

MBProbe Installation (04-Dec-2009)

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Overview:

This document covers only installation of MBProbe. Complete documentation for MBProbe can be found in the on line help. To access the on line help, see the instructions below under "Testing the Application".

Installation consists of the following steps:

- Extract the application files from the archive.
- Obtain and install the required third party software packages.
- Test the installation.

Installing the Base Application:

The application is distributed as a source archive file. For most platforms (including Linux), this is a "tar.gz" file. For MS-Windows, this is a "zip" file. The MS-Windows version has the special new-line character combination (CR-LF) required by that platform, but is otherwise identical to the standard version.

Installation:

- Select or create a directory into which to extract the application files.
 - Extract the archive file into the desired location.
 - Several sub-directories will be created as part of the extraction process.
 - The application itself will now be installed. However, you cannot run it until you install the third party support software (see the help instructions on how to perform that step).
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Application Directory Contents:

You should see the following items present in the application directory.

Application Directory Contents:

There will be a directory called "mbprobe". It will contain a number of files with ".py" extensions. These are part of the application program itself. These files will be automatically compiled to ".pyc" files when the application first starts. There will also be several sub-directories with additional code files, as well as html web pages for the user interface and the help system. There is nothing in these directories that you will need to change.

Shell Script to Start the System:

There will also be a shell script which is used to start the system. For the Linux version, this is called "mbprobe.sh". For the MS-Windows version, this is called "mbprobe.bat". This file simply calls the main program file in the "mbprobe" directory.

Shell Script to Start the Demo Support Programs:

There will also be a shell script which is used to start some additional programs used to support a simple demo application. For the Linux version, this is called "demoserver.sh". For the MS-Windows version, this is called "demoserver.bat".

Installing Third Party Support Software

The system requires a third party package which must be installed separately before the system will function. This third party package is the Python run time language support for the Python programming language. This package is free, and can be downloaded from the location listed below.

The system has been tested with Python versions 2.5 and 2.6. Other versions may work but have not been tested.

For Linux:

For Linux, Python is already installed in most distros. If it is not already installed, it can normally be obtained from your distro's package repository. Use your package manager (e.g. Synaptic) to download and install the package.

For MS Windows:

Installing software on MS Windows is traditionally more difficult than with Linux, as MS Windows has no package management or repository system. This means that each package must be downloaded and installed manually. However, this is relatively straightforward if you follow the steps below.

Python can be obtained from the following location (don't install it just yet though):

Python - <http://Python.org>

Once you have obtained the software, install it as shown below: Python. Make a note of where you installed this, as you will need this information later. (Note, the actual install screen will look slightly different from the one shown below. This screen shot was taken after the install was run once already). Run the installer and follow the instructions in the install menus.



Some copies of MS-Windows may have one or more "dll" files missing which prevent the program from operating correctly. This can happen when dll files are unintentionally removed when uninstalling software or making other changes. One dll in particular to check is "mfc71.dll". This is a standard MS Windows library which is used by many programs. This should be in the "c:\windows\system32" directory. If it is missing, you will need to reinstall it. A search on Google will turn up many solutions for this problem (this is a common problem). This file is not necessary for Linux.

Testing Third Party Software:

To test if the third party software installation is working, you can do the following (you can skip this step if you wish).

For Linux:

For Linux, open a command line terminal and type "python". You should see the Python interpreter start up with something like the following:

```
Python 2.5.2 (r252:60911, Jul 31 2008, 17:31:22)
[GCC 4.2.3 (Ubuntu 4.2.3-2ubuntu7)] on linux2
```

```
Type "help", "copyright", "credits" or "license" for more information.
>>>
```

To exit Python, press "control-D" (press the control and "d" keys simultaneously). To close the terminal, press "control-D" again.

For MS Windows:

For MS-Windows, following the instructions given above for Linux, with the following exceptions. When starting Python, you will need to include the full path name to the Python interpreter. For example:

```
"C:\Python25\python"
```

To exit Python, type the following ("control-D" is not compatible with MS-Windows):

```
import sys
sys.exit()
```

Starting the Demo Support Packages:

When all software has been installed, you can start the application.

Starting the Demo Support Packages:

This step is only required if you are using the demo provided with the release. This step starts up a Modbus/TCP server that simulates a field device. This is not required if you are connecting to a normal Modbus/TCP server (e.g. a PLC).

Starting the Demo Support from Linux:

Do one of the following:

- If you are using Gnome, double click on the "demosever.sh" file.
- Or from the command line, type "./demosever.sh".

Starting from MS Windows:

Do one of the following:

- If you are using the MS-Windows GUI, double click on the "demoseverxx.bat" file. *
- Or from the command line, type "demoseverxx.bat". *

* (Where "xx" corresponds to the version of Python you have installed. e.g. "hmidemombc26.bat" for Python 2.6).

