



DEISA MyProxy Service

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1 Introduction

The MyProxy Service gives a means to store proxy certificates for later usage when, for instance, your private key is not at hand.

The procedure to store your proxy certificate exists both as a graphical Java-based tool and via the Globus command-line command.

The Java based GSISsh-Term can use a MyProxy server directly. Alternatively, when using the Globus Toolkit, users can retrieve their proxy certificate by using the Globus command-line.

1.1 General Information about Certificates

Grid middleware uses certificates for authenticating and authorizing users. The use of certificates means that separate passwords for each account on each of the target machines are not required: instead, a user just needs to create a single certificate with a single password for their personal key. Then several services can be used with that certificate. For example, one can use `gsissh` to login to a DEISA machine and run there a GridFTP file transfer session or login to another machine connected to the DEISA network without the need to specify a password.

Personal certificates are obtained from a Certification Authority. Instructions to apply for a certificate usable in the DEISA infrastructure are provided by the Primer[1]. A certificate consists of two parts: a private key and a public certificate. They can be stored in a single 'p12' format file or stored in 'pem' format within two separate files, namely `userkey.pem` and `usercert.pem`. Users can convert between these two formats, if necessary, using the `openssl` command (See DEISA Certificates FAQ[2]). Further, a web browser can import and export p12 files.

1.2 Introduction to the MyProxy Service

The MyProxy service stores proxy certificates, where these certificates can be employed on your behalf without the need to have your private key and certificate files at hand. This is useful, for example, when you are using a computer which you do not normally use. A use case example: a researcher visits an Internet Cafe to check the status of their jobs.

Indeed, it is also best to avoid distributing the private key across several machines, but to keep it safe on your workstation instead. If you wish to run Globus commands on a platform on which you cannot or should not store your private key and/or certificates, then you can retrieve your proxy certificate stored at a MyProxy service. A use case example: A researcher needs to use `ssh` to login to a machine. On target machine they need to use Globus commands. Due to either security or practical reasons there is no private key stored on the target machine. So, the user can use Globus commands to fetch proxy certificate from a MyProxy server.

-
1. <http://www.deisa.eu/usersupport/primer/access-to-the-DEISA-infrastructure#section-4>
 2. <http://www.deisa.eu/usersupport/user-documentation/faq/CertificatesFAQ>

2 Storing your Proxy Certificate on the DEISA MyProxy Server

2.1 Using the Java Web Start MyProxy Uploader

The UK's National Grid Service (NGS) provides a Certificate Management Wizard (MyProxy Uploader) Java Web Start application. It can be run by either visiting <http://www.ngs.ac.uk/tools/certwizard> and then pressing the (orange) Launch button or by clicking <http://tools.ngs.ac.uk/ngstools/certwizard/myproxy.jnlp> (NB: the Java version will not be checked).

Alternatively, a Java jar file can be downloaded from the same URL, namely <http://www.ngs.ac.uk/tools/certwizard>, which allows users to start the application without using a browser. Using the tool will, in each case, involve the following steps to configure the MyProxy Uploader tool to use MyProxy server hosted by LRZ.

- From the left-hand side menu (See Figure 1) click "**4) MyProxy servers**"
- Click "Create New"
- Fill as **Server Host** `myproxy1.deisa.eu`
- Add a description into **Server Name** field.
- The **Server DN** can be left as it is or can be set to myproxy1 using `/C=DE/O=GridGermany/OU=Leibniz-Rechenzentrum/CN=myproxy.lrz.de`
- The **server port** is 7512.
- Click **Save** button. Then the property file dialog will appear. Choose a name and click Save.

