**Creating a key-pair on Windows**

1. Download **Putty.exe** and **PuttyGen.exe** from <https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html>

You probably want the 64-bit versions.



1. Run **PuttyGen.exe**, and click **Generate.** Then waggle the mouse *furiously* in the blank region, in random artistic swirly patterns that represent the uniqueness of your personality.



1. When you’re done, the blank text fills with gibber. Type a “passphrase” (basically a more friendly password), into the two fields. Then Save the Public Key as “public.key”, and the Private Key as “private.ppk”. Save them somewhere private – your home directory is an option (which is backed up).
2. Edit the “public.key” file in an editor of your choice. It looks a bit like this.

**---- BEGIN SSH2 PUBLIC KEY ----**

**Comment: "rsa-key-20180524"**

**AAAAB3NzaC1yc2EAAAABJQAAAQEAu3HYJS6yFz2Z0oy+/1ZtBl9oTpMPJZ5N5pPt**

**HyaVA2kpHa0ugWdw/wW1fNW5HTmDEeSmqHJwatmX8ZZZe95EHEuoi3LosHj3jKIr**

**O9oppcMTVVQwu0hyY+A6PqhGD5wzzoA/hIMi3Bi3DWGzLBhoaZSIlW/peofSCoqY**

**LHvqkWJVQnziBCWPistr13LURU4b1EMj+1Rr0ePl25SpCNCH7AhEcMxcqcL0t+z6**

**95KbnaTnbxRCz3hn9ScwkusapxdvXGkryiO/gl+NRMvHAsp8ucGm9W4n5s0yBadN**

**fOCqhbb1OdetTaIbrxIzt032sI6v8g1Q7/JHNclXDng3sqrQBQ==**

**---- END SSH2 PUBLIC KEY ----**

1. Remove the first two lines, and the last line. Then remove the line breaks, so that the long key is all on one line. Prefix it with **ssh-rsa** (with one space), and then append on to the same line **user@computer-name** – hence, you might end up with something like:-

ssh-rsa AAAAB3NzaC1yc2E <snip> g3sqrQBQ== wrh1@wpia-dide065

1. Slack this modified public key file to Rich or Wes (or whoever runs the linux machine) – they will…
   1. Create a user account for you if not done already – **sudo adduser fred**
   2. Create/append public key to **/homes/fred/.ssh/authorized\_keys**
   3. Allow ssh access with – **sudo usermod -aG ssh fred**

(more excitement over the page…)

**Logging into a linux machine from windows using the ssh key.**

1. Run **Putty.exe. First time setup:** type the hostname (eg, ncov.dide.ic.ac.uk) – the defaults of SSH and Port 22 will be fine, unless we say otherwise!

Then click on the (+) next to SSH, and Auth. Click Browse, and locate your **private.ppk** file you made with putty gen.

1. Click on session at the top, and then type a sensible name for your session (eg, the server name), and don’t forget to **Save**. Then finally, click the **Open** button at the bottom if you want to start a session.

**In the future:** you can just **double click the Session Name** in the list, and all the above will be remembered, and a session will start.

1. A black terminal window appears, and you type your username (specific for the linux box), putty provides your private key, and the linux server matches that with the public key. It additionally asks for your **passphrase**, and if you get that right, you’ll login to the world of linux.