

Analizo Installation Guide

João Miranda
Paulo Meirelles
Lucianna Almeida
Vinícius Daros
Fabio Kon
University of São Paulo (USP)

Antonio Terceiro
Joênio Costa
Luiz Romário Rios
Christina Chavez
Federal University of Bahia (UFBA)

15/06/2010

This work is partially funded by EU under the grant of IST-FP6-034763 – QualiPSo Project

<http://www.qualipso.org>



This document is licensed under the Creative Commons Attribution-Share Alike 3.0 License.

To view a copy of this license, visit <http://creativecommons.org/licenses/by-sa/3.0/> or send a letter to Creative Commons, 171 Second Street, Suite 300, San Francisco, California, 94105, USA.

QualiPSo • IST- FP6-IP-034763 • Version 1.0, dated 15/06/2010 • Page 1 of 15



EXECUTIVE SUMMARY

This document contains information concerning the installation steps of the Analizo tool. It also presents what are its dependencies and how to install them.

See also user guide and architecture guide documentations.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	2
TABLE OF CONTENTS	3
1 INTRODUCTION	4
2 INSTALLATION PACKAGE DESCRIPTION	5
2.1 Installation requisites	5
2.2 Analizo components.....	5
3 INSTALLATION STEPS	7
3.1 Linux/Unix Installation Steps.....	7
3.1.1 Debian/Ubuntu Linux distribution.....	7
3.1.2 All Linux/Unix distribution.....	7
3.2 Windows Installation.....	11
4 TROUBLESHOOTING	13
5 LICENSE	14
6 ACKNOWLEDGMENT	15

1 INTRODUCTION

Analizo¹ is multi-language source code analysis and visualization toolkit. It supports the extraction and calculation of a fair number of source code metrics, generation of dependency graphs, and software evolution analysis. It efficiently parses source code written in C, C++ and Java and reports useful information. More details in user and architecture guide.

¹<http://softwarelivre.org/mezuro/analizo>

2 INSTALLATION PACKAGE DESCRIPTION

2.1 Installation requisites

The requisites to run Analizo are:

- Perl programming language interpreter
- GNU C++ compiler, also known as g++
- Shell Script

2.2 Analizo components

Analizo architecture is based on three main components: Analizo (perl) modules, Doxyparse² and Sloccount³. Doxyparse is an auxiliary tool based on Doxygen⁴ internals. It is a command line based application which parses the given files or directory and reports source code information. Sloccount is another auxiliary tool used to extract the number of effective lines of code. In order to install it entirely, it is necessary to configure and install each of the dependencies. Therefore, Analizo depends of the following Perl Modules:

- Class::Accessor
 - <http://search.cpan.org/~kasei/Class-Accessor-0.34/>
- Getopt::Euclid
 - <http://search.cpan.org/~kgalinsky/Getopt-Euclid-0.2.1/>
- Graph
 - <http://search.cpan.org/~jhi/Graph-0.94/>
- List::Compare
 - <http://search.cpan.org/~jkeenan/List-Compare-0.37/>
- MRO::Compat
 - <http://search.cpan.org/~flora/MRO-Compat-0.11/>
- Statistics::Descriptive
 - <http://search.cpan.org/~shlomif/Statistics-Descriptive-3.0100/>
- Statistics::OnLine
 - <http://search.cpan.org/~nids/Statistics-OnLine-0.02/>
- Sub::Uplevel
 - <http://search.cpan.org/~dagolden/Sub-Uplevel-0.22/>

²softwarelivre.org/mezuro/doxyparse

³dwheeler.com/sloccount

⁴stack.nl/~dimitri/doxygen

- Test::Class
 - <http://search.cpan.org/~adie/Test-Class-0.35/>
- Test::Exception
 - <http://search.cpan.org/~adie/Test-Exception-0.29/>
- YAML
 - <http://search.cpan.org/~adamk/YAML-0.71/>

3 INSTALLATION STEPS

- Install Doxyparse
 - Doxygen dependencies
 - Perl modules
- Install Sloccount
- Install Analizo modules

3.1 Linux/Unix Installation Steps

3.1.1 Debian/Ubuntu Linux distribution

We developed a Debian package with all dependencies.

- Add the following line to your `/etc/apt/sources.list`:

```
deb http://app.dcc.ufba.br/~terceiro/analizo/ ./
```

- Then do:

```
wget -q -O - http://app.dcc.ufba.br/~terceiro/analizo/signing-  
key.asc | sudo apt-key add -  
sudo apt-get update  
sudo apt-get install analizo
```

3.1.2 All Linux/Unix distribution

3.1.2.1 Doxyparse

1. Install Doxygen dependencies:

- GNU Flex version 2.5.33 (Linux) and 2.5.4 (MacOSX)
 - <http://flex.sourceforge.net/>
- GNU Bison version 1.75
 - <http://www.gnu.org/software/bison/>

2. Install all perl modules, using CPAN or your native package manager:

- Class::Accessor
- Getopt::Euclid
- Graph

- List::Compare
- MRO::Compat
- Statistics::Descriptive
- Statistics::OnLine
- Sub::Uplevel
- Test::Class
- Test::Exception
- YAML

