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Link Github to Puhti

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ABSTRACT

How to connect your github account to a local machine or an HPC cluster (example at Puhti CSC)

DOI

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PROTOCOL CITATION

Alise J Ponsero 2021. Link Github to Puhti. **protocols.io** https://dx.doi.org/10.17504/protocols.io.bvnkn5cw

KEYWORDS

Github, HPC

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LAST MODIFIED

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BEFORE STARTING

You'll need either a local or remote machine where Git is installed (https://git-scm.com/downloads)
You'll need a github account (https://github.com/)

Verify that git is installed

1 Open a terminal and log onto the remote machine (if applicable).
In order to quickly test that Git is installed on the machine type:

```
git --help
```

You should have the git usage printed out!

```
[ponseroa@puhti-login2 ~]$ git --help
usage: git [--version] [--help] [-c name=value]
           [--exec-path[=<path>]] [--html-path] [--man-path] [--info-path]
           [-p|--paginate|--no-pager] [--no-replace-objects] [--bare]
           [--git-dir=<path>] [--work-tree=<path>] [--namespace=<name>]
           <command> [<args>]

The most commonly used git commands are:
   add        Add file contents to the index
   bisect     Find by binary search the change that introduced a bug
   branch     List, create, or delete branches
   checkout   Checkout a branch or paths to the working tree
   clone      Clone a repository into a new directory
   commit     Record changes to the repository
   diff       Show changes between commits, commit and working tree, etc
   fetch      Download objects and refs from another repository
   grep       Print lines matching a pattern
   init       Create an empty Git repository or reinitialize an existing one
   log        Show commit logs
   merge      Join two or more development histories together
   mv         Move or rename a file, a directory, or a symlink
   pull       Fetch from and merge with another repository or a local branch
   push       Update remote refs along with associated objects
   rebase     Forward-port local commits to the updated upstream head
   reset      Reset current HEAD to the specified state
   rm         Remove files from the working tree and from the index
   show       Show various types of objects
   status     Show the working tree status
   tag        Create, list, delete or verify a tag object signed with GPG

'git help -a' and 'git help -g' lists available subcommands and some
concept guides. See 'git help <command>' or 'git help <concept>'
to read about a specific subcommand or concept.
[ponseroa@puhti-login2 ~]$
```

Configuration of Github

2 To configure the Git account type:

```
git config --global user.name "Your name here"
git config --global user.email "your_email@example.com"
```

Replace the above code with your github username and email address.

SSH keys

3 Next we'll set up the SSH keys between Github and the machine. Check if you already have ssh keys on the machine. SSH keys are typically stored in your home directory under a **.ssh/** folder in files named **id_rsa** and **id_rsa.pub**

```
cd ~/.ssh/
ls
```

Do you see any id_rsa and id_rsa.pub files?

Step 3 includes a Step case.

No SSH keys

Previous Keys

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Create the keys in Github

step case

No SSH keys

The machine doesn't have any previous SSH Keys? Then we'll need to generate some!

```
ssh-keygen -t rsa -C "your_email@example.com"
```

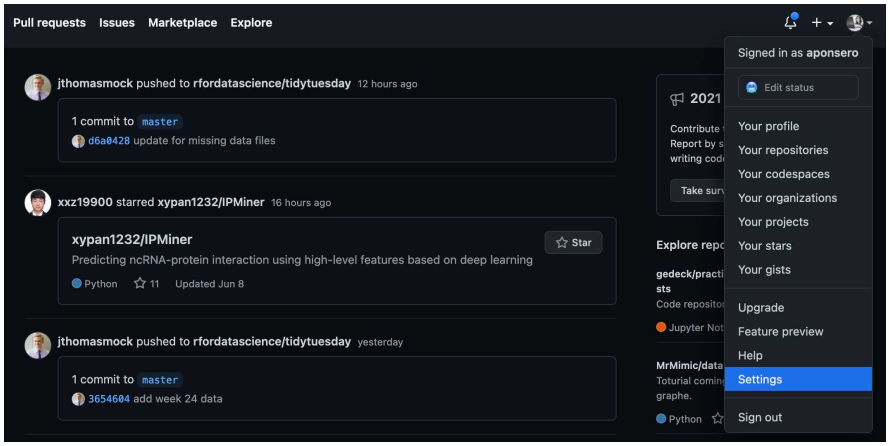
Make sure to replace the email address by the one used in Github!

Then open and copy the content of the id_rsa.pub file

```
vi ~/.ssh/id_rsa.pub
```

