



Installation of a MyProxy Server

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Change log

Version 1.0	14 th July 2009	First initial draft
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Table of contents

1. Introduction.....	1
1.1 Typographic conventions.....	1
1.2 Tested OS versions	2
1.3 Dependencies.....	2
1.4 Services started and network ports used.....	2
1.5 Key configuration and logging information.....	2
1.6 Estimated system resources.....	2
2. installation instructions	2
2.1 Preparation of the Operating System	2
2.2 Downloading the necessary files.....	2
2.3 Installing a server certificate.....	3
2.4 Installing globus-gsi libraries and MyProxy version provided with Globus Toolkit.....	3
2.5 Upgrading MyProxy to the newest version:	4
2.6 Configuring MyProxy	4

1. INTRODUCTION

This document describes the installation procedure for a MyProxy server. It assumes a degree of prior knowledge of UNIX/Linux administration and is not necessarily a verbatim set of instructions that can be typed literally.

1.1 Typographic conventions

Italic is used for filenames, program names and URLs.

Constant width is used for code examples and for commands and items which appear in code such as keywords, methods, functions and classes.

Constant width italic is used to show text that can be replaced with user-supplied values in code examples

Constant width bold is used for commands which must be typed on the command line, for emphasis in code examples or to indicate code output.

1.2 Tested OS versions

These instructions have been tested on Red Hat Enterprise Linux 5, release 3.

1.3 Dependencies

There is a requirement on some parts of the *Globus Toolkit*, but the installation of these are fully covered by these instructions.

1.4 Services started and network ports used

myproxy is installed and configured to start automatically. It uses network port 7512.

1.5 Key configuration and logging information

- Several options are specified in the startup script */etc/init.d/myproxy*, though the defaults can all be used
- The main configuration file is */etc/myproxy-server.config*
- The server logs incoming connections to */var/log/messages*

1.6 Estimated system resources

The *myproxy* daemon uses very few system resources. The current production service is running on a system with 1 CPU and 256MB of memory, and uses < 3GB of disk space.

2. INSTALLATION INSTRUCTIONS

2.1 Preparation of the Operating System

- Open the firewall port for *myproxy* by adding the following rule to */etc/sysconfig/iptables*:

```
#Allow incoming myproxy requests
-A INPUT -s -p tcp -m tcp --dport 7512 -j ACCEPT
```

- Restart the firewall to apply the changes with **service iptables restart**
- Ensure the packages `gcc`, `db4-devel`, `db4-utils`, `gdbm-devel`, `autoconf` and `automake` are installed:

```
yum -y install gcc db4-devel db4-utils gdbm-devel autoconf
automake
```

- Contact the site firewall administrator in order to open the external port 7512 to allow incoming and outgoing connections for MyProxy.

2.2 Downloading the necessary files

- Get the latest MyProxy tarball from <http://grid.ncsa.uiuc.edu/myproxy/download.html#gpt> - the version

provided on this site will be newer than the version provided in the Globus Toolkit.

- Download the latest stable version of the Globus toolkit version 4.0 (not 4.2) source installer from <http://www.globus.org/toolkit/downloads/>. MyProxy will need to use some libraries provided by the Globus toolkit.

2.3 Installing a server certificate

- Apply for a server certificate at <https://ca.grid-support.ac.uk/cgi-bin/pub/pki?cmd=getStaticPage&name=index>.
- Install the server certificate into `/etc/grid-security/`. Part of this procedure will involve splitting the host certificate bundle into two `.pem` files; for a host certificate named `cert.p12` this requires the following commands:

```
openssl pkcs12 -in cert.p12 -clcerts -nokeys -out
hostcert.pem
```

```
openssl pkcs12 -in cert.p12 -nocerts -nodes -out
hostkey.pem
```

```
chmod 400 hostkey.pem
```

- Download the UK e-Science CA and Root certificate files and signing policy files from <http://www.grid-support.ac.uk/content/view/182/244/> and put them in the `/etc/grid-security/certificates/` directory.

2.4 Installing globus-gsi libraries and MyProxy version provided with Globus Toolkit

- Extract the downloaded Globus Toolkit installer
- Change directory into the Globus installer directory
- Run the configure script with `./configure`
- Build and install `myproxy` with `make myproxy && make install myproxy`
- Build and install the `globus-gsi` libraries with `make globus-gsi && make install globus-gsi`
- Set some one-time environment variables. These depend on the `<version>` of Globus you have downloaded, such as 4.0.8:

```
export PATH=/usr/local/globus-<version>/bin:$PATH
```

```
export PATH=/usr/local/globus-<version>/sbin:$PATH
```

```
export GLOBUS_LOCATION=/usr/local/globus-<version>/
```

```
export GPT_LOCATION=/usr/local/globus-<version>/
```

- Run the command `myproxy-server-setup`. If the automatic test suite fails, run the command again.
- Stop the service in preparation for the upgrade to the latest version using `service myproxy stop`.

2.5 Upgrading MyProxy to the newest version:

- Run the command `gpt-uninstall myproxy` to uninstall the version of *myproxy* provided by the Globus toolkit.
- Change to the directory to where you have downloaded the new *myproxy* tarball.
- Run the command `gpt-query globus_gssapi_gsi` to find out the *flavour* of build you are using:

```
[root@myproxy ~]# gpt-query globus_gssapi_gsi

2 packages were found in /usr/local/globus-4.0.8/ that
matched your query:
```

```
packages found that matched your query
```

```
globus_gssapi_gsi-gcc64dbg-dev pkg version: 4.14.0
```

```
globus_gssapi_gsi-gcc64dbg-rtl pkg version: 4.14.0
```

In this case, the *flavour* is *gcc64dbg*.

- Run the command:

```
gpt-build -force -verbose myproxy-<version>.tar.gz <flavour>
```

where *<flavour>* was determined above and *<version>* is dependent on the *myproxy* tarball you downloaded

- Verify the installed version is the new one with `myproxy-server --version`
- Start the service with `service myproxy start`

2.6 Configuring MyProxy

- The master configuration file is `/etc/myproxy-server.config`, which is usable with the default options out of the box.
- If you make any changes, remember to get the *myproxy* server to re-read the configuration file by invoking `service myproxy restart`