

Oct 2012 Find and download IPCC5 data.

How to get an account

get a certificate

search for data

create and run a wget script

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The description might have to be changed, because the ESGF portal is still under development.

 get an OpenID to login to the ESG (only once):

<http://ipcc-ar5.dkrz.de>

-> LOGIN

-> Not a user? Register here

you get an OpenID like

https://ipcc-ar5.dkrz.de/myopenid/<your_username>

Your registration is effective immediately - there is no need to wait for a confirmation email.

Now you can login by typing your OpenID in the LOGIN mask.

In the next mask you have to type your chosen password.

 Your login account is valid for every ESG data node,
 you don't have to apply for a new account to get data from another node.

####\ FUTHER INFO:

http://pcmdi-cmip.llnl.gov/my/cmip5/data_getting_started.html

<http://ipcc-ar5.dkrz.de//help/download-help.htm>

http://www.esgf.org/wiki/ESGF_Data_Download

 prepare data download:

get a certificate to download data

normally you will download more than one dataset at a time, for that the procedure is to

1. search for your data,
2. create wget script, and
3. run the wget script which does the download.

In the beginning at least one file has to be downloaded from the browser. Search files (see description below) and click on the „HTTP“ link to download one file. Within that procedure you might need to join "CMIP5 Research" or "CMIP5 Commercial". After you have successfully downloaded a file from the web browser, and registered with the appropriate group, you can use "wget" scripts to download files more efficiently.

To run a wget script, you have to have a valid certificate,
 which has to be renewed every 12 hours (default value, can be changed, see below).

To get this certificate include the following lines in your .login :

```
module load globus/5.2.1
```

```
setenv X509_CERT_DIR $HOME/.esg/certificates
```

```
setenv X509_USER_PROXY $HOME/.esg/credentials.pem
```

(load module first, setenv second; order is important, module loading would overwrite settings!)

store your ESG password in a file.

then execute the myproxy-logon as follows:

```
myproxy-logon -s ipcc-ar5.dkrz.de -p 7512 -t 72 -l <your_username> -b -T -S < <file_with_password>
```

```
-t 72          sets the expiration time to 72 hours.
               Default is 12 hours, 72 ist the largest of the possible values.
-l <your_username> your ESG username (see above)
-S            sets your password.
               You can redirect the input, so that your PW is read
               from the file you created (see above)
```

(for further information type myproxy-logon -h)

You can run the command interactively or at the beginning of a wget script.

A wget script checks if there is a valid certificate and trys to renew it when it expires in less than 8 hours.

 To get the information, when your certificate will expire use the command:

```
cat $X509_USER_PROXY | openssl x509 -text | perl -e 'while (<>) {print if /\s*Not /}'
```

 Search for IPCC5 data in the ESG and create a wget script

<http://pcmdi9.llnl.gov/esgf-web-fe/live>

Two possibilities:

1. Choose from search categories (as above, but faster) or
2. Type your choice in the text field on top, when you know exactly what you need and don't have to look at the possibilities.

example:

```
project:CMIP5 AND experiment:historical AND ensemble:r1i1p1 AND time_frequency:mon AND
                                                                    realm:atmos AND variable:pr
```

Then click on "Add all displayed to datacard"

At the datacard you can "expand" every dataset to get more information,
 remove it from your selection, or create a wget script for it.

Click on "WGET All Selected" to prepare the download of all datasets,
 and save the wget script.

<http://esgf-data.dkrz.de/esg-search/wget?>

```
project=CMIP5&experiment=historical&ensemble=r1i1p1&time_frequency=mon&realm=atmos&variable
=pr
```

..is an advanced method to create a wget script directly from the browser window command line.
 This link is already an example with the same choice as above.

####\ find all the information on the ESGF homepage:

####/ <http://pcmdi9.llnl.gov/esgf-web-fe/>

especially:

####\ http://esgf.org/wiki/ESGF_User_Guide (information about creating a wget script)

####/ http://www.esgf.org/wiki/ESGF_Search_CV (ESGF Search Controlled Vocabulary)

run the wget script:

chmod u+x <wget-script>

run <wget-script> (after you renewed the certificate, see above)

####\ FUTHER INFO:

####/ http://pcmdi-cmip.llnl.gov/my/cmip5/guide_to_cmip5.html

####\ http://www.esgf.org/wiki/ESGF_Search_API (Application Programming Interface)

####/ http://www.esgf.org/wiki/ESGF_Search_Service