To use the other DEISA MyProxy server at SARA, employ the other possible "Server Name" `myproxy2.deisa.eu` where its "Server DN" is `/O=dutch-grid/O=hosts/OU=sara.nl/CN=voms.grid.sara.nl`

Storing your Proxy Certificate on the DEISA MyProxy Server

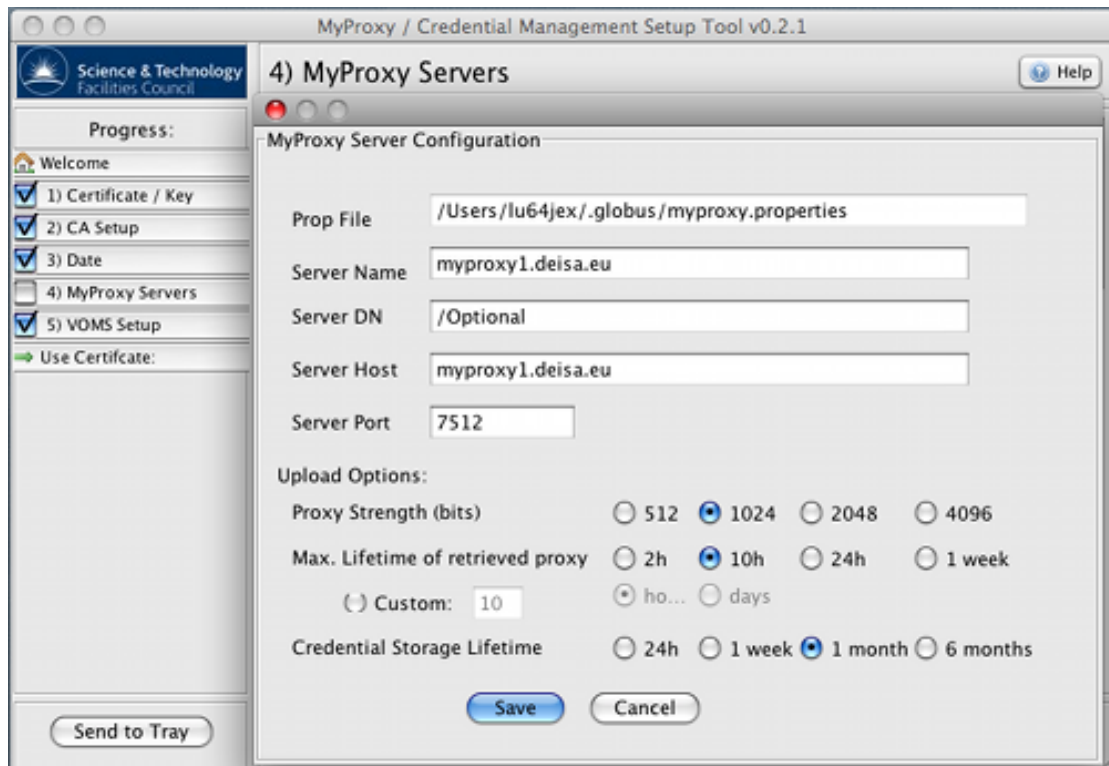


Figure 1: MyProxy Uploader: On the left-hand side select item "4) MyProxy Servers" to add a new MyProxy server.

Credentials access

- Go to the "1) Certificate / Key" menu
- Locate your p12 file or pem files.

Sending the proxy

- Click "Use Certificate"
- Go to "MyProxy"
- Make sure that your MyProxy server is selected (myproxy1.deisa.eu).
- Click "Upload"

Then enter the following information (see Figure 2)

- Leave the **Proxy Type** as it is
- **Private Key password**
- **MyProxy Username**
- **MyProxy Password** (not same as Private Key Password)

By clicking the **OK** button your proxy will be sent to the MyProxy Service.

