

# Prerequisites to the Tenant-in-a-day-training

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## General information

This guide is ