

# Installation of Dao Virtual Machine (DVM)

September 19, 2009

## 1 Compiling and Installation

Under Linux with GCC compiler, simply type:

```
shell: make
shell: make install
```

This will compile the DVM with most features enabled and install it at **/usr/local/dao**

One may modify the Makefile to change the compiler, or disable some Dao language features, or change the installation location.

Under Windows, it can be compiled with MinGW Developer studio and Microsoft Visual Studio Express. One just has to create a project and add the source files (excluding `daoMaindl.h`) into the project, and then add additional preprocess definitions such as,

```
-DDAO_WITH_AFC,
-DDAO_WITH_JIT,
-DDAO_WITH_MPI,
-DDAO_WITH_MACRO,
-DDAO_WITH_THREAD,
-DDAO_WITH_NETWORK,
-DDAO_WITH_NUMARRAY
```

and add additional linking libraries: *msvcp60* for MinGW, and *ws2\_32* , *winmm* , *msvcprt* for MS visual studio. Now the DVM should be built without problem.

A makefile for compiling using MinGW under Windows is also included in the release. Compiling the DVM under OS X is also possible.

## 2 Configuring Paths

The paths should be properly configured for Dao to load modules. To have an idea how the paths work for this purpose, one should refer to the *Path Management* section in the quick guide documentaion. Basically, one need create one file named *addpath.dao* with the following line:

```
@@PATH( + "YOUR_INSTALLATION_FOLD" )
```

and put it at one of the following 3 locations:

1. /usr/lib/dao for linux, or C:\dao for windows;
2. your\_home\_dir/dao
3. path defined by environment variable DAO\_DIR

If you want to use the binaries coming with the distribution package, you may simple put the fold of the unzipped package as the *YOUR\_INSTALLATION\_FOLD* in that **addpath.dao** file.

## 3 Extra Configuration

Extra configuration can be set by creating file(s) named *dao.conf*. When the Dao interpreter is started, it will search in the following folds for a file with such name, if found, the current configuration of the interpreter will be overridden by what is specified in the file.

1. /usr/local/dao for Linux (or C:\dao for Windows);
2. directory specified by the environment variable *DAO\_DIR* ;
3. the current directory where the interpreter is invoked.

All the found files with such name in these folds are used to change the configuration, so that, the first found *dao.conf* file can override the internal configuration; and the following *dao.conf* files can override the configurations set by the previous files.

An example configuration file looks like,

```
# number of CPUs
cpu = 2

# just in time compiling
jit = yes
```

```
# typed virtual machine code
typedcode = yes

# incremental compiling
incompile = yes

# safe running mode
safe = no
```

---