Storing your Proxy Certificate on the DEISA MyProxy Server

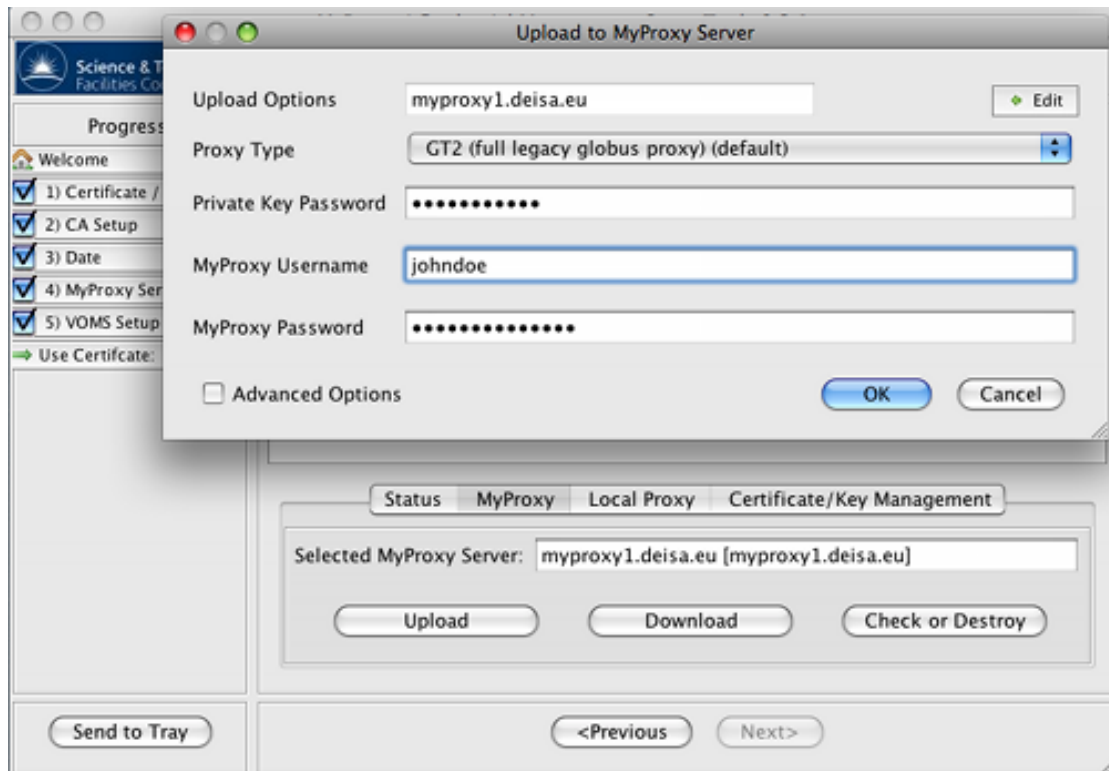


Figure 2: MyProxy Uploader: Upload Dialogue from "Do Actions" menu.

Your MyProxy Username and MyProxy Password are required when you fetch your proxy. Now you can use, for example, GSISSH-Term from a machine which does not have certificates at hand, as long as the proxy is valid on the MyProxy server.

2.2 Using Globus command-line tools

If the private key is on a machine with a Globus installation, then the following Globus command can be used to store the proxy certificate on the MyProxy server: `myproxy-init`

Optional command line parameters for this command include

- Username: `-l myusername`
- Lifetime in hours of the proxy on the server: `-c 168` (this is the default value)
- Maximum lifetime in hours of the proxy when retrieved from server: `-t 12` (default)
- Target host: `-s myproxy1.deisa.eu`

By default, the target host name should have been set already through the `module load globus` command.

2.3 test

Testing changes

Here are some texts.

Storing your Proxy Certificate on the DEISA MyProxy Server

Just for testing purposes, as title says.

Now saved.

More changes.

By OlliS

2.4 Using the Java Web Start MyProxy Uploader 2

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Storing your Proxy Certificate on the DEISA MyProxy Server

