



OpenERP e l'arte della gestione azienda con Python

DOMSENSE



Firenze - 8 maggio 2010

***OpenERP
e l'arte della gestione aziendale con Python***

relatore:

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...o meglio, cosa non è?

OpenERP NON è un software gestionale



OpenERP: cos'è?

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OpenERP è prima di tutto un framework

Tiny ERP

Open ERP
OPEN SOURCE MANAGEMENT SOLUTION

Open OBJECT
Open Source Professional RAD Framework

2003

2009



OpenObject: cos'è?

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**A RAD framework to design
sexy applications in hours !**





OpenERP: sexy?

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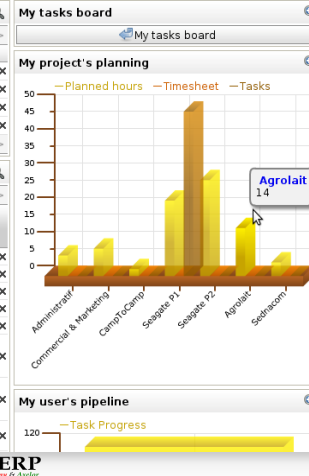
Project Manager Dashboard

My projects

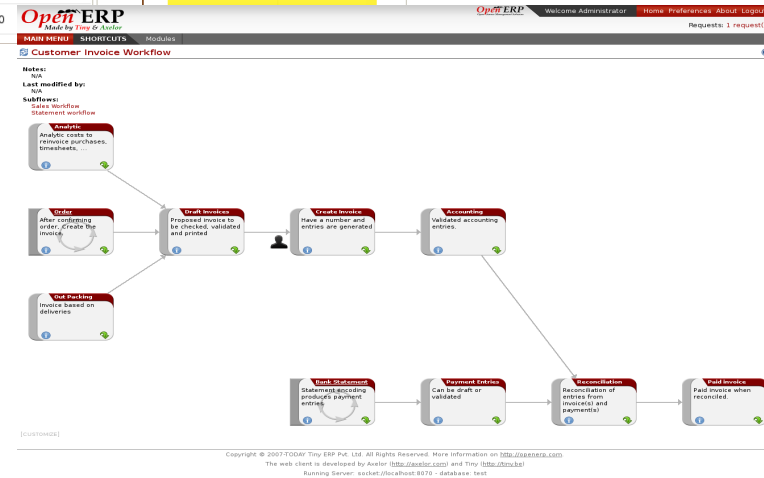
Project Name	Project Manager	Partner	Planned Time	Total Time	Time Spent	Progress	State
Open ERP Integration	Administrator		560:00	560:00	00:00	0.00%	Running X
Study + Prototype	Administrator		192:00	192:00	00:00	0.00%	Running X
Specific Developments	Administrator		264:00	264:00	00:00	0.00%	Running X
Install, data import, configuration	Administrator		104:00	104:00	00:00	0.00%	Running X

My accounts to invoice

Account code	Account Name	Hours Tot	Uninvoiced Hours	Remaining Hours	Maximal quantity	Last Invoice Date	Uninvoiced Amount	Date End
1	Absences	0.00	0.00	0.00	0.00		0.00	X
100	Our Super Product	0.00	0.00	0.00	0.00		0.00	X
101	Project 1	0.00	0.00	0.00	0.00		0.00	X
102	Project 2	0.00	0.00	0.00	0.00		0.00	X
2	Internal	0.00	0.00	0.00	0.00		0.00	X
1	Internal / Our Super Product Development / Stable	0.00	0.00	0.00	0.00		0.00	X
2	Internal / Our Super Product Development / Trunk	0.00	0.00	0.00	0.00		0.00	X



Enterprise: Operades spr
 Nombre Contacto: Bernot Montier
 Calle3: Rue des Palais 44, ete 33
 C.P.: 1030
 Pais: Belgium
 Telefono: (+32) 211 34 83
 E-Mail: info@operades.be





OpenERP: multi-piattaforma

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The screenshot displays the OpenERP software interface with several overlapping windows. The primary window is the 'Dashboard Produzione' (Production Dashboard), which includes a table of production orders, a bar chart for 'Carico Futuro del Laboratorio' (Future Lab Load), and a bar chart for 'Variazione Valore Stock' (Inventory Value Variation).

