *Dashboards* → *Document Management*. One dashboard is for the document management system manager and one dashboard is for tracking use by different users.

The first lets you track the change of documents by month, by customer and by type of resource. You could also quickly assess the use that's made of the system by the various users.

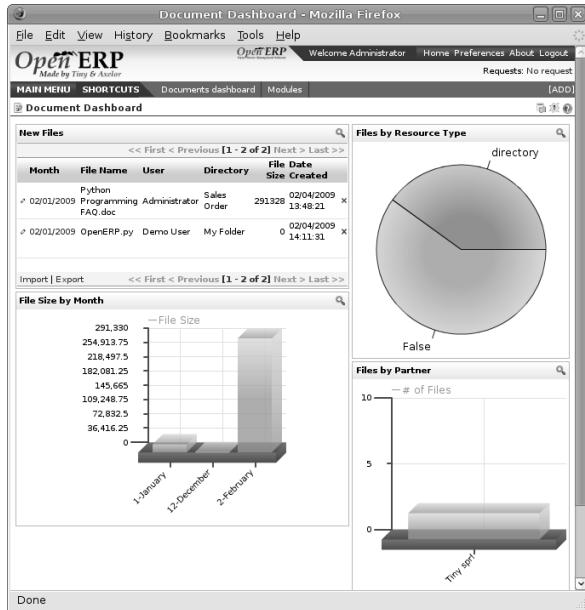


Figure 7.13: Dashboard for the document management system manager

The second dashboard shows you how different employees use the system. You can see the number of files sent by each user and who uses the document management system the least. That tells you something about your user training and whether you need to do something about changing work methods.

## 7.12 Version Management

There's usually a need to keep track of all the important documents that you have printed. For example, when you send an invoice to a customer it's a good idea to store a copy of that invoice internally in paper or electronic form. Then you can reprint it exactly in the same format as when you sent it, even if the company's details have changed in the meantime.

To do this, Open ERP can automatically store as attachments the different reports printed by users. By default, only invoices are saved as attachments, and they're saved when they are printed. That's because they are

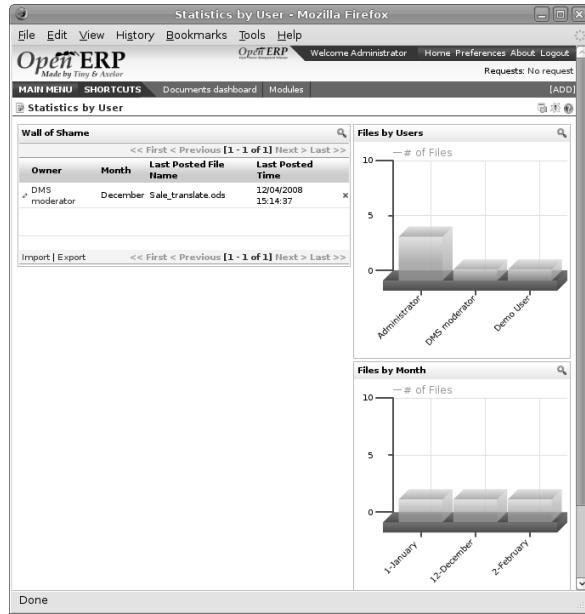


Figure 7.14: Dashboard for the document management system analyzed by user

commonly legally required.

But you can configure the system so that it doesn't matter which type of report is printed - they can all be stored automatically. To activate that functionality on another type of report, modify this in the menu *Administration* → *Configuration* → *Low Level* → *Actions* → *XML Reports*.

This screenshot shows the 'Report XML' configuration dialog in Mozilla Firefox. It's a form for defining a new report. The 'Name' field is set to 'Quotation / Order', 'Object' to 'sale.order', and 'Report Type' to 'ir.actions.report.xml'. The 'Internal Name' is 'sale.order'. There are fields for 'XML path' (empty), 'RML path' (set to 'sale/report/order.rml'), 'Action Usage' (set to 'pdf'), and 'Type' (set to 'pdf'). Other options like 'Automatic XSL-RML' and 'Add RML header' are checked. A note says 'Save As Attachment Prefix: [object.state in ('manual','progress')) and ('SO'+(object.number or '')).rep'. The 'Save' button is highlighted.

Figure 7.15: Modifying the definition of a report

Select the report that you want to change and complete the field **Prefix for saving as an attachment**. Once you've done that each document print action will automatically be saved as an attachment to the document.

## 7.13 Documents used for company processes

Finally, the document management system is also completely linked to the main system that manages company processes. Then on each node of your management process you could store a procedure. Once the user sees a process view of the relevant document he would be able to click on the directory to get all the documents that might be useful for this phase of the process.

So you could also efficiently store the documents required for each phase of a process.

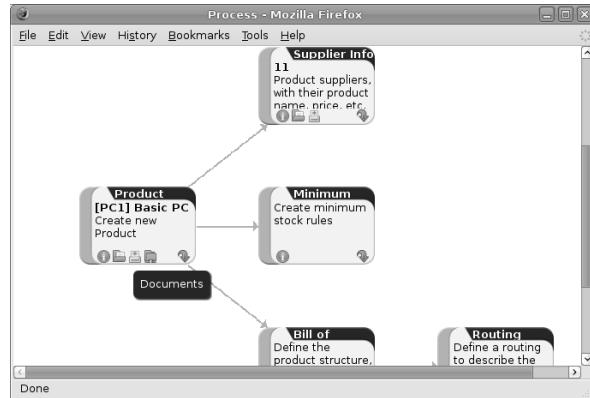


Figure 7.16: Example of a document linked to process management



# Conclusion

Open ERP has become established as the main free market-changing alternative for enterprise management systems in amongst software from giants such as SAP, Oracle and Microsoft, and from the small software developers in their own niches.

Until now only two main alternatives existed for systems that manage a company's information: install a proprietary ERP system, complete but usually overweight, inflexible, and expensive; or develop a solution internally, adapted to current needs but often expensive to develop, not integrated, and incomplete.

With its free business model, Open ERP combines the advantages of a complete ERP system with the flexibility of an in-house solution. The open source code, the project's general flexibility, and its hundreds of modules let you construct a solution from a selection of the modules already available and you can then freely update it as your needs evolve.

The results will be at the top end of what you might expect from any ERP system, let alone an Open Source system. The considerable gains in productivity, efficiency and visibility become apparent only a few months after implementation. And you can gain from increased operational quality even if you reduce your human resourcing intensity. Because there are fewer repetitive tasks for your staff to do, they can concentrate on higher added-value work. We frequently receive the gratitude of senior management who get better results from their business because they've adopted Open ERP.

## You aren't alone

Many resources are at hand to accompany you on your Open ERP adventure.

Bypass the technical difficulties by using the SaaS offer For a quick low-cost start, you can make use of a month's comprehensive free trial of Tiny's Open ERP SaaS package found at . Using this you sidestep any technical difficulties and get a comprehensive set of system administration services, server hosting, configuration to your environment, maintenance, support and initial training.

An SaaS package is suited to the needs of small enterprises that don't have very specific needs, and where the initial cost and the delay of implementation are critical factors.

To meet its objectives of minimal cost, the SaaS package aims for highly automated standardized data migrations, minimal support load by training customers well, and a strict limit to the number of modules offered. So you can't use your own modules, and are limited to the standard modules that are included in various package levels.

## Consult the available resources

Larger companies often prefer a more classic implementation path. Even though Open ERP's simplicity makes this task easier than with other systems, you can't hide the fact that a project implementation is complex and introduces big changes to a company.

So you can turn towards some of the different actors in this free software ecosystem to help you out:

- the community of users and developers,

- Tiny's Open ERP partner companies,
- the main project developers, Tiny, themselves.

## The community of users and developers

The community, supported by Tiny, hosts a set of communication tools which can help you in your Open ERP investigation.

### *The forum*

- <http://openobject.com/forum>

The forum enables you to discuss issues with other Open ERP users. It's very active and you have a good chance of receiving some form of response to your questions within twenty-four hours or so.

### *The wiki*

- <http://openerp.org/wiki>

The wiki contains a large amount of information about the software, some current and some historical. You'll find the documentation necessary for installation there, as well as user documentation, and a technical manual for developing your own modules.

### *Database of Open ERP modules*

- [http://openerp.org/component?option=com\\_mtree&Itemid,111/](http://openerp.org/component?option=com_mtree&Itemid,111/)

A database of all the modules available for use gives you free access to most of the known Open ERP extensions.

### *Launchpad*

<https://code.launchpad.net/~openerp/>

The most recent communication tool is the launchpad system, which now hosts all of Open ERP's source code (using the *bzr* source code control system) and is used for reporting faults. It's become the central location for Open ERP technology.

## Open ERP partners

If you need contract-backed guarantees for implementing and maintaining Open ERP you can contact an official Open ERP partner. Open ERP partners offer various services such as user training, prototype installations, and change management services. The complete list of partners by country and by type can be found on the official Open ERP site: <http://openerp.com/partners.html>.

## The main developer, Tiny

Finally you can call the main project developers, Tiny, who can help you in your Open ERP project. Tiny offers various services such as free demonstration days for the software, user training and technical training, support contracts, maintenance contracts and developments as required. Depending on the demand, they can also put you in contact with partners most aligned to your requirements.

### *The mailing list*

To keep up to date with all Open ERP's news you can subscribe to the mailing list using <http://tiny.be/mailman/listinfo/tinyerp-announce>.

To conclude, don't forget that Open ERP has more than two hundred modules available and that many of them haven't been covered in this book. So if you haven't found a solution to your problems here, look amongst those modules, talk to other Open ERP users on the forum, and don't hesitate to contact a partner.

Wishing you the greatest of success in your ERP project,

— Geoff Gardiner and Fabien Pinckaers.



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