In order to install them, for each or them (replacing ModuleFile to each module file name), do:

```
$ tar -zxvf ModuleFile.tar.gz
$ cd ModuleFile
$ perl Makefile.PL
$ make
$ make test
$ make install
```

3. Download Doxyparse source code:

```
$ git clone git://github.com/terceiro/doxyparse.git
```

(or from <http://github.com/terceiro/doxyparse/archives/master>)

Then do:

```
$ cd doxyparse
```

4. Configure the installation running the configure script using the `--with-doxyparse` option:

```
$ ./configure --with-doxyparse
```

5. Run the Makefile:

```
$ make
```

6. Run the the Makefile using the install task. It will probably be necessary to do this as super user in order to install it in the system:

```
$ sudo make install
```


3.1.2.2 Sloccount

To install Sloccount, download the source code and follow the installation steps described at <http://www.dwheeler.com/sloccount/>:

1. Download (this is the latest version at the moment):
from <http://www.dwheeler.com/sloccount/sloccount-2.26.tar.gz>

2. Installation

Unpacking the file will create a subdirectory (the * replaces the version #) by typing this at a terminal session:

```
$ tar -zxvf sloccount*.tar.gz
```

Then do:

```
$ cd sloccount*
```

```
$ make
```

```
$ sudo make install
```

3.1.2.3 Analizo Modules

1. Download Analizo source code:

```
$ git clone git://github.com/terceiro/analizo.git
```

(or from <http://github.com/terceiro/analizo/archives/master>)

Then do:

```
$ cd analizo
```

2. Use Perl to run the Makefile.PL in order to generate the Makefile:

```
$ perl Makefile.PL
```

3. Run the generated Makefile:

```
$ make
```

4. Run the Makefile install task to install the application. It will probably be necessary to run 'make install' as super user when performed on Unix Operating Systems:

```
$ sudo make install
```


3.2 Windows Installation

Download Cygwin installer from <http://www.cygwin.com/>

Run the installer and, besides the default packages, select also the following:

- bison
- flex
- gcc4
- git
- libiconv
- make
- vim
- ncurses

Doxyparse

Start Cygwin shell.

Download Doxyparse source code:

```
$ git clone git://github.com/terceiro/doxyparse.git  
(or from http://github.com/terceiro/doxyparse/archives/master)
```

Then do:

```
$ cd doxyparse
```

Correct Doxyparse makefile template:

- Open the file `addon/doxyparse/doxyparse.pro.in`
- Go to LIBS variable line (line 5)
- Add **-liconv** at the end of the line :

```
LIBS += -L../lib -L../lib -ldoxygen -lqtools  
-lmd5 -ldoxycfg -lpng -liconv
```

Configure the installation running the `configure` script using the `--with-doxyparse` option:

```
$ ./configure --with-doxyparse
```

Run the Makefile:

```
$ make
```

Run the the Makefile using the install task:

```
$ make install DESTDIR=/usr INSTALL=local
```

If everything went well, doxyparse would be installed at /usr/local/bin

```
$ ls /usr/local/bin | grep doxyparse  
doxyparse.exe
```

In some Cygwin installation, the folder /usr/local/bin is not in PATH. So it is necessary to add it manually:

- Open the file /etc/profile
- Find the PATH variable attribution line
- Add /usr/local/bin: before \$PATH

Example:

```
PATH=/usr/bin:/bin:/usr/local/bin:$PATH  
export PATH
```

Perl Modules

Download and install the Perl Modules according to section **2.2.**

Sloccount

Install Sloccount according to section **3.1.2.2.**

Analizo

Install Analizo according to section **3.1.2.3.**

To test, you can run Analizo to analyze it's own source:

```
$ cd ..  
$ analizo metrics analizo/
```

4 TROUBLESHOOTING

Analizo has no reported bugs or troubles up to date. If the user occasionally finds one, please report it on:

- <http://github.com/terceiro/analizo/issues>
- Mailing list:
 - mezuro@listas.softwarelivre.org
 - <http://listas.softwarelivre.org/cgi-bin/mailman/listinfo/mezuro>

STD CONSTRAINT FOR

The user may encounter the following message while using Analizo. Note that this does not cause any failure on the source code analysis nor on the output results. This is not an Analizo error, but a warning concerning the Getopt::Euclid Perl Module:

```
Variable "%STD_CONSTRAINT_FOR" will not stay shared at  
/usr/share/perl5/Getopt/Euclid.pm line 208.
```

5 LICENSE

This program is free software: you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation, either version 3 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program. If not, see <http://www.gnu.org/licenses/gpl.html>.

Copyright (c) 1994-2006

Andreas Gustafsson

Copyright (c) 2008-2010

Antonio Terceiro, Joenio Costa, Luiz Romário Rios

Copyright (c) 2009-2010

João Miranda, Lucianna Almeida, Paulo Meirelles, Vinícius Daros

6 ACKNOWLEDGMENT

This tool also is supported by CNPQ, FAPESB, the National Institute of Science and Technology for Software Engineering (INES), and USP FLOSS Competence Center.

