Install Guide

Version 3.0.4974.3

April 17, 2014

1 Introduction

This document describes the installation of MyARM. First the requirements and environment needed to deploy MyARM version 1.4 for C/C++, Java, C# and Python are described. Followed by a detailed description how to install MyARM on your system and finally setting up the required license key.

1.1 Requirements

The following conditions must be fulfilled to deploy the MyARM agent and you need at least 160 MB (enterprise edition) of free disk space. Currently MyARM supports mainly 32-bit environments. Currently only on Linux 64-bit is supported. Any other operating system or 64-bit support upon request. If you need support for any other platform, database or compiler feel free to contact us.

1.1.1 Platforms

1. AIX:
   - Power3 or higher.
   - AIX 5.3 TL 10, AIX 6.1
2. Linux:
   - Intel i586 or higher CPU (Pentium, AMD), PowerPC G3/G4 or higher.
   - Linux kernel 2.4.x or 2.6.x
   - glibc 2.3.6 or higher.
3. Solaris:
   - UltraSparc CPU or Intel i586 or higher CPU (Pentium, AMD).
   - Solaris 2.10 or higher.
4. Windows:
   - Intel i586 or higher CPU (Pentium, AMD).
   - Windows XP, Windows 2000.

1.1.2 Databases

1. MySQL 5.0-5.5
2. MariaDB 5.5
3. Oracle 10g
4. SQLite3 (file based)

1.1.3 Compiler

1. Any ANSI-C/C++ compliant C/C++ Compiler.
2. Java 1.4 RTE or higher
3. C# Visual Studio 9 or higher and .NET 3.5 for C# or higher on Windows and Mono 2.01 for Linux/Solaris.

1.2 Naming of MyARM archives

MyARM is only distributed over the net by downloading the appropriate distribution from the MyARM download page: http://myarm.com/support.html#support-dl.

The following naming scheme applies to all MyARM distribution archive files under UNIX.

myarm-***version-edition-os-arch-type***.***extension***

where the parts set in ***italic*** are:

version – the version of the MyARM distribution. The MyARM version is build with the following pattern: "<major>.<minor>.<buildid>.<revision>".

edition – the edition of MyARM. Either ***community*** for the community edition, ***professional*** for the professional edition, ***enterprise*** for the enterprise edition or ***client*** for the client edition.

os – the operating system the distribution was build for. Currently ***aix***, ***linux***, ***solaris*** or ***windows*** are supported.

arch – the architecture (CPU) the distribution was build for. Currently

- ***x86*** for Intel/AMD 32bit CPU based systems
- ***amd64*** for Intel/AMD 64bit CPU based systems
- ***ppc*** for PowerPC 32bit CPU based systems
- ***sparc*** for Sparc 32bit CPU based systems.

type – the distribution type. Either ***agent*** containing a libraries and programs needed to deploy instrumented applications, ***tools*** containing libraries and programs to analyse measured data, ***docs*** containing the documentation and manual pages of MyARM programs or ***sdk*** containing header files and examples how to use MyARM or to instrument applications with ARM. A type of ***bin*** is an archive containing the all above described archives for easy downloading.

extension – For unix systems this is a simple tar.gz file. Under ***windows*** the msi package is used.

2 Installing the MyARM distribution on a workstation under UNIX

2.1 Install directory

MyARM was build using the `/opt/myarm` directory and if used shared libraries are found automatically. We recommend to install the MyARM distribution under the directory `/opt` as this is the standard for programs from third-party vendors. The install procedure installs MyARM into a parent directory called `myarm-1.4.2584.0`. All you have to do after an installation is to create a symbolic link from `/opt/myarm` to the current version of MyARM you want to use:

```
# cd /opt
# ln -s myarm-1.4.2584.0 myarm
```

Therefore its easy to change to a new version of MyARM.

2.2 Archive extraction

All files and directories belonging to the MyARM distribution reside under a common parent directory named `myarm-1.4.2584.0`. The MyARM distribution is divided into several parts. Therefore a two step extraction exists:

1. extract the MyARM distribution archive into a tempory directory mostly in your home directory.
2. install the appropriate MyARM parts onto your system using either the provided installation script or manually.

If you have downloaded a MyARM professional edition for linux for Intel 32-bit you have an archive named:

```
myarm-1.4.2584.0-professional-linux-x86-bin.tar.gz
```

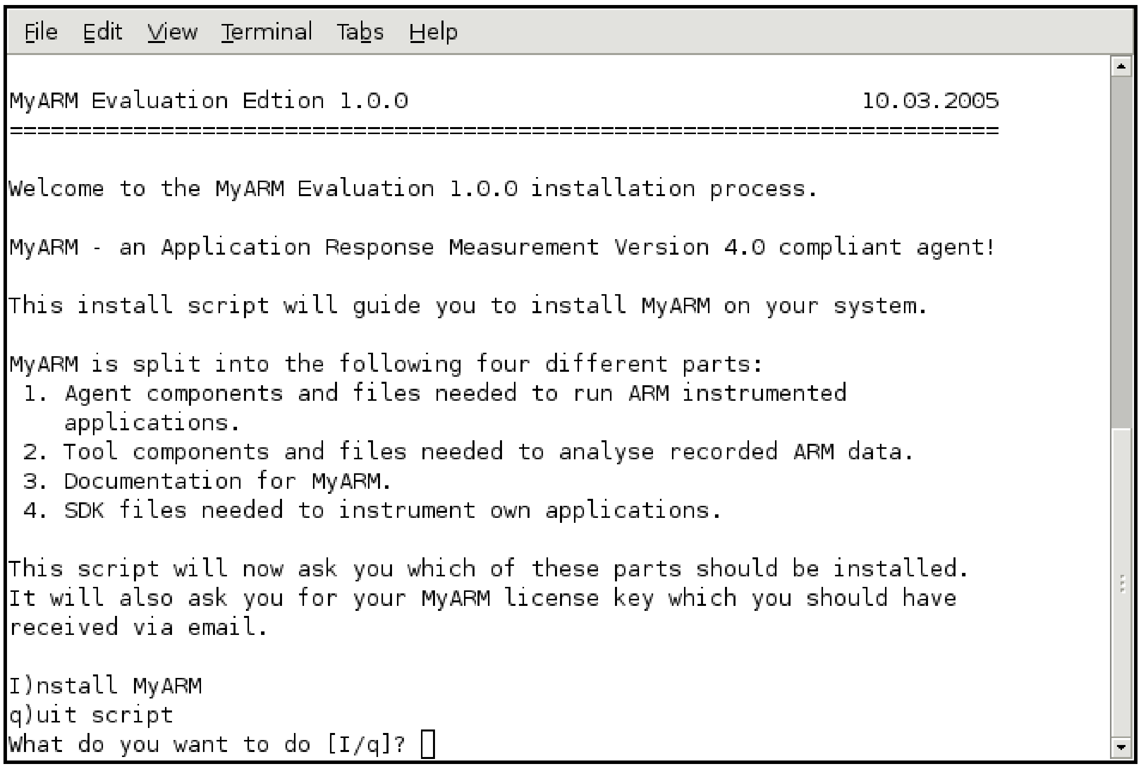
The following command sequence will extract the archive in a new directory named `myarm-1.4.2584.0` and starts the installation process with the provided installation script:

```
# tar xvzf myarm-1.4.2584.0-professional-linux-x86-bin.tar.gz
# cd myarm-1.4.2584.0
# ./install.sh
```

Next section will guide you through the installation script. If you want to extract and install MyARM manually skip it.

2.3 Installing using provided installation script

Executing the provided install script will present you the greeting page shown in Figure 1. It asks if you want to proceed with the installation. Enter `Y` and you will be prompted to anwser few questions about which parts of MyARM you want to install.



```
MyARM Evaluation Edtion 1.0.0                                    10.03.2005
===========================================================================

Welcome to the MyARM Evaluation 1.0.0 installation process.

MyARM - an Application Response Measurement Version 4.0 compliant agent!

This install script will guide you to install MyARM on your system.

MyARM is split into the following four different parts:
 1. Agent components and files needed to run ARM instrumented
    applications.
 2. Tool components and files needed to analyse recorded ARM data.
 3. Documentation for MyARM.
 4. SDK files needed to instrument own applications.

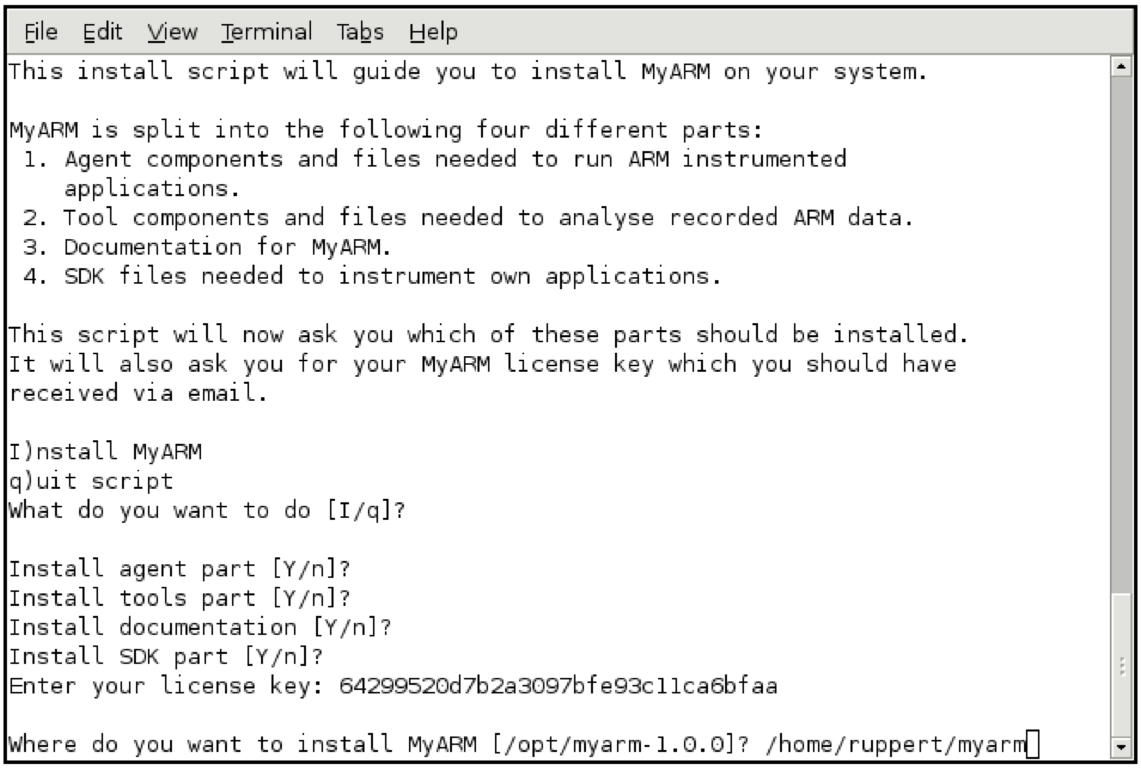
This script will now ask you which of these parts should be installed.
It will also ask you for your MyARM license key which you should have
received via email.

I)nstall MyARM
q)uit script
What do you want to do [I/q]?
```

Figure 1: Install greeting page

You will be asked to install:

1. the agent part; needed to deploy instrumented applications.
2. the tools part; needed to analyse the measured data.
3. the documentation part.
4. the SDK part (needed to instrument own applications).
5. the license key you received via email.
6. and the directory where to install MyARM to.



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received via email.

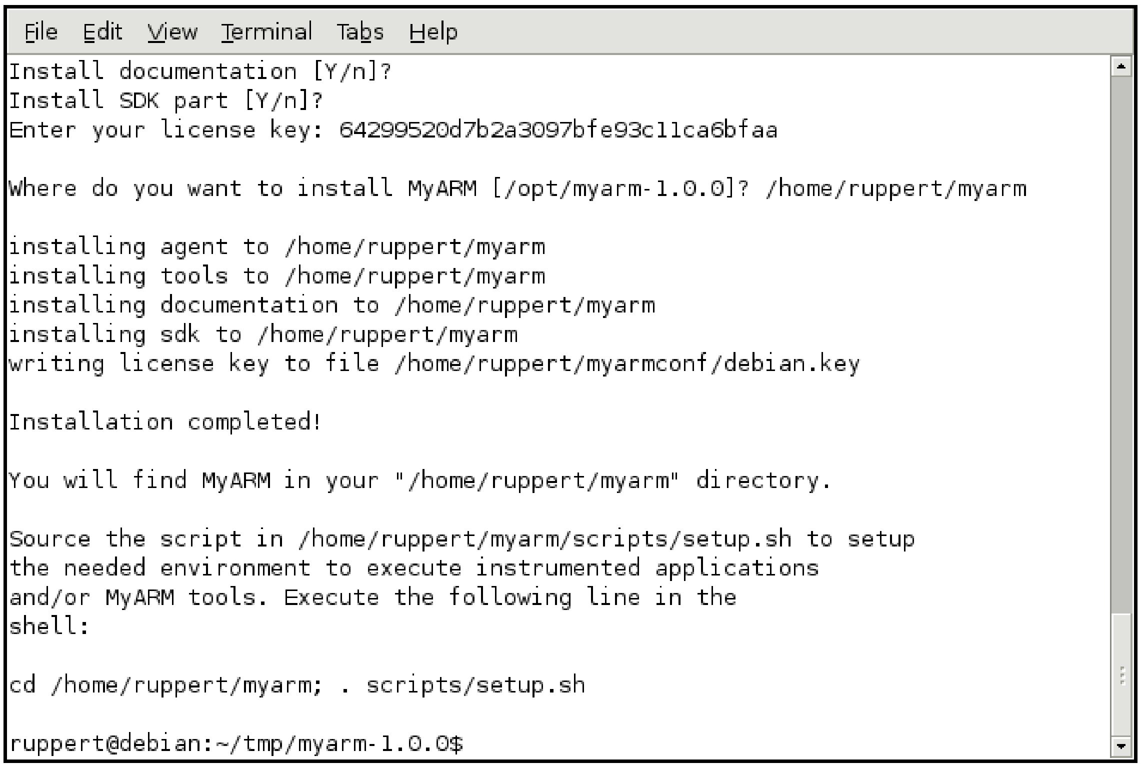
I)nstall MyARM
q)uit script
What do you want to do [I/q]?

Install agent part [Y/n]?
Install tools part [Y/n]?
Install documentation [Y/n]?
Install SDK part [Y/n]?
Enter your license key: 64299520d7b2a3097bfe93c11ca6bfaa

Where do you want to install MyARM [/opt/myarm-1.0.0]? /home/ruppert/myarm
```

Figure 2: Install questions

Figure 3 shows a completed installation and you should execute the `setup.sh` script as recommended to setup the MyARM environment.



```
Install documentation [Y/n]?
Install SDK part [Y/n]?
Enter your license key: 64299520d7b2a3097bfe93c11ca6bfaa

Where do you want to install MyARM [/opt/myarm-1.0.0]? /home/ruppert/myarm

installing agent to /home/ruppert/myarm
installing tools to /home/ruppert/myarm
installing documentation to /home/ruppert/myarm
installing sdk to /home/ruppert/myarm
writing license key to file /home/ruppert/myarmconf/debian.key

Installation completed!

You will find MyARM in your "/home/ruppert/myarm" directory.

Source the script in /home/ruppert/myarm/scripts/setup.sh to setup
the needed environment to execute instrumented applications
and/or MyARM tools. Execute the following line in the
shell:

cd /home/ruppert/myarm; . scripts/setup.sh

ruppert@debian:~/tmp/myarm-1.0.0$
```

Figure 3: Install completed

2.4 Installing manually

MyARM provides an installation script for easy installation. So please use this script to install MyARM on your system. However, in some cases it might be necessary to install it manually. For this purpose MyARM is divided into the following parts:

MyARM agent – contains all necessary files to deploy an ARM instrumented application with the MyARM agent.

MyARM tools – contains all necessary files to analyse recorded ARM data.

MyARM documentation – contains all documentation of MyARM.

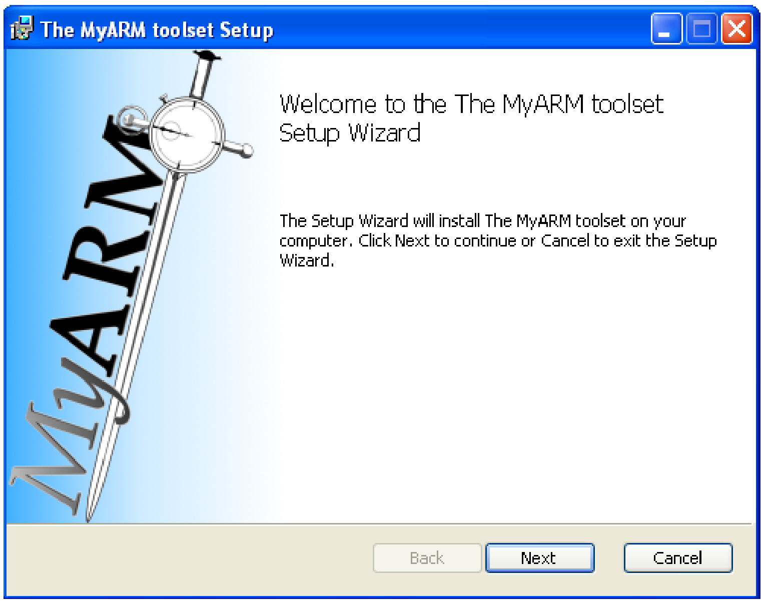
MyARM SDK – contains all necessary files to develop ARM instrumented applications.

All these archives extract into one tree if they are unpacked into the same directory. The following command will unpack and install MyARM, assuming archives are in the current working directory and you want to install MyARM into the current working directory. It will create a sub-directory called `myarm-1.4.x.0`.

```
tar xvzf myarm-*.tar.gz
```

3 Installing the MyARM distribution on a workstation under MS-Windows

The installation under windows is very easy and straightforward. Just double-click on the received msi package. It starts with a welcome dialog (Figure 4) and requires the user to press the next button several times until it is fully installed.

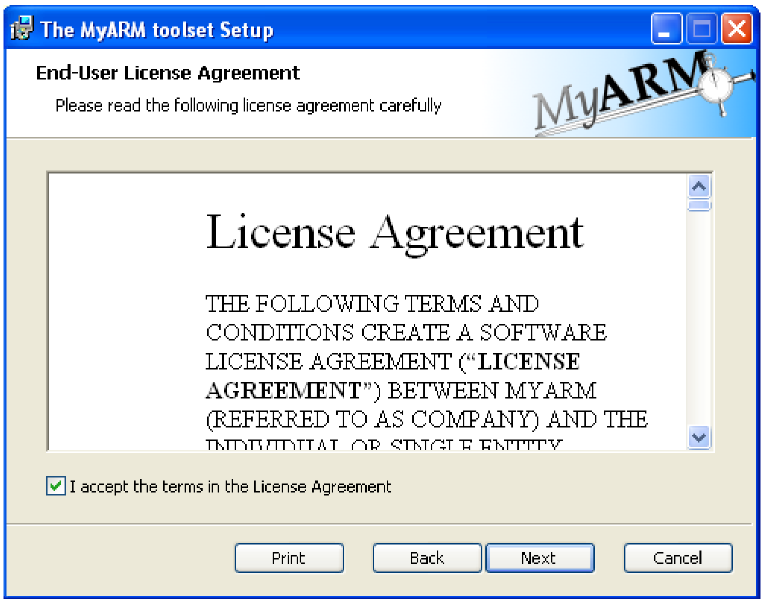


Welcome to the The MyARM toolset Setup Wizard

The Setup Wizard will install The MyARM toolset on your computer. Click Next to continue or Cancel to exit the Setup Wizard.

Figure 4: Installation welcome dialog

The next dialog (Figure 5) shows the license under which MyARM will be installed. You must accept hte license by clicking on the respective checkbutton. The next button can be clicked only when the license was accepted.


The MyARM toolset Setup

End-User License Agreement

Please read the following license agreement carefully

License Agreement

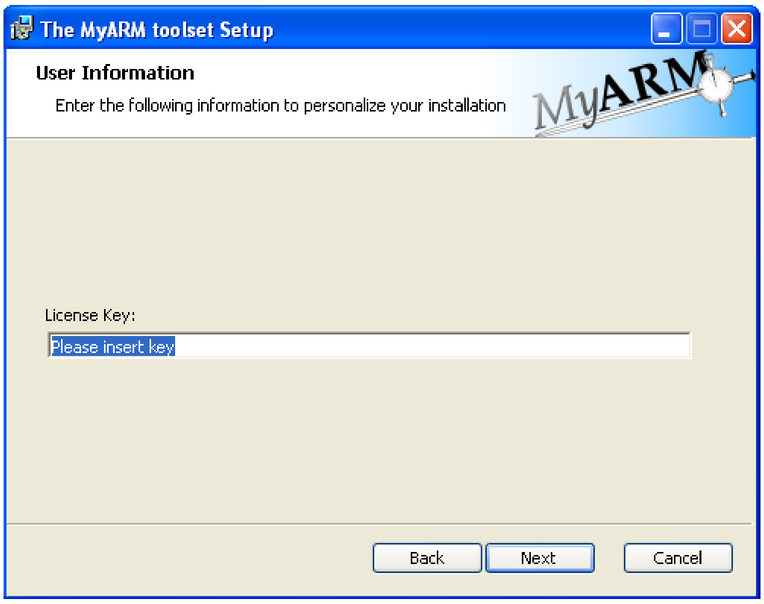
THE FOLLOWING TERMS AND CONDITIONS CREATE A SOFTWARE LICENSE AGREEMENT ("LICENSE AGREEMENT") BETWEEN MYARM (REFERRED TO AS COMPANY) AND THE

☑ I accept the terms in the License Agreement

Figure 5: Installation MyARM license dialog

The license key dialog (Figure 6) allows to type in the MyARM license that was received via e-mail. This is a string with about 32 characters or more. If you did not receive a license yet leave this as is and change the license key afterwards as described in the chapter below. You will only be able to read the documentation provided as pdf and html files if you did not receive any license.

This dialog is skipped for the community edition since here no license is necessary.


The MyARM toolset Setup

User Information

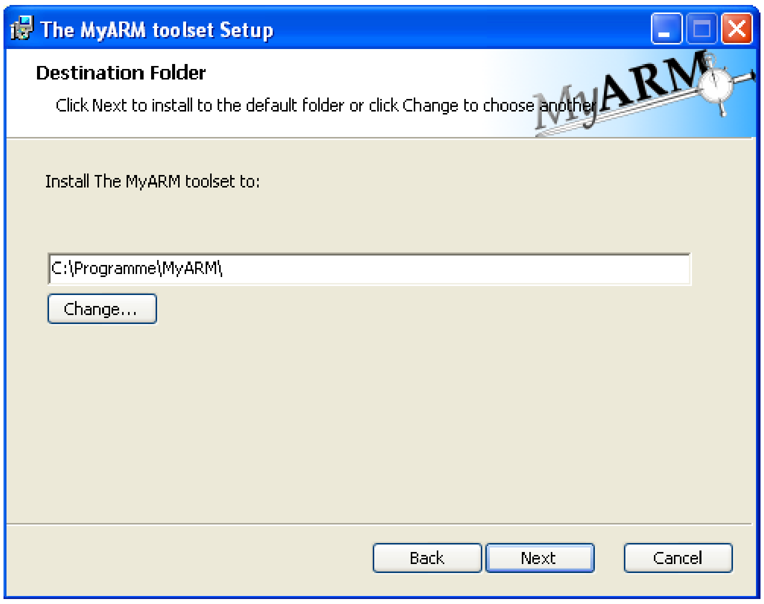
Enter the following information to personalize your installation

License Key:

Please insert key

Figure 6: License key dialog

Next the directory where MyARM will be installed can be selected in the installation directory dialog (Figure 7). Type in the name of the directory you want to install MyARM into or use the "Change"button to open a standard directory dialog where you can select the target directory graphically.



Destination Folder

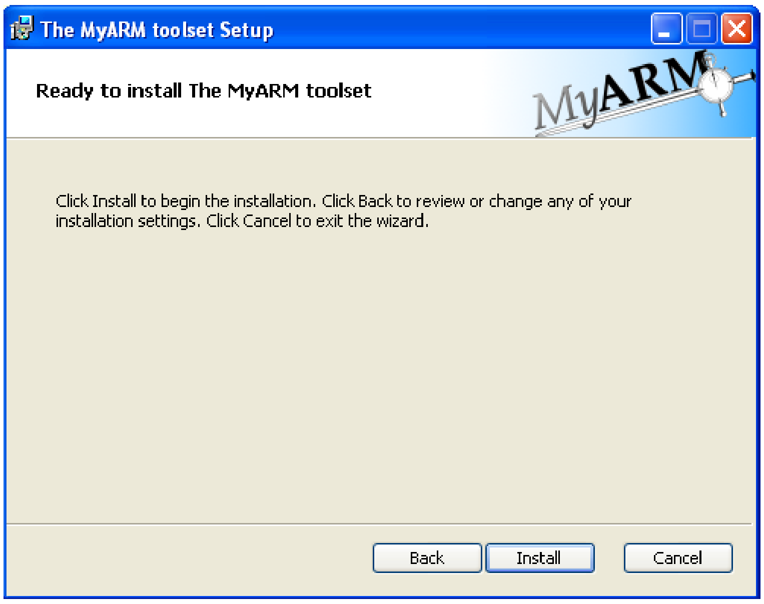
Click Next to install to the default folder or click Change to choose another

Install The MyARM toolset to:

C:\Programme\MyARM\

Figure 7: Installation directory dialog

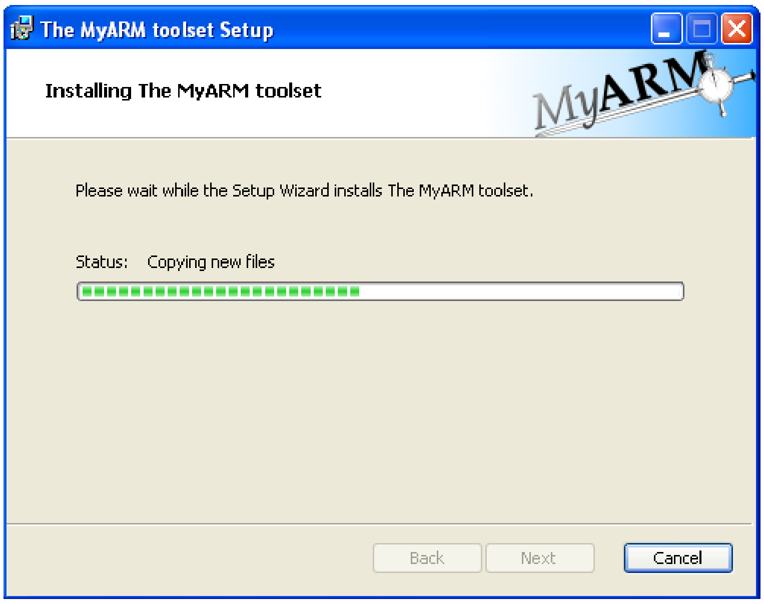
When you are at this stage you are almost done. You will be prompted to start the installation by clicking Next in the “finished dialog” (Figure 8). You will then see the progress in the respective dialog (Figure 9)



Ready to install The MyARM toolset

Click Install to begin the installation. Click Back to review or change any of your installation settings. Click Cancel to exit the wizard.

Figure 8: Installation finished dialog



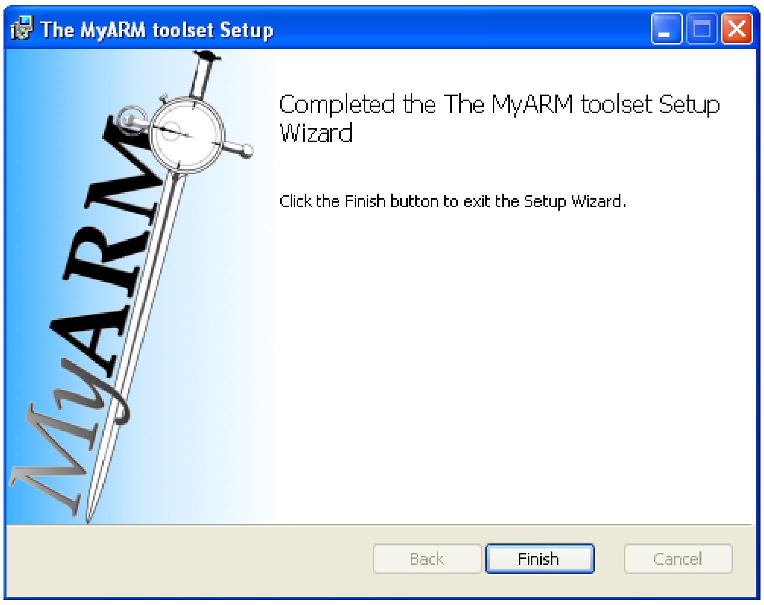
Installing The MyARM toolset

Please wait while the Setup Wizard installs The MyARM toolset.

Status: Copying new files

Figure 9: Installation progress dialog

When the installation has completed you will be asked to press next to finish the installation (Figure 10).



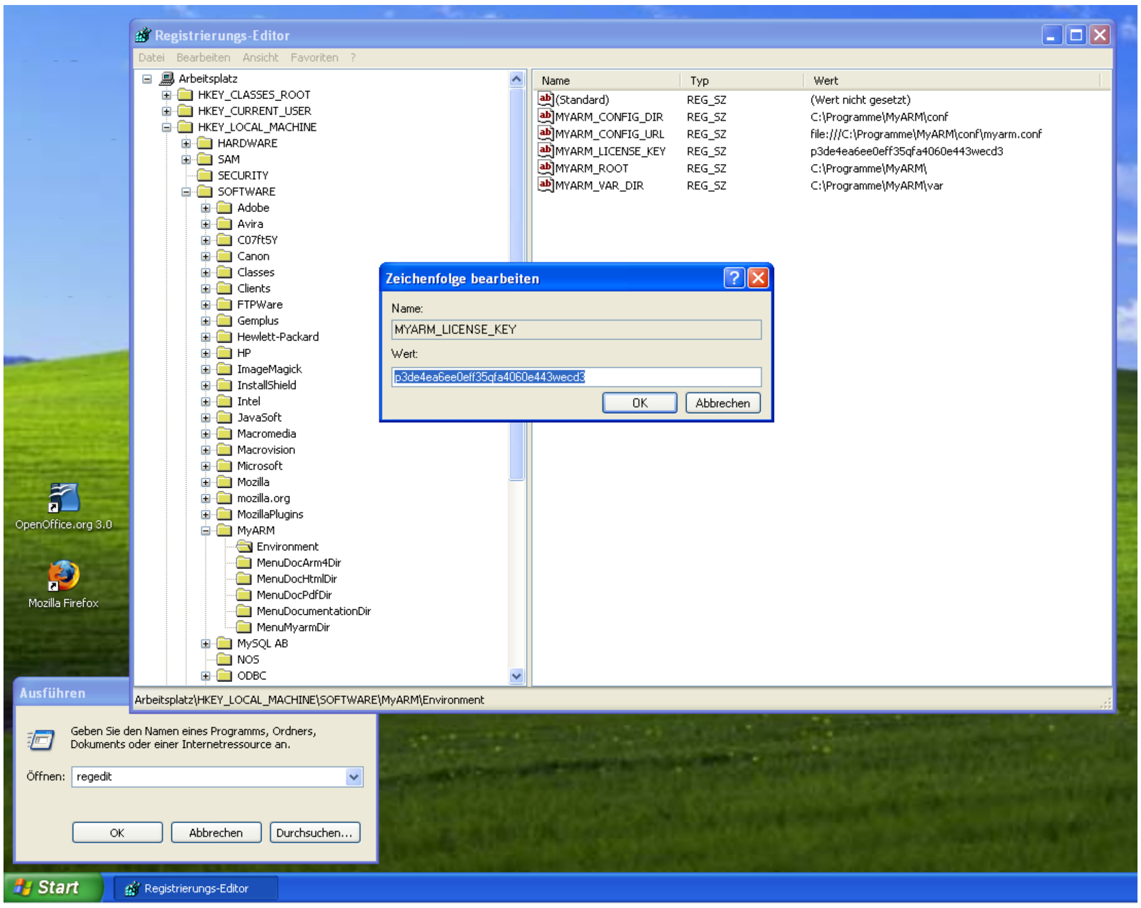
Completed the The MyARM toolset Setup Wizard

Click the Finish button to exit the Setup Wizard.

Figure 10: Installation completed dialog

3.1 Changing the license key after installation

If you did not receive a license key before installation then you were not able to fill in the required key in the respective dialog (Figure 6). The installation just creates the registry key `HKEY_LOCAL_MACHINE/Software/MyARM/Environment/MYARM_LICENSE_KEY` with an empty value so you can easily change this by adapting this key. Just open the registry editor by typing "regedit" into the execution window. (see Figure 11) and type in the received license key. You should then be able to execute all MyARM command line tools or the manager if you've purchased the respective license.