Riferimento	Prodotto	Quantità	Data Program
MO/0006	[CPU_GEN] Consueta Configurazione Processore	3,00	28/02/2010 14:3
MO/0007	[CPU_GEN] Consueta Configurazione Processore	3,00	05/03/2010 14:3
MO/0008	[CPU_GEN] Consueta Configurazione Processore	2,00	05/03/2010 14:3
MO/0009	[CPU_GEN] Consueta Configurazione Processore	4,00	13/03/2010 14:3

Summary statistics: Qta totale: 12,00 | Ore totali: 36,00 | Cicli totali: 6,00

Descrizione	Prodotto	Quantità	Unità di Mis
SC004-MO/0001	[CPU2] Configurazione processore Alta Velocità	5,00	Pz

Summary statistics: Nessun record selezionata | Stato: Richieste: 1 richiesta/e



OpenERP: multi-piattaforma

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The screenshot displays the OpenERP web interface for creating a Customer Invoice. The interface includes a menu bar with options like 'Nuovo', 'Salva', 'Elimina', 'Indietro', 'Avanti', 'Lista', 'Modulo', 'Calendario', 'Grafico', 'Stampa', 'Azione', 'Allegati', 'Menu', and 'Ricarica'. The main form is titled 'Fatture' and contains the following fields:

- Libro Giornale: x Sales Journal
- Partener: ASUSTek
- Data fattura: 07.03.2010
- Tipo: Customer Invoice
- Indirizzo Fattura: Tang, 31 Hong Kong street
- Numero fattura: 2010/001
- Valuta: EUR
- Forza periodo: Mar.2010

The 'Fattura' tab is active, showing the following details:

- Contabilità: x 40000 Main Receivable
- Descrizione: Test invoice 1
- Modaltà di pagamento: (empty)
- Price method: Tasse escluse

The 'Voce fattura' section contains a table with the following data:

Descrizione	Contabilità	Quantità	Unit of Measure	Prezzo unitario	Sconto (%)	Subtotale (tasse)
Basic computer with Dvorak keyboard and left-handed mouse	x 701000 Products Sales	1,00		250,00	0,00	
Little server with raid 1 and 512ECC ram	x 701000 Products Sales	2,00		800,00	0,00	1

The 'Tasse' section shows the following summary:

- Imponibile: 1850,00
- Tassa: 0,00
- Totale: 1850,00
- Rimanenze: 0,00

The 'Pagato/Riconciato' checkbox is checked, and the 'Stato' is set to 'Fatto'. A 'Riapri' button is visible at the bottom of the form.

Record: 1 / 3 di 3 - Modifica documento (id: 1) Stato:

Administrator Richieste: 1 richiesta/e



OpenERP: multi-piattaforma

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OpenERP Made by Tiny & Axelor OpenERP Benvenuto Administrator Home Preferenze Informazioni su Logout

Richieste: 1 richiesta/e

MENU PRINCIPALE COLLEGAMENTI Documents dashboard Production dashboard Modules

Prossimi Ordini di Produzione

<< Primo < Precedente [1 - 4 di 4] Successivo > Ultimo >>

Riferimento	Prodotto	Quantità	Data Programmata	Ciclo di Lavoro	Ore Totali	Cicli totali	Rif. documento	Stato
MO/00006	[CPU_GEN] Consueta Configurazione Processore	3,00	28/02/2010 14:32:14	Component Manufacturing	9,00	1,30	SO003:MO/00002	Pronto per Entrare in Produzione X
MO/00007	[CPU_GEN] Consueta Configurazione Processore	3,00	05/03/2010 14:32:14	Component Manufacturing	9,00	1,30	SO003:MO/00003	Pronto per Entrare in Produzione X
MO/00008	[CPU_GEN] Consueta Configurazione Processore	2,00	06/03/2010 14:32:14	Component Manufacturing	6,00	1,00	SO004:MO/00004	Pronto per Entrare in Produzione X
MO/00009	[CPU_GEN] Consueta Configurazione Processore	4,00	13/03/2010 14:32:14	Component Manufacturing	12,00	2,00	SO005:MO/00005	Pronto per Entrare in Produzione X
		12,00			36,00	6,00		

