

]project-open[v3.1
Unix
Simplified
Installation
Guide

Klaus Hofeditz and Frank Bergmann,
V1.0, 2006-05-13

INDEX

1	ABOUT THIS DOCUMENT	3
1.1	VERSION	3
1.2	SCOPE	3
1.3	AUDIENCE	3
2	INSTALLATION INSTRUCTIONS	4
2.0	ABOUT THE INSTALLER & LICENSE	4
2.1	PREREQUISITES:	4
2.2	INSTALLATION OVERVIEW	4
2.3	INSTALLATION FILE CONTENTS	5
2.4	MAIN INSTALLATION PROCEDURE#	5
2.5	WHERE TO GO FROM HERE	14

1 About this Document

Please note: This is a formatted copy of the "INSTALL" instructions of the version [ProjectOpen-3.1.2.0.LinuxInstaller.tgz](#). Please see the INSTALL file of the Linux installer for updates and corrections if the version number of the installer is higher than V3.1.2.

1.1 Version

Version: 1.0, 2006-05-13

Author: Klaus Hofeditz and Frank Bergmann

Status: Advanced Draft

1.2 Scope

This manual describes the installation of **]project-open[** using the binary Linux Installer. The current installer [ProjectOpen-3.1.2.0.LinuxInstaller.tgz](#) is available for download in the download area of <http://www.sourceforge.net/projects/project-open/>.

This is the preferred way to install **]project-open[**.

1.3 Audience

This manual is written for Linux system administrators.

2 Installation Instructions

2.0 About the Installer & License

]project-open[Installer
Frank Bergmann <frank.bergmann@project-open.com>
Version V3.1.4, 2006-04-04
Copyright (c) 2006]project-open[
<http://www.project-open.org/download/win/3.1.4.0.html>

This is the]project-open[Linux installer. This document describes how to install]project-open[, and open-source based project management and Professional Service Automation (PSA) system.

Permission is granted to copy, distribute and/or modify this document under the terms of the GNU Free Documentation License, Version 1.1 or any later version published by the Free Software Foundation.

A copy of the license is available at
<http://www.gnu.org/copyleft/fdl.html>.

Please see LICENSE.ProjectOpen in the /web/projop/ directory for details about the licensing of the contained software.

2.1 Prerequisites:

- Any recent Linux distribution (Kernel 2.4.x and 2.6.x).
The system is known to work with SuSE (> 9.1), RedHat (> 8.0) and Debian (Sarge). For installation on different systems please see <http://openacs.org/doc/current/acs-admin.html>.
 - PostgreSQL 7.4.x or 8.0.1 (8.0.3 or higher DOES NOT WORK!)
PostgreSQL comes as part of all Linux distributions above.
 - CVS 1.12.x
CVS comes as part of all major Linux distributions.
- Other recommended software includes:
- Pound reverse proxy

2.2 Installation Overview

It will probably take you 15 minutes to go through the following steps:

- Check that the prerequisites are OK
- Setup "AOLServer". AOLServer is a webserver, similar to Apache. It acts as the application server that interprets the]project-open[source code.
- Extract the]project-open[source code tree
- Setup the PostgreSQL database and import the]po[demo system.
- Start the system for the first time
- Automate backup, maintenance and system restart.
This is only necessary for a production installation of the server.
- Check for the latest version and updates

2.3 Installation File Contents

- INSTALL # This file
- aolserver3.3oacs.tgz # The AOLServer binary
- project-open.3-1-2-0-0.tgz #]project-open[source tree

The finished directory tree will look like this:

```

/ usr / local / aolserver3.3oacs / bin      # Binaries
                                   / lib      # Libraries
                                   / log       # Not used
                                   / modules   # The TCL interpreter
                                   / include   # Header files

/ web / projop / apm-workspace             # Tmp space
    / bin                                  # Utilities
    / etc                                  # Config files
    / filestorage                          # Filestorage
    / log                                  # Log files
    / packages                            # Package home
    / packages / <package_name>           # A single package
    / packages / <package_name> / catalog # Localization
    / packages / <package_name> / sql      # SQL satamodel
    / packages / <package_name> / tcl      # Library
    / packages / <package_name> / www      # Pages
    / tcl                                  # Global libraries
    / www                                  # 1st page and templates

```

2.4 Main Installation Procedure#

2.4.1 Install AOLServer

AOLServer is the application server of]project-open[. It is similar to Apache, but includes a built-in compiler for the TCL language.