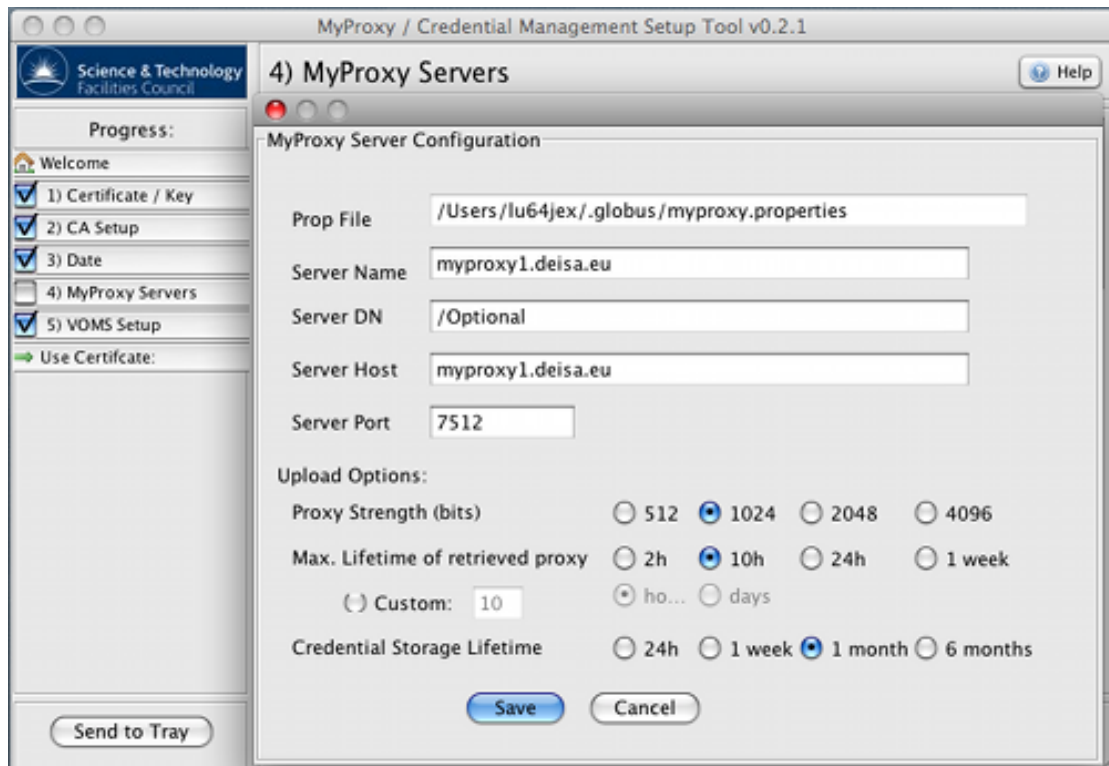


Figure 3: MyProxy Uploader: On the left-hand side select item "4) MyProxy Servers" to add a new MyProxy server.

Credentials access

- Go to the "1) Certificate / Key" menu
- Locate your p12 file or pem files.

Sending the proxy

- Click "Use Certificate"
- Go to "MyProxy"
- Make sure that your MyProxy server is selected (myproxy1.deisa.eu).
- Click "Upload"

Then enter the following information (see Figure 2)

- Leave the **Proxy Type** as it is
- **Private Key password**
- **MyProxy Username**
- **MyProxy Password** (not same as Private Key Password)

By clicking the **OK** button your proxy will be sent to the MyProxy Service.

Storing your Proxy Certificate on the DEISA MyProxy Server

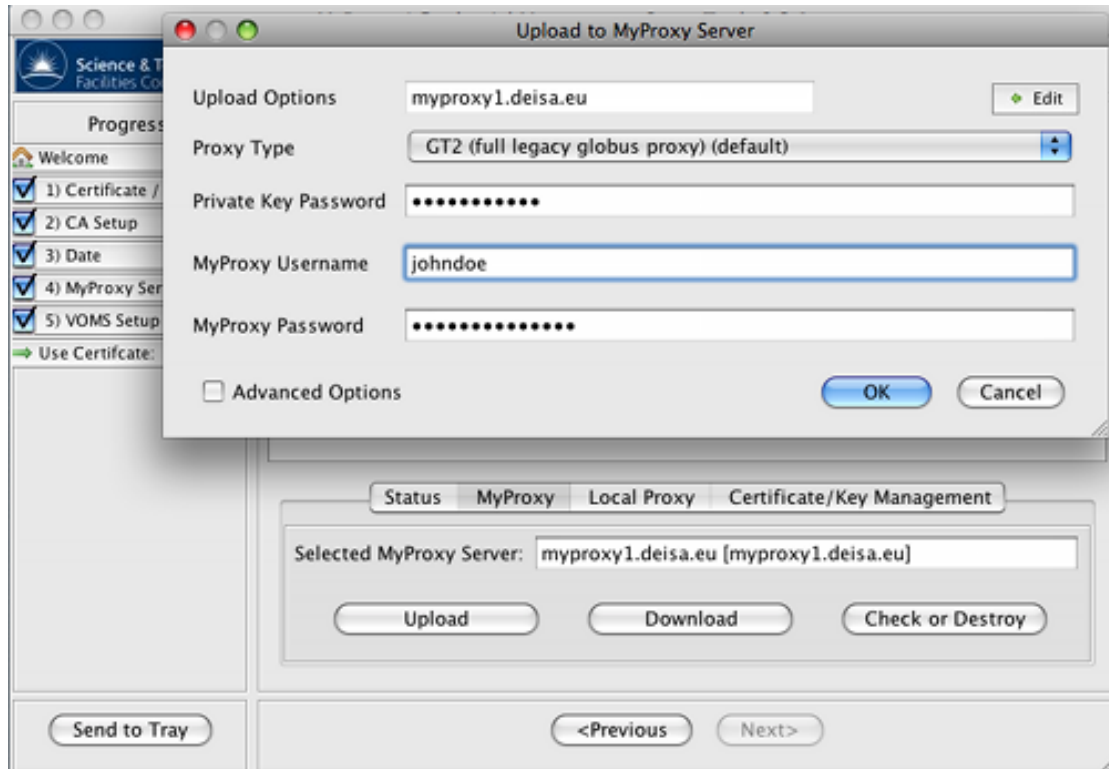


Figure 4: MyProxy Uploader: Upload Dialogue from "Do Actions" menu.

Your MyProxy Username and MyProxy Password are required when you fetch your proxy. Now you can use, for example, GSISSH-Term from a machine which does not have certificates at hand, as long as proxy is valid on the MyProxy server.

2.5 Page 3

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Storing your Proxy Certificate on the DEISA MyProxy Server

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- Click **Save** button. Then the property file dialog will appear. Choose a name and click Save.

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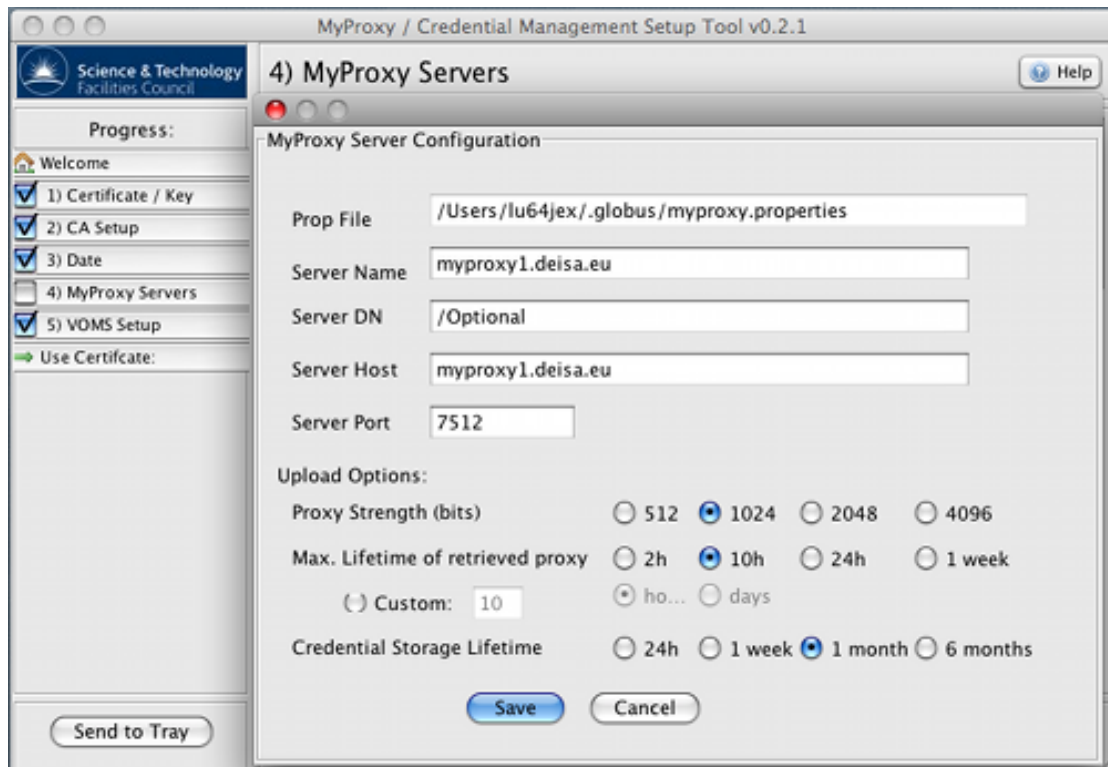


Figure 5: MyProxy Uploader: On the left-hand side select item "4) MyProxy Servers" to add a new MyProxy server.

Credentials access

- Go to the "**1) Certificate / Key**" menu
- Locate your p12 file or pem files.

Sending the proxy

- Click "**Use Certificate**"
- Go to "**MyProxy**"
- Make sure that your MyProxy server is selected (`myproxy1.deisa.eu`).
- Click "**Upload**"

Then enter the following information (see Figure 2)

- Leave the **Proxy Type** as it is
- **Private Key password**
- **MyProxy Username**
- **MyProxy Password** (not same as Private Key Password)

Storing your Proxy Certificate on the DEISA MyProxy Server

By clicking the **OK** button your proxy will be sent to the MyProxy Service.

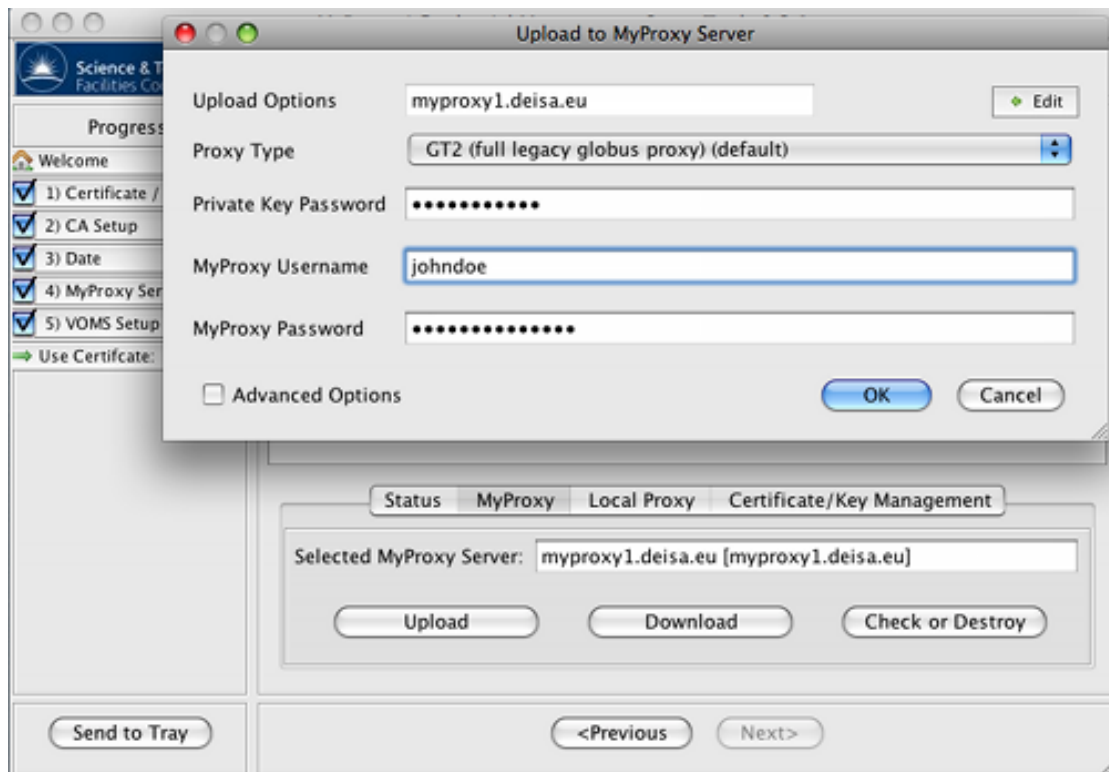


Figure 6: MyProxy Uploader: Upload Dialogue from "Do Actions" menu.

Your MyProxy Username and MyProxy Password are required when you fetch your proxy. Now you can use, for example, GSISSH-Term from a machine which does not have certificates at hand, as long as proxy is valid on the MyProxy server.

3 Retrieving your Proxy Certificate

3.1 Using the GSI-SSH Java Web Start

Java GSI-SSH Term provides easy way to connect into DEISA machines outside DEISA network. Its usage is described in Chapter 3 of the Interactive Access Document[1]. The GSISsh-Term tool supports the MyProxy service. The MyProxy server address is found behind menu sequence Figures 3 and 4 below:

File - New Connection – Advanced – GSI Defaults tab

- Provide the access information:
 - o **Username:** you have to use same name when you stored the proxy
 - o **Host:** myproxy1.deisa.eu (or myproxy2.deisa.eu)
 - o **Port:** 7512 (should be the default)
- In the **authentication method** list **MyProxy** is under **Other Methods**.
- Write the **target hostname** in the **Host** tab.
- Press **Connect** button.



Figure 7: GSI-SSH Java Web Start application: The connection properties can be configured by clicking the "Advanced" button in the "New Connection" dialogue. In this tab, one can use the "MyProxy" method from the "Other Methods" list to fetch a proxy.

1. <http://www.deisa.eu/usersupport/user-documentation/interactive-access/accessing-your-execution-site>

Retrieving your Proxy Certificate

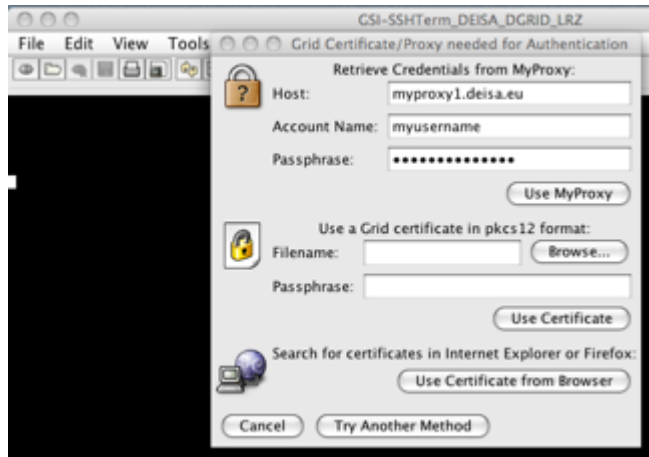


Figure 8: GSI-SSH Java Web Start application: When "Other Methods" is the primary method you can also see this kind of dialog. "Account Name" and "Passphrase" were set when storing the proxy.

3.2 Using Globus command-line tools

When logged on a DEISA machine which has both a Globus installation and is connected to the public internet, users can fetch the proxy using the following commands:

```
module load deisa
module load globus
myproxy-logon
```

The final command will ask for the MyProxy Password which was used to store the proxy certificate on DEISA's MyProxy server. The default MyProxy server address should be set in the globus modulefile into the `$MYPROXY_SERVER` environmental variable. If required, the address can be given as parameter, e.g. `-s myproxy1.deisa.eu`. Lifetime, in hours, can be specified with `-t`. Time cannot exceed the time which was specified when storing it on the server. The default lifetime is with `myproxy-init` command 12 hours and with Java Uploader tool 10 hours.