Importazione | Esporta << Primo < Precedente [1 - 4 di 4] Successivo > Ultimo >>

Deliveries (Out packing)

<< Primo < Precedente [0 - 0 di 0] Successivo > Ultimo >>

Riferimento	Riferimento dell'origine	Partner	Ordine non ricevuto	Data ordine	Data Pianificata	Stato Fattura	Registro	Tipo Fattura	Registro Vendite	Stato

Importazione | Esporta << Primo < Precedente [0 - 0 di 0] Successivo > Ultimo >>

Approvvigionamenti in Eccezione

<< Primo < Precedente [1 - 1 di 1] Successivo > Ultimo >>

Descrizione	Prodotto	Quantità	Unità di Misura	Data Programmata	Tipo di Approvvigionamento	Rif. documento	Stato	Ultimo Errore
SO004:MO/00001	[CPU2] Configurazione processore Alta Velocità	3,00	Pz	01/03/2010 14:32:14	su Ordinazione	SO004:MO/00001	Eccezione	No BoM defined for this product ! X

Importazione | Esporta << Primo < Precedente [1 - 1 di 1] Successivo > Ultimo >>

Carico Futuro del Laboratorio

Periodo	Numero Ciclo	Numero Ore
2010-08	3	9
2010-09	10	27
2010-10	5	17
2010-11	5	8

Variazione Valore Stock

Periodo	Valore Stock
2010-08	185
2010-09	1665
2010-10	1480
2010-11	1110

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OpenERP 6.0: countdown

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The screenshot displays the OpenERP 6.0 web interface. At the top, there's a navigation bar with tabs for SERVICES, ADMIN, PROJECTS, SALES, STOCK, and FINANCE. The main content area is divided into several sections:

- Tasks:** A burndown chart showing hours remaining over 7 weeks. A tooltip for Week 4 indicates 368 hours remaining.
- MESSAGES:** A list of recent messages from users like Marie Zilberman, Jessica Sarah Stone, Johnathan Doe, and Serge Amorizi.
- ISSUES:** A line chart showing the number of open and closed issues over 7 weeks.
- LATEST LOGS:** A table listing recent system logs with columns for NAME, AGE, NICKNAME, and EMPLOYEE.

At the bottom of the interface, it says "POWERED BY OPENERP.COM" and "CUSTOMIZE".

Nuovo Skin



OpenERP 6.0: countdown

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FABIEN PINCKAERS [notification 3] [home] [folder] [gear] [help] [info] LOGOUT

NAVIGATOR »

JULY 2010

28	29	30	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1

RESPONSIBLE [ADD]



OpenERP 6.0: countdown

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Calendar Meetings ?

MONTH WEEK DAY

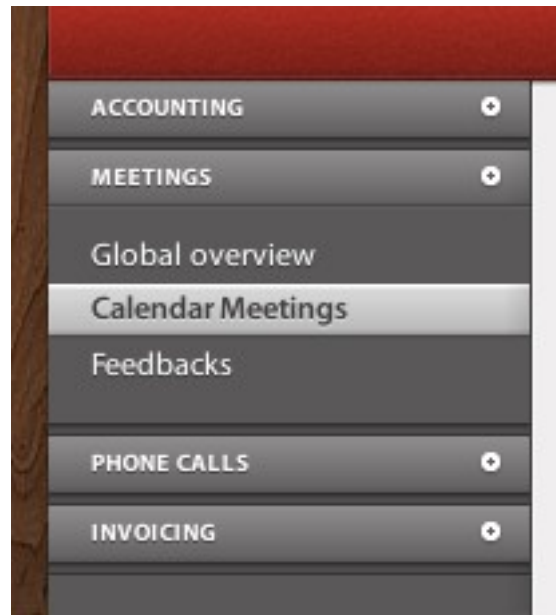
February 2010

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRII
1	2 <ul style="list-style-type: none">Enforcing equalExpanded array	3 <ul style="list-style-type: none">Conveniently impactHolistically engineer installedEnforcing equal	4	5



OpenERP 6.0: countdown

DOMSENSE





OpenERP 6.0: countdown

DOMSENSE

Sales orders ?

ORDER REFERENCE NR. MEA50388

SAVE SAVE & NEW CANCEL 25 OF 130

ORDER REFERENCE CUSTOMER REF PICKED

SELECTED SHOP ORDER DATE PAID

SALE ORDER OTHER DATA HISTORY

CUSTOMER ORDER CONTACT

INVOICE ADDRESS SHIPPING ADDRESS

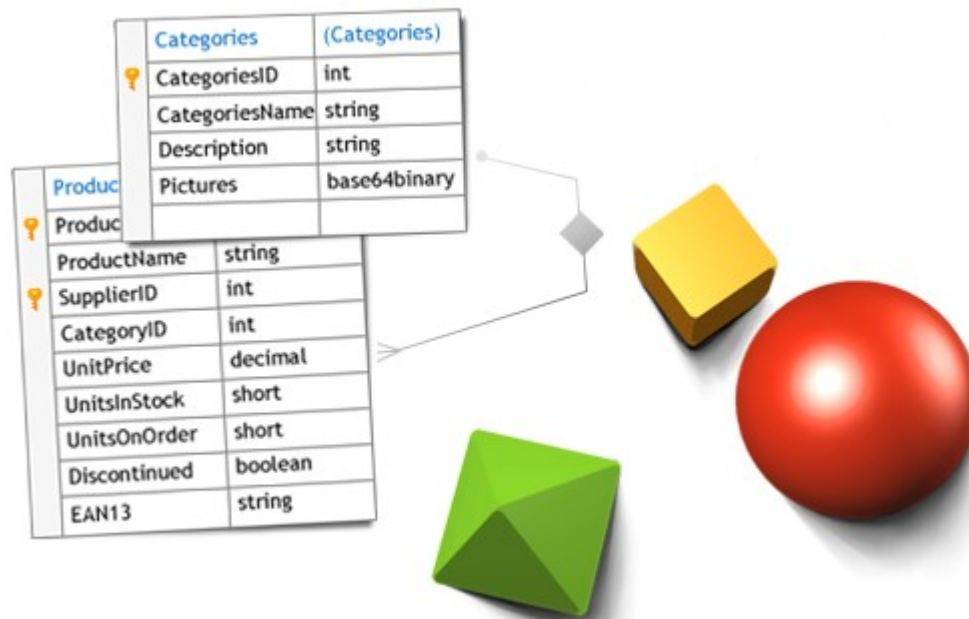
PRICELIST ANALYTICS ACCOUNT



OpenERP: oltre il look

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OpenObject: ORM, API, XML-RPC, Viste, ...





OpenObject: gli oggetti

DOMSENSE

```
class project(osv.osv):
    _name = "project.project"
    _description = "Project"

    [...]

def onchange_partner_id(self, cr, uid, ids, part):
    if not part:
        return {'value':{'contact_id': False, 'pricelist_id': False}}
    addr = self.pool.get('res.partner').address_get(cr, uid, [part], ['contact'])
    [...]

    _columns = {
        'name': fields.char("Project Name", size=128, required=True),
        'complete_name': fields.function(_complete_name, method=True, string="Project Name", type='char', size=128),
        'active': fields.boolean('Active'),
        'category_id': fields.many2one('account.analytic.account','Analytic Account', help="..."),
        'priority': fields.integer('Sequence'),
        [...]

    _defaults = {
        'active': lambda *a: True,
        'manager': lambda object,cr,uid,context: uid,
        [...]
    }
```



OpenObject: le viste

DOMSENSE

```
<?xml version="1.0" encoding="utf-8"?>
<openerp>
  <data>
    <menuitem icon="terp-project" id="menu_main" name="Project Management"/>
    <menuitem id="menu_tasks" name="Tasks" parent="menu_main"/>project.project</field>
      <field name="type">form</field>
      <field name="arch" type="xml">
        <form string="Project">
          <group colspan="4" col="6">
            <field name="name" select="1"/>
            <field name="parent_id"/>
```