Starting the Application:

Starting MBProbe:

When you have started the demo support package, you can then start the actual MBProbe application. If you do not start the demo support packages, MBProbe will still run, but it will display an error as it was not able to connect to the Modbus/TCP server.

Starting from Linux:

Do one of the following:

- If you are using Gnome, double click on the "mbprobe.sh" file.
- Or from the command line, type "./mbprobe.sh".

Starting from MS Windows:

Do one of the following:

- If you are using the MS-Windows GUI, double click on the "mbprobexx.bat" file.
- Or from the command line, type "mbprobexx.bat".

* (Where "xx" corresponds to the version of Python you have installed. e.g. "mbprobe26.bat" for Python 2.6).

The batch files assumes that you have installed Python it in the default location (e.g. "C:\Python25" for Python 2.5, "C:\Python26" for Python 2.6). If you have a different version of Python installed, or have installed Python in a different location, you will have to edit the batch file accordingly. To edit the batch file, open it with a text editor (e.g. MS Notepad), and change the "C:\Python25\python mbprobe.py" to match the version and location of your Python installation.

Start-up Messages:

You should see something like the following appear:

```
Started mbprobe 0.50 on Fri Jun 26 20:16:46 2009 at port 8680.
```

The port number will be the port used by the web server.

Testing the Application:

This section describes how to test the application after you have installed it.

Checking the Web Interface:

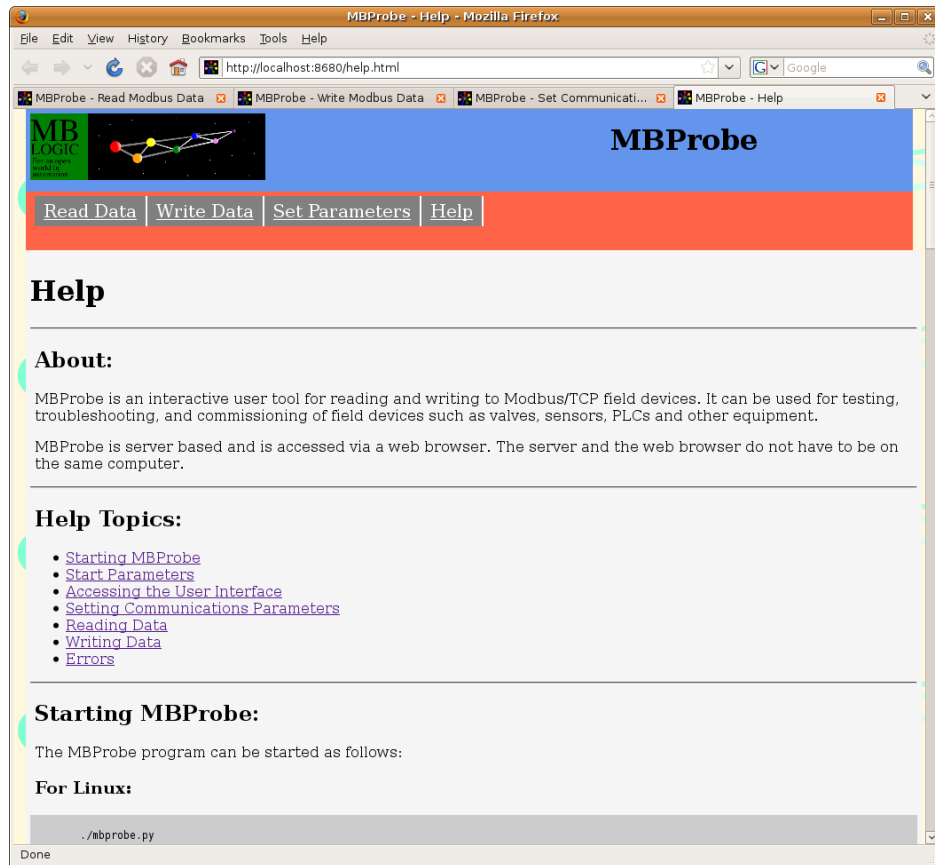
Check the system by starting your web browser and entering the following URL (this assumes you are using the sample configuration in the shell script command line):

```
http://localhost:8680/help.html
```

You should see a web page titled "MBProbe Help" similar to the one shown below.

Running the Demo:

The help page displayed contains instructions on how to operate the system. You should be able to write data to and read data from the demo Modbus/TCP server to test the system.



Stopping the Application

To shut down the application, press "control-C" (press the "control" and "C" keys simultaneously) in the terminal window where the application is running. This will send a signal to the system asking it to shut down. You should see something like the following appear:

```
Operator terminated server at Fri Jun 26 20:39:20 2009
```

The demo server package (if you are using it) can be stopped in a similar manner.

Other Information:

Documentation on how to use the system can be found in the on-line documentation provided with the installation. (see above).