```
Arbeitsplatz
  HKEY_CLASSES_ROOT
  HKEY_CURRENT_USER
  HKEY_LOCAL_MACHINE
    HARDWARE
    SAM
    SECURITY
    SOFTWARE
      Adobe
      Avira
      C07ft5Y
      Canon
      Classes
      Clients
      FTPWare
      Gemplus
      Hewlett-Packard
      HP
      ImageMagick
      InstallShield
      Intel
      JavaSoft
      Macromedia
      Macrovision
      Microsoft
      Mozilla
      mozilla.org
      MozillaPlugins
      MyARM
        Environment
        MenuDocArm4Dir
        MenuDocHtmlDir
        MenuDocPdfDir
        MenuDocumentationDir
        MenuMyarmDir
      MySQL AB
      NOS
      ODBC
```

Name	Typ	Wert
(Standard)	REG_SZ	(Wert nicht gesetzt)
MYARM_CONFIG_DIR	REG_SZ	C:\Programme\MyARM\conf
MYARM_CONFIG_URL	REG_SZ	file:///C:\Programme\MyARM\conf\myarm.conf
MYARM_LICENSE_KEY	REG_SZ	p3de4ea6ee0eff35qfa4060e443wecd3
MYARM_ROOT	REG_SZ	C:\Programme\MyARM\
MYARM_VAR_DIR	REG_SZ	C:\Programme\MyARM\var

Zeichenfolge bearbeiten

Name: MYARM_LICENSE_KEY

Wert: p3de4ea6ee0eff35qfa4060e443wecd3

OK Abbrechen

Arbeitsplatz\HKEY_LOCAL_MACHINE\SOFTWARE\MyARM\Environment

Ausführen

Geben Sie den Namen eines Programms, Ordners, Dokuments oder einer Internetressource an.

Öffnen: regedit

OK Abbrechen Durchsuchen...

Figure 11: License key change after installation

4 Environment

The MyARM agent library can be configured through configuration files. MyARM needs to find the configuration files during start up. This is achieved by using environment variables under Unix or registry keys under Windows.

4.1 Unix setup

Under UNIX the following environment variables can be set to specify the location of the configuration files and to set a valid license key. The easiest way to do this is to use the provided `setup.sh` script found in the `scripts` directory of the MyARM installation.

4.1.1 scripts/setup.sh

The `setup.sh` script is used to setup a MyARM environment in an easy way. The script tests your shell environment and modifies the following system environment variables to enable the full usage of MyARM:

PATH
: is modified to add the path to the MyARM programs so that any MyARM program can be executed.

LIBPATH, LD_LIBRARY_PATH
: is modified to enable the runtime linker to find MyARM shared libraries (`LIBPATH` on AIX, `LD_LIBRARY_PATH` on Linux and Solaris).

MANPATH
: is modified to add the MyARM man page directory to the search path of the man system.

MYSQL_UNIX_PORT
: is set to the mysql port as used by the current system. If this could not be determined a warning message is issued.

MONO_PATH
: is modified if MyARM comes with C# support to add the path for the MyARM assemblies.

PYTHONPATH
: is modified if MyARM was installed with ARM 4.0 python support. It adds the directory for the appropriate `arm4` python module.

To work properly the following MyARM specific environment variables are set:

MYARM_ROOT
: root directory of the MyARM installation.

MYARM_VARRUN_DIR
: directory where to store any runtime data such as pid files or temporarily used files

MYARM_VARLOG_DIR
: directory where to store any log files

MYARM_VARLIB_DIR
: directory where to store any files which need to be persistent such as SQLite databases or MyARM ARM data files

MYARM_CONFIG_URL
: contains the configuration end point in URL notation. For more information read section *MYARM_CONFIG_URL*.

MYARM_LICENSE_KEY

contains the license key of MyARM. This key is extracted from some configuration files. For more information see section *"License key"*.

Usage:

```
$ . scripts/setup.sh [-q] [config]
```

The "-q" option suppresses any warning and the basic configuration output. The optional "config" parameter specifies a configuration to be used. This configuration must reside in the MYARM_ROOT/conf or MYARM_ROOT/conf/templates directory.

Typical usage of the setup.sh script, which configures MyARM in the current shell to use the myarmdaemon to collect files written by the file datasink and store the ARM data into MySQL database:

```
user@localhost:/opt/myarm$ . scripts/setup.sh file_mysql.conf
```

4.2 Windows setup

MyARM for Windows supports registry keys instead of environment variables. During installation of MyARM for Windows the following registry keys are set using the HKEY_LOCAL_MACHINE/Software/MyARM/Environment/<var> key path, where <var> is a placeholder for the variable names in the following sections (e.g. MYARM_CONFIG_URL). Please note that under Windows no further action is necessary to make these variables known to the MyARM utilities.

4.3 MyARM environment variables

4.3.1 MYARM_CONFIG_URL

The MYARM_CONFIG_URL environment variable is used to specify the MyARM configuration file. It uses the common URL notation of the form <protocol>://<host>:<port>/<filepath>. Currently, the following <protocol> types are supported:

file

specifies a local configuration file.

For example, if you want to specify a global <filepath> you have to use two slashes after the protocol indicator, resulting in the following setup:

```
MYARM_CONFIG_URL=file:////opt/myarm/conf/foo.conf
export MYARM_CONFIG_URL

myarmquery FooTran FooApp
```

To reference a file within the MYARM_CONFIG_DIR directory, just omit one slash. The following example locates the foo.conf file in the directory configured with the MYARM_CONFIG_DIR environment variable.

```
MYARM_CONFIG_URL=file:///foo.conf
export MYARM_CONFIG_URL

myarmquery FooTran FooApp
```

4.3.2 MYARM_CONFIG_DIR

If the `MYARM_CONFIG_DIR` environment variable is set it contains the absolute path to the directory where all ARM configuration files reside. Therefore you don't need to specify the full path of a configuration file; just use the default file name itself. For example, if you have a configuration stored in the file `fooproject.conf` which is located in the `/usr/local/myarm/conf` directory, you can use the following statements:

```
export MYARM_CONFIG_DIR=/usr/local/myarm/conf

myarmquery -C fooproject.conf FooTran FooApp
```

4.3.3 MYARM_LICENSE_KEY

If the `MYARM_LICENSE_KEY` environment variable is set and its not empty it contains the license key to deploy the MyARM components on this host.

4.3.4 MYARM_VARRUN_DIR

This variable is used within the configuration files to reference the directory where to store runtime data like pid files or temporary data.

4.3.5 MYARM_VARLOG_DIR

This variable is used within the configuration files to reference the directory where to log messages.

4.3.6 MYARM_VARLIB_DIR

This variable is used within the configuration files to reference the directory where to store persistent data such as a SQLite database file or ARM data files.

4.3.7 MYARM_TRACE

With the `MYARM_TRACE` environment variable it is possible to enable diagnostic trace messages during configuration and initialization of the MyARM agent to standard error channel. Currently the following options are supported, which can be combined using a comma character as the delimiter:

none
: no tracing at all.

all
: enables all the following trace options.

init
: enables tracing of initialization and cleanup of the MyARM agent.

env
: enables tracing output of all used environment variables.

config
: enables tracing output of all configuration properties.

readcfg
: enables tracing of reading configuration.

For example:

```
export MYARM_TRACE=init,env
export MYARM_TRACE=all
```