'parent_id': fields.many2one('project.project', \n 'Parent Project', \n help="If you have..."),



OpenObject: i widget

DOMSENSE

```
<?xml version="1.0" encoding="utf-8"?>
<openerp>
  <data>
    <menuitem icon="terp-project" id="menu_main" name="Project Management"/>
    <menuitem id="menu_tasks" name="Tasks" parent="menu_main"/>
    <menuitem id="menu_definitions" name="Configuration" parent="project.menu_main" sequence="1"/>

    <!-- Project -->
    <record id="edit_project" model="ir.ui.view">
      <field name="name">project.project.form</field>
      <field name="model">project.project</field>
      <field name="type">form</field>
      <field name="arch" type="xml">
        <form string="Project">
          <group colspan="4" col="6">
            <field name="name" select="1"/>
            <field name="parent_id"/>
            <field name="manager" select="1"/>
            <field name="date_start"/>
            <field name="date_end"/>
            <field name="progress_rate" widget="progressbar"/>
          </group>
        </form>
      </field>
    </record>
  </data>
</openerp>
```

?Progetto Padre :

OpenERP ricerca: Progetto

Nome Progetto : Project Manager :

Nome Progetto	Project Manager	Partner	Tempo
SO002	Administrator	Tiny sprl	00:00
SO003	Administrator	Tiny sprl	00:00

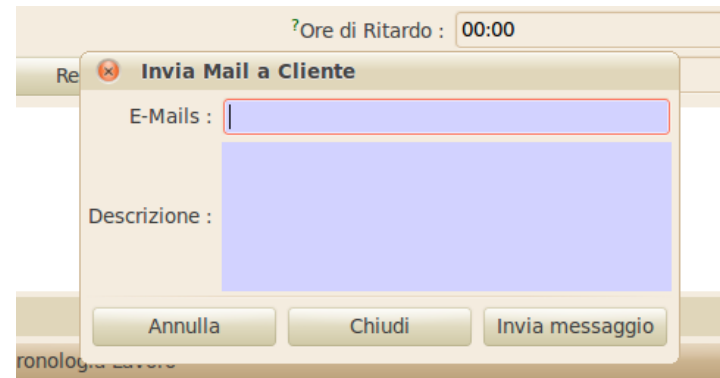


OpenObject: i wizard

DOMSENSE

```
class wizard_close(wizard.interface):
    def _check_complete(self, cr, uid, data, context):
        task = pooler.get_pool(cr.dbname).get('project.task').browse(cr, uid, data['ids'])[0]
        if not (task.project_id and task.project_id.warn_customer):
            return 'close'
        return 'mail_ask'
    [...]

states = {
    'init': {
        'actions': [],
        'result': {'type':'choice', 'next_state':_check_complete}
    },
    'mail_ask': {
        'actions': [_get_data],
        'result': {'type':'form', 'arch':mail_form, 'fields':mail_fields, 'state':[(('end', 'Cancel'), ('close', 'Quiet close'), \
('mail_send', 'Send Message'))],
    },
    [...]
    'close': {
        'actions': [_do_close],
        'result': {'type':'state', 'state':'end'},
    },
}
```





OpenObject: i reports

DOMSENSE

OpenERP

```

<O.COMPANY_ID.PARTNER_ID.NAME>
<O.COMPANY_ID.PARTNER_ID.ADDRESS[0].STREET>
<O.COMPANY_ID.PARTNER_ID.ADDRESS[0].ZIP> -
<O.COMPANY_ID.PARTNER_ID.ADDRESS[0].CITY>
<O.COMPANY_ID.PARTNER_ID.ADDRESS[0].PROVINCE_ID AND
STR('+O.COMPANY_ID.PARTNER_ID.ADDRESS[0].PROVINCE_ID.CODE+') OR "> -
<O.COMPANY_ID.PARTNER_ID.COUNTRY_NAME>
Tel: <O.COMPANY_ID.PARTNER_ID.ADDRESS[0].PHONE OR ">
Fax: <O.COMPANY_ID.PARTNER_ID.ADDRESS[0].FAX OR ">
Email: <O.COMPANY_ID.PARTNER_ID.ADDRESS[0].EMAIL OR ">
PVA: <O.COMPANY_ID.PARTNER_ID.VAT OR ">
CF: <O.COMPANY_ID.PARTNER_ID.FISCALCODE OR ">