AOLServer is the server of AOL and is know to deliver up to

2.5 million pages/second (no typo!).

```
root# cd /usr/local/
root# tar xzf aolserver3.3oacs.tgz
```

Check that AOLServer is working:

```
root# /usr/local/aolserver3.3oacs/bin/nsd -h
=> Usage: /usr/local/aolserver3.3oacs/bin/nsd [...]
```

2.4.2 UnTar the Source Tree

The default location for]project-open[is /web/. This is handy if you have several servers and if the main purpose of your computer is to run web servers. You can use a different directory, but you'll have to change pathes in the config.tcl and later in the application configuration. So we RECOMMEND that you stick with /web/, atleast for the purpose of the first installation.

```
root# cd /
root# mkdir /web
root# cd /web
root# tar xzf project-open.3-1-2-0-0.tgz
```

2.4.3 Create a new User and Group

You can run]project-open[using any user/group that you want. So we recommend you to create a separate user/group for it for security reasons. We usually choose the same name for the user and the group:

```
root# groupadd projop
root# useradd -g projop -d /web/projop projop
```

Check that the new user is working:

```
root# su - projop
=> You should get a permission warning like:
    "su: warning: cannot change directory to /web/projop:
```

```
Permission denied"
```

```
That is OK because you haven't set the permissions yet
(section below)
```

However, there is a configuration option where you may want to allow]project-open[to read and write to your existing Samba fileserver, that is located on the same computer.

This configuration is convenient for many companies, because it allows users to work with the same files from within the office and from outside the office.

In this case you will have to run]po[with the group "users" (or whatever is your main employee group), so that the files created by]po[can be read and written by the Samba users.

2.4.4 Verify the Config File

The config.tcl configuration file in /web/projop/etc/ tells AOLServer where to start action. Please verify the first 10 or so lines to for IP address and port and adapt the values to your configuration.

Here are the sample values that are delivered with the installer:

```
#-----
# change to 80 and 443 for production use
set httpport      8080
set httpsport     8443

# The name of the server and its location
set server         "projop"
set servername     "ProjectOpen Test Server"

# Set hostname and address. The following two lines
# are OK as a default. Change only if you know what
# you do.
set hostname       [ns_info hostname]
set address        "0.0.0.0"
```

2.4.5 Set Permissions and Owner

All files in /web/projop/ should be owned by projop:

```
root# cd /web
root# chown -R projop:projop projop
```

Now you should be able to login as "projop" without error message:

```
root# su - projop
=> No error
```

2.4.6 Setup the PostgreSQL Database

We are going to create a database "projop" and load a preconfigured demo system into this database:

Check that PostgreSQL up and running ("postgres" is the default database administrator account. All PostgreSQL installers on SuSE, RedHat and Debian setup this account by default).

```
root# su - postgres
postgres# psql --help
=> This is psql 7.4.7, the PostgreSQL interactive terminal. [...]
```

Create a new user. The new user should be a database admin (-a, -d) because these privileges are needed in order to setup the full-text search engine:

Create a new user, a new database and a language in the database:

```
postgres# createuser -a -d projop
postgres# createdb --owner=projop projop
postgres# createlang plpgsql projop
=> May say that "plpgsql" is already installed, that's OK.
```

Known Issues:

- PostgreSQL 8.1.x: Don't use this version, it won't work.
- PostgreSQL 8.0.x: There is a function missing in 8.0.x.

Please add the function by executing the following steps:

```
root# su - projop
projop# psql projop
```

Then enter:

```
create or replace function bitfromint4 (integer)
returns bit varying as ''
begin
    return $1::bit(32);
end;'' language 'plpgsql' immutable strict;
```

- PostgreSQL 7.4.x: There is a bug in TSearch2, which breaks backup/restore if you install it. So don't install the "Intranet-Search-Pg" package. The package contains another

warning message.

2.4.7 Load the Demo Data into the Database

There are two demo configurations coming with this server:

-]project-consulting[is a small consulting company with some 10 employees. This setup is also suitable for advertising agencies, engineering offices, IT departments of larger companies etc.
-]project-translation[is a small translation company with some 10 employees. This setup is also suitable for localization companies and translation departments of larger companies.
- For]project-lifecycle[or]project-agency[please use the]project-consulting[demo. These three products are very similar and distinguished mainly by configuration.

```
root# su - projop
projop# cd /web/projop/packages/intranet-core/preconf
projop# psql projop -f pc.preconf.sql          # ]project-consulting[
or
projop# psql projop -f pt.preconf.sql          # ]project-translation[
```

Loading the files may take some 1-2 minutes. It is OK if you see ERROR messages in the beginning talking about missing "tables" or missing "functions".

