

Installation Instructions

This appendix provides instructions on the installation, configuration and preparation of the various parts of the facility. It is assumed that these instructions are followed in sequential order.

Note (and this is very important) that this facility is not guaranteed to function properly with Perl environments that are not executing the 5.6.1 release of the Perl programming language.

Preparing the Key Server

The Key Server requires the creation of an MySQL database, executing on the same computer that runs the Key Server. It is assumed that MySQL is available to you. If you need to install (or learn about) MySQL first, any book by Paul Dubois is as good a starting point as any.

Preparing MySQL

Use the *MySQL Monitor* to create the required database using these commands:

```
mysql -u root -p
Enter password: *****

mysql> create database SCOOBY;
Query OK, 1 row affected (0.19 sec)

mysql> use mysql;
Database changed

mysql> grant all on SCOOBY.* to perlagent identified by 'passwordhere';
Query OK, 0 rows affected (0.11 sec)
```

```
mysql> quit
Bye
```

Create a text-file (called `create_publics.sql`) and adds these lines to the file:

```
create table publics
(
    ip_address      varchar (16) not null,
    protocol_port   varchar (6)  not null,
    public_key      text         not null
)
```

Use this file to create the required database table within the `SCOOBY` database, as follows:

```
mysql -u perlagent -p SCOOBY < create_publics.sql
Enter password: *****
```

Use these commands to confirm that the creation of the database table has been successful:

```
mysql -u perlagent -p SCOOBY
Enter password: *****

mysql> show tables;
+-----+
| Tables_in_SCOOBY |
+-----+
| publics          |
+-----+
1 row in set (0.04 sec)

mysql> describe publics;
+-----+-----+-----+-----+-----+-----+
| Field          | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| ip_address     | varchar(16)   |      |     |          |       |
| protocol_port  | varchar(6)    |      |     |          |       |
| public_key     | text          |      |     |          |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.12 sec)

mysql> quit
Bye
```

With MySQL up-and-running, and the `SCOOBY` database in existence, the Key Server can now be installed and configured.

Installing the Key Server's Required Modules

The Key Server requires the installation of the `Net::MySQL`, `libwww-perl` library and `Crypt::RSA` module (and all of their dependencies). Both of these modules are available on CPAN. Install these modules as per their installation instructions before continuing.

Installing the Key Server

To install the Key Server and read the installed on-line documentation, enter these commands at the Linux command line:

```
tar zxvf keyserver-1.04.tar.gz
cd keyserver-1.04
perl Makefile.PL
make
su
make install
<ctrl-D>
man keyserver
```

The above commands install the Key Server within the “bin” directory of the user performing the installation. Note the requirement to use superuser privilege to perform the “make install” step.

Configuring the Key Server

Prior to executing the Key Server, the configuration files needs to be created within the same directory that holds the `keyserver` disk-file. Use any editor to create a disk-file called: “.keyserverrc” (note the required dot at the start of the filename). The contents of this file determines which IP addresses (and in the future, which protocol port numbers) can communicate with the Key Server. The entries in this file should look something like this:

```
127.0.0.1:*
149.153.23.52:*
```

Which states that the Key Server will service connections from IP address 127.0.0.1 and 149.153.23.52. Note that each line within the configuration file should contain no spaces.

Once the configuration file exists, change into the directory that contains the Key Server and start it, as follows:

```
cd ~/bin
./keyserver
```

Installing Devel::Scooby

This section provides installation and configuration instructions for the facility's debugger: `Devel::Scooby` module.

Installing the Required Modules

This module requires the installation of a collection of third-party modules (and all of their dependencies) from CPAN. These include `Crypt::RSA`, `Storable`, `PadWalker`, and `Data::Dumper`. Install these modules as per their installation instructions before continuing.

Installing the Devel::Scooby Module

To install this module and read the installed on-line documentation, enter these commands at the Linux command line:

```
tar zxvf Devel-Scooby-4.12.tar.gz
cd Devel-Scooby-4.12
perl Makefile.PL
make
make test
su
make install
<ctrl-D>
man Devel::Scooby
```

The above commands install the `Scooby.pm` module within the installed Perl environment. Note the requirement to use superuser privilege to perform the “`make install`” step.

Installing Mobile::Location

This section provides installation and configuration instructions for the Location class, `Mobile::Location`.

Installing the Required Modules

This class requires the installation of a collection of third-party modules (and all of their dependencies) from CPAN. These include `Crypt::RSA`, `Storable`, `libwww-perl`, and (of course) `Devel::Scooby`. Install these modules as per their installation instructions before continuing.

Installing the Mobile::Location Class

To install this class and read the installed on-line documentation, enter these commands at the Linux command line:

```
tar zxvf Mobile-Location-4.02.tar.gz
cd Mobile-Location-4.02
perl Makefile.PL
make
make test
su
make install
<ctrl-D>
man Mobile::Location
```

The above commands install the `Location.pm` class within the installed Perl environment. Note the requirement to use superuser privilege to perform the “`make install`” step.

Installing Mobile::Executive

This section provides installation and configuration instructions for the mobile agent module, the `Mobile::Executive` module.

Installing the Required Modules

This module requires the installation of a collection of third-party modules (and all of their dependencies) from CPAN. These include `Crypt::RSA`, and (of course) `Devel::Scooby` and `Mobile::Location`. Install these modules as per their installation instructions before continuing.

Installing the Mobile::Executive Module

To install this module and read the installed on-line documentation, enter these commands at the Linux command line:

```
tar zxvf Mobile-Executive-2.03.tar.gz
cd Mobile-Executive-2.03
perl Makefile.PL
make
make test
su
make install
<ctrl-D>
man Mobile::Executive
```

The above commands install the `Executive.pm` class within the installed Perl environment. Note the requirement to use superuser privilege to perform the “`make install`” step.

Configuring for Scooby

Every machine that runs a mobile agent or executes a Location needs to be configured with the *Scooby* configuration file. This is a small text-file that exists within the HOME directory of the user-id running the mobile agent or executing the Location. Create a file called “`.scoobyrc`” in your HOME directory and add a single line to the text-file, similar to the following:

```
KEYSERVER=somehost.somewhere.net
```

Replace “`somehost.somewhere.net`” with the IP name or address of the computer acting as Key Server. Note that there are no spaces either side of the equals symbol.