```

```

<SETLANG(O.COMPANY_ID.PARTNER_ID.LANG OR 'EN_US')>
<O.PARTNER_ID.TITLE OR "> <O.PARTNER_ID.NAME OR ">
<O.ADDRESS_INVOICE_ID.STREET OR ">
<O.ADDRESS_INVOICE_ID.ZIP OR "> -
<O.ADDRESS_INVOICE_ID.CITY OR ">

```

N° Documento	Del		Cod. Cliente	Cod. fiscale	Partita IVA	Pag.
<O.NUMBER OR ">	<FORMATLANG(TIME, STRFTIME("%D/%"))>	Fattura	<O.PARTNER_ID.REF OR ">	<O.PARTNER_ID.FISCALCODE OR ">	<O.PARTNER_ID.VAT OR ">	1/1
Banca d'appoggio		Filiale		BIC/ SWIFT		
<IF TEST="O.COMPANY_ID.PARTNER_ID.BANK_IDS">		<IF TEST="O.COMPANY_ID.PARTNER_ID.BANK_IDS">		<IF TEST="O.COMPANY_ID.PARTNER_ID.BANK_IDS">		
<O.PAYMENT_TERM.NAME OR ">		Nz. IBAN		<O.PARTNER_ID.BANK_IDS[0].IBAN OR ">		

Cod. articolo	Descrizione	U.M.	Q.ta	Prezzo	%Sc.	Importo	IVA
---------------	-------------	------	------	--------	------	---------	-----



```
import xmlrpclib
```

```
user = 'admin'
```

```
pwd = 'admin'
```

```
dbname = 'pycon4'
```

```
model = 'res.partner'
```

```
sock = xmlrpclib.ServerProxy('http://localhost:8069/xmlrpc/common')
```

```
uid = sock.login(dbname ,user ,pwd)
```

```
sock = xmlrpclib.ServerProxy('http://localhost:8069/xmlrpc/object')
```

```
# CREATE A PARTNER
```

```
partner_data = {'name':'Acme SPA', 'active':True, 'vat':'IT0123456789213'}
```

```
partner_id = sock.execute(dbname, uid, pwd, model, 'create', partner_data)
```



OpenObject: XML-RPC

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```
<?
include('xmlrpc.inc');
$arrayVal = array(
'name'=>new xmlrpcval('Acme SPA', "string") ,
'vat'=>new xmlrpcval('IT0123456789434' , "string")
);
$client = new xmlrpc_client("http://localhost:8069/xmlrpc/object");
$msg = new xmlrpcmsg('execute');
$msg->addParam(new xmlrpcval("dbname", "string"));
$msg->addParam(new xmlrpcval("3", "int"));
$msg->addParam(new xmlrpcval("demo", "string"));
$msg->addParam(new xmlrpcval("res.partner", "string"));
$msg->addParam(new xmlrpcval("create", "string"));
$msg->addParam(new xmlrpcval($arrayVal, "struct"));
$res = $client->send($msg);
if ($res->faultCode())
    echo 'Error: '.$res->faultString();
else
    echo 'Partner '.$res->value()->scalarval().' created !';
?>
```



1. <http://www.openobject.com> (Forum, Wiki, Planet...)
2. <http://doc.openerp.com> (Dev Book, Community Book, ...)
3. Memento: <http://www.openobject.com/memento>



1. IRC (freenode): #openobject, #openerp-it
2. Forum: <http://www.openobject.com/forum>
3. Forum IT: <http://www.openerp-italia.org>



1. <https://launchpad.net/openobject-server>
2. <https://launchpad.net/openobject-client>
3. <https://launchpad.net/openobject-client-web>
4. <https://launchpad.net/openobject-addons>