

- Perseus -

User manual

1 Firefox Module (compatible with Firefox 3.5 et 3.6)

1.1 Installation

Once you have downloaded the xpi file, you just have to open it with Firefox:

File → *Open a file ...* → <look for the xpi file>

A window is opening, wait for a few seconds and click on *Install Now*. Then you just have to restart Firefox in order to activate the extension.

In order to check whether the installation has succeeded or not, once Firefox has been restarted, the Perseus icon must appear in the status bar (bottom right). This bar may be unactive then you have to reactivate it through the menu

Display → *Status bar*

However, if the Perseus logo would still not be visible, then email us at <mailto:perseus.esiea@gmail.com>

You can now use the Perseus module.

1.2 Use

The Perseus module works at the present time according two different modes: active or inactive.

The idle (inactive) mode is represented by the logo Perseus barred with a black cross. In this mode, Firefox perates normally, that is to say that the data sent using the HTTP protocol (http address starting with: //) are sent unprotected.

The active mode is represented by the logo Perseus uncrossed. When Perseus is active, it will try to protect your data sent with HTTP so that they are actually encoded. Several conditions must be fulfilled:

- The server to which data are sent must also have a module Perseus active;
- The client and the server must successfully exchange parameters of the encoder through a preliminary HTTPS session.

Once those conditions are met, data are exchanged securely. Steps leading to this exchange may slow down a little bit the data transfer. If a significant delay occurs, retry the exchange Perseus being inactive. If you find that the slow down came from Perseus, thank you to contact <mailto:perseus.esiea@gmail.com> and explain as precisely as possible the problem.

Perseus protects your data only if the server enables it. In the present state of development, there is still no indication whether the data are secured or not. A future enhancement will display the status of transfer.

2 Apache module (compatible with Apache 2.0 or greater)

2.1 Installation from source code (Linux only)

Prerequisites:

- Installation of Apache
- Installation of Apache resources (apxs2, apache2ctl)
- SSL Certificate

The module for Apache must first be compiled before installation. Once the source files have been downloaded, use the following command to compile:

```
> make
```

Then installation is performed with the command

```
(root) > make install
```

In order to work with the Apache module, you must add the following lines into the *httpd.conf* file (depending on the Apache installation directory):

```
LoadModule perseus_module /usr/lib/apache2/modules/mod_perseus.so
SetInputFilter PERSEUS
SetOutputFilter PERSEUS
```

Then you just have to restart Apache to make the installation effective.

```
(root) > /etc/init.d/apache2 restart
```

2.2 Installation from binaries

Prerequisites:

- Installation of Apache
- SSL certificate

Move the *mod_perseus.so* into the Apache modules directory (e.g. *usr/lib/modules/* for Ubuntu) and then activate the module by inserting the following lines into the *httpd.conf* file:

```
LoadModule perseus_module /usr/lib/apache2/modules/mod_perseus.so
SetInputFilter PERSEUS
SetOutputFilter PERSEUS
```

Then you just have to restart Apache to make the installation effective.

```
(root) > /etc/init.d/apache2 restart
```

Use: Nothing special to do.

Warning: to use the Perseus module, users must first activate the SSL module and own a valide certificate.

- Perseus -

Developer's Guide

Firefox Module

Source tree

- content/
 - skin/
 - icon.png
 - icon_smallOff.png
 - icon_small.png
 - perseus.js
 - perseus.xul
 - defaults/
 - preferences/
 - perseusPref.js
 - public/
 - Makefile.in
 - nsIPerseus.idl
 - src/
 - Makefile.in
 - nsPerseusModule.cpp
 - nsPerseusUtil.h
 - nsPerseusUtil.cpp
 - nsPerseusObserver.h
 - nsPerseusObserver.cpp
 - nsPerseusUploadData.h
 - nsPerseusUploadData.cpp
 - nsPerseusDownloadData.h
 - nsPerseusDownloadData.cpp
 - nsPerseusCode.h
 - nsPerseusCode.cpp
 - nsPerseusMime.h
 - nsPerseusMime.cpp
 - HOWTO
 - install.rdf
 - jar.mn
 - Makefile.in
 - TODO
- | |
|---|
| Perseus Icons |
| Javascript file to manage the logo |
| Activate the logo in the status bar |
| Definition of Perseus preferred settings |
| Declaration of the Perseus Public interface |
| Record the module in Firefox |
| Tool function (debugging) |
| Declaration and management of observers |
| Management of sending towards server the (encoding) |
| Management of decoding (reception) |
| Encoder management and de/encoding |
| Declaration on a mime type mime (unused) |
| Useful information |
| Firefox Description file |
| Skins declaration |
| TODO list |

Important Information: the Perseus project will soon migrate to a C open library (libperseus).

Compiling

Compiling a Firefox module in native language is rather tedious (reading the Mozilla document is

more than required). Refer to https://developer.mozilla.org/en/Build_Documentation

First you have to fulfill all prerequisites and download the Firefox sources. In what follows every commands used will be run at the Firefox root directory.

Before compiling Firefox, create the *perseus* directory inside the *extension* directory:

```
>cd extension && mkdir perseus
```

Then add the sources into the *perseus* directory while complying with the above-mentionned source tree. Then create a *.mozconfig* file in the Firefox root directory and add the following options to work with a debug version:

```
. $topsrcdir/browser/config/mozconfig
mk_add_options MOZ_OBJDIR=@TOPSRCDIR@/ff-dbg
ac_add_options --disable-optimize
ac_add_options --enable-debug
ac_add_options --enable-tests
ac_add_options --enable-extensions=default,perseus
```

For more details, visit the Mozilla website. Do not forget to check that *perseus* is defined in the *enable-extension* option. Then you can launch the compiling step.

```
>make -f client.mk
```

Once the compiling is complete (it can be time consuming for slow computers), you can start the Firefox version you have just obtained:

```
>./ff-dbg/dist/bin/firefox
```

The Perseus logo should normally appear in the status bar.

In further steps, if you must modify Perseus sources, you do no longer have to recompile Firefox. Only the Perseus part will require to be recompiled. For that purpose, run the command:

```
>cd ff-dbg/extension/Perseus
>make
```

Building of a .xpi

The compiling step enables to creat a xpi file containing all the data required for the module installation. The xpi file is located in the *ff-dbg/dist/xpi-stage* directory. To make the file fully functional, you have to add the *libperseus.xpt* file (located in the *ff-dbg/extensions/Perseus/public/_xpidlgen* directory) to it.

To add the *libperseus.xpt* file into the xpi file, open the xpi file with an archive manager, then add the *libperseus.xpt* file into the *components* directory.