Check that the file has been loaded OK:

```
projop# psql projop
projop=# select count(*) from users;
```

=> 192

2.4.8 Customize Your Login Screen

There are two demo configurations for the login screens, one for]project-consulting[and one for]project-translation[.

```
root# rm /web/projop/www/index.tcl
root# rm /web/projop/www/index.adp
root# su - projop
projop# cd /web/projop/packages/intranet-core/
projop# cp preconf/pt.index.tcl /web/projop/www/index.tcl
projop# cp preconf/pt.index.adp /web/projop/www/index.adp
```

You can check the availability of the screen when starting AOLServer in the next step.

2.4.9 Start the Server for the First Time

Now we are ready to start the server. We are going to run it in "foreground mode" to get all debugging messages on the terminal. (The "\" indicates a continuation of the command line):

```
root# /usr/local/aolserver3.3oacs/bin/nsd -f -t \
      /web/projop/etc/config.tcl -u projop -g projop
```

=> You should get hundreds of lines of debugging output.

=> After about 30 seconds you should see a line like this:

```
[...][...][...] Notice: nssock: listening on 0.0.0.0:8080
```

Congratulations!

If you should encounter errors please check the output for occurrence of the "error:" string.]po[gives quite detailed error messages that allow you track down any error. Please check the "Open Discussion" forum at <http://sourceforge.net/projects/project-open/> for help. Please include the first(!) line of your log file containing "error:" if you post.

To check that the server is running file please start a Web browser on your local computer with the URL "http://localhost:8080" or choose a suitable URL if you start the browser at a different computer.

Known issues.

- RHEL4: Please replace the link /usr/local/aolserver/bin/libtdom.so by a copy of libtdom0.7.8.so. No idea why this doesn't work on RHEL, it's fine with SuSE and Debian...

2.4.10 Update Parameters and Configuration

The parameters in your system should be set for a Windows installation right now (after importing the preconfigured demo contents).

To convert these parameters to Linux please use the "Convert parameters from Windows to Linux" link in the "Admin" menu.

Please point your favourite web browser to "Admin" -> "Parameters" in order to check the parameters manually. The filestorage paths should now all be set to /web/projop/... (instead of "C:/ProjectOpen/..." in Windows). Please check the "HomeBasePathUnix". It should become "/web/projop/filestorage/home" under Linux.

Also, decide whether you want to allow people to register themselves to access your server or whether you want to confirm membership.

For more information on parameters and configuration please check the PO-Configuration-Guide in the /web/projop/filestorage/home folder or just check in Google for "project-open configuration-guide".

2.4.11 Automate Server Restart

AOLServer in our productive installations usually run weeks without a restart. However, you want to make sure the server "comes back" if it's been stopped (for example after the installation of a new package).

To do this, please stop any running AOLServer instances and include the following line in your "InitTab" (the "\" indicates a continuation of the same line):

```
root# vi /etc/inittab
```

And add somewhere the line:

```
ns1:345:respawn:/usr/local/aolserver3.3oacs/bin/nsd -it \  
/web/projop/etc/config.tcl -u projop -g users
```

This line tells "Init" to restart the server in case it has stopped.
Then tell "init" to read the InitTab again:

```
root# init q
```

Check with "top" or "tail -f /web/projop/log/error.log" that the server starts.

There have been reports that "init q" wouldn't work on a Debian system. In this case please reboot your system. Let us know if you have found/resolved this behaviour.

You can test the restart behaviour by killing AOLServer the "hard way".
Your server should "come back" withing 1-2 minutes automatically.

```
root# killall -9 nsd
```

Know Issues:

- On Debian 3.1 please check your default runlevel. Please replace "345" by "2345" if you default runlevel is "2".

2.4.12 Automate PostgreSQL Maintenance

PostgreSQL requires you to execute a "vacuumdb" command regularly in order to reorganize and cleanup the database. Please add a line to your "crontab":

```
root# crontab -e
```

And then add the following line to schedule a "vacuum" at 3:20am every day:

```
20 3 * * * su - postgres -c "/usr/bin/vacuumdb -a -f" >> \  
/var/log/vacuumdb.log 2>&1
```

2.4.13 Automate PostgreSQL Backup

It is advisable to schedule PostgreSQL backups every day, or even every few hours (the database is usually quite small, so that it's save to backup during times of low system use such as 5am, 1pm, 9pm).

Load your "crontab" into an editor:

```
root# crontab -e
```

Then add a line like this (make sure /var/log/backup/ exists and is writable for the user "postgres"):

```
9 5 * * * /root/bin/backup-postgres > \
/var/log/backup/export_postgres.`/bin/date +%Y%m%d.%H%M`.log 2>&1
```

Here is a sample file to initiate the backup:

```
#
# /root/bin/backup-postgres
# V1.1, 060115 Frank Bergmann <frank.bergmann@project-open.com>
#

# Backup to a directory that is written to tape every day:
exportdir=/web/projop/filestorage/backup

# Make sure this log directory is writable for user "postgres"
logdir=/var/log/backup

# PostgreSQL Admin account
PG_OWNER=postgres

# Add a timestamp to all database dumps:
CURRENT_TIME=`/bin/date +%Y%m%d.%H%M`

# ----- "projop" Database on "berlin" -----
#
COMPUTER_NAME=berlin
SERVICE_NAME=projop
export_file=$exportdir/pgback.$COMPUTER_NAME.$SERVICE_NAME.$CURRENT_TIME.sql
log_file=$logdir/export-postgres.$SERVICE_NAME.$CURRENT_TIME.log
echo su - $SERVICE_NAME --command="pg_dump -c -O -F p -f $export_file"
su - $SERVICE_NAME --command="pg_dump -c -O -F p -f $export_file" > $log_file 2>&1
bzip2 $export_file
```

You need to make this file writable:

```
root# chmod ug+x /root/bin/backup-postgres
```

2.4.14 Check for Latest Version & Updates

Please check <http://www.project-open.org/download/win/3.1.4.0.html> for

release notes and <http://www.sourceforge.net/projects/project-open/> for news and announcements. You can subscribe yourself to the project to get updated about new packages, security updates etc.

Please send us your email address if you are planning to use]po[in your company. This way we will send you a ~quarterly newsletter and alert you in urgent cases.

On Sourceforge check for the latest announcement of a stable release.

For example the latest while writing this document is "v3-1-2-0-0". The upgrade to this release (this is also necessary for if you install this installer - there are updates with respect to Invoices):

```
root# su - projop
projop# cd /web/projop/packages
projop# cvs -d :pserver:anonymous@berlin.dnsalias.com:/home/cvsroot \
    update -r v3-1-2-0-0 -Pd
```

After this please go to your server URL <http://localhost/acs-admin/apm/>, choose "Install Packages" and select all packages that "Upgrade" (please don't install packages if you don't know what they are doing).

The same process is available as the "Automated Software Update Service". ASUS is free at the moment, but we plan to charge a small amount per month for its use in the future.

2.5 *Where to go from here*

- Please check www.project-open.org/download/win/3.1.4.0.html
This is the location where we are posting release notes and comments from other users on this particular version of the installer.
- Check SourceForge: <http://sourceforge.net/projects/project-open/> and consult the "Open Discussions" forum. Here you will find a lot of other users, discussing the product.

Please leave us a message in this forum if you like this software. You can do this anonymously, just telling everybody about your experience and how you would like to use the system.

- Play around with the system:

We have provided you with the sample company configurations so that it is easy (and even fun) to browse around and explore the projects of the "Tigerpond" company.

Checkout the "Iteligent Software Localization" project in]project-translation[and the "Distribution System for door-locks" project in]project-consulting[. These projects have been setup up based on real-world experience.

- Read the PDF manuals:

A full set of PDF manuals is included with this distribution in the "Home Filestorage" located at /web/projop/filestorage/home/.

- Complete List of Documentation:

For complete documentation please go to <http://www.project-open.org/> The "]po[overview" diagram on the first page lists all components that are involved in running]po[.

- Start to use the system for "production":

Once you have found that the system suits your needs you can delete the "demo data" in "Admin" -> "Delete Demo Data".

Only projects and companies are deleted. All master data Configuration and the users will remain.

- Buy Training and Configuration support from us:

A day of consulting work will allow us to talk with you about your configuration details and your rollout strategy.

Also, we can help you with training and to avoid any "people issues" that frequently show up when employees have to start to use a new system.

- Get a Support Contract:

A support contract allows us to respond quickly to your support questions. See <http://www.project-open.com/product/services/>



Ronda Sant Antoni, 51 1º 2a
08011 Barcelona, Spain
Tel.: +34 93 325 0914
Fax.: +34 93 289 0729