Select the content and copy it in your clipboard

4 Next, connect to your Github account and go to your profile's settings



5 In Settings, navigate to SSH and GPG Keys section

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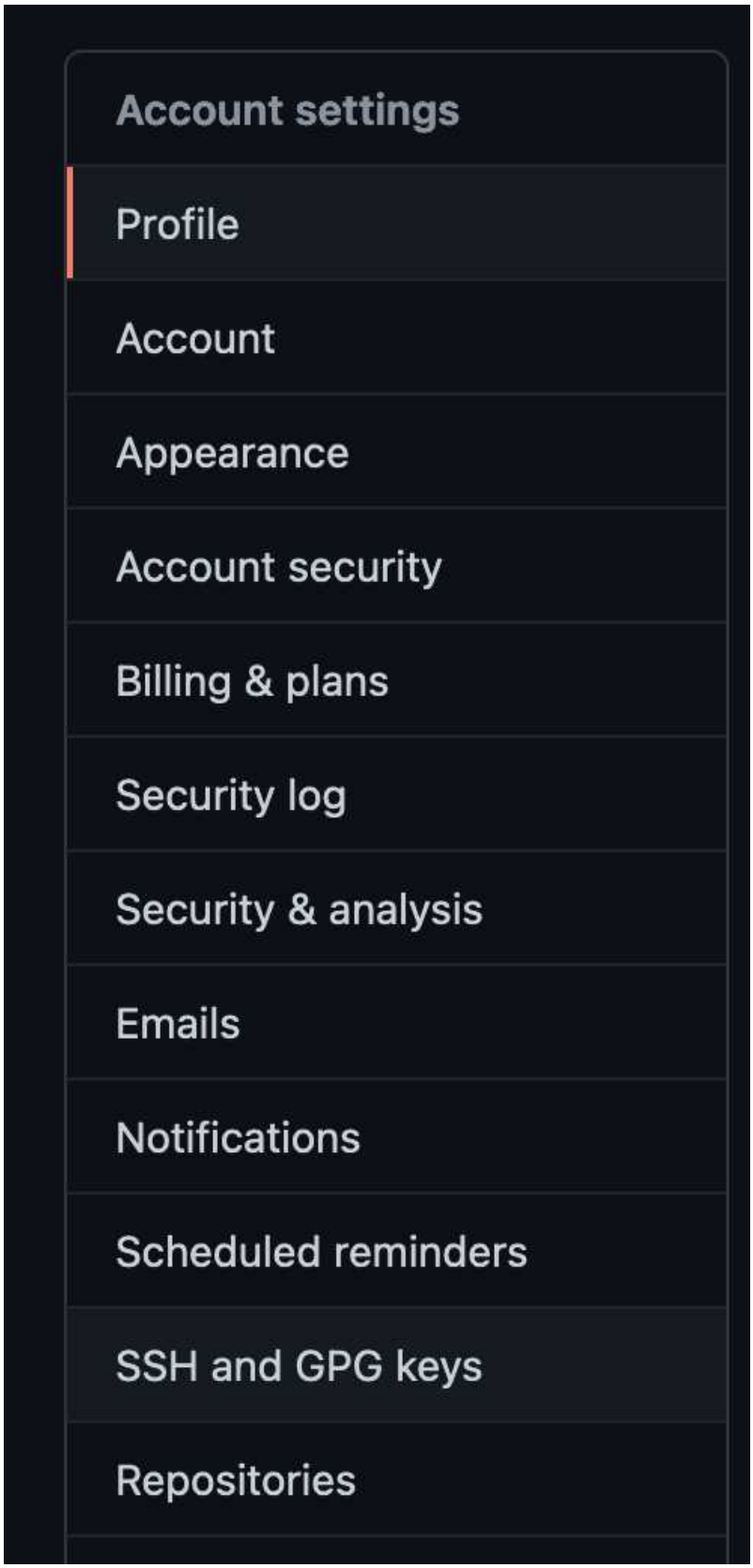

6 Finally create a new SSH key, give it an appropriate name and paste the content of the id_rsa.pub file.

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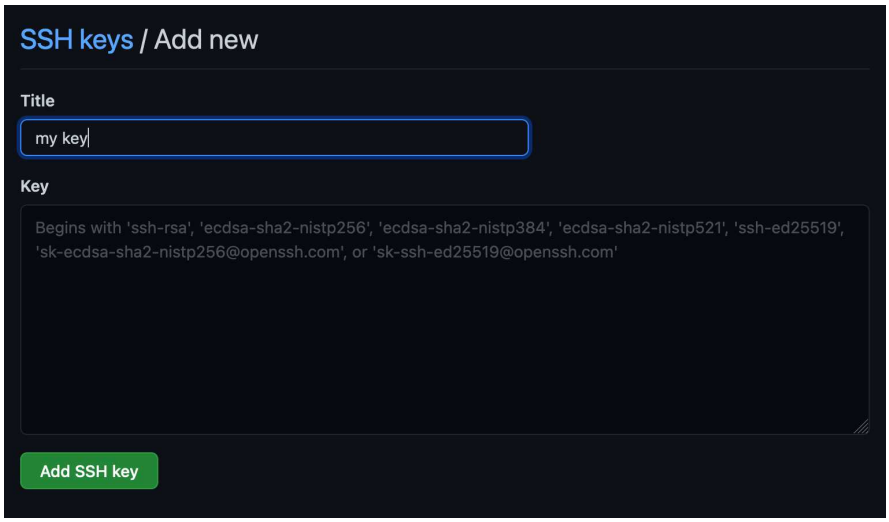


Save the key and close Github!

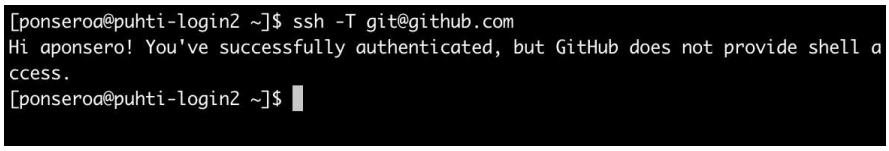
Check the configuration

7 Finally we can check if everything went well!

Open a new terminal window and connect to the remote machine (if applicable). Test the configuration by typing:

```
ssh -T git@github.com
```

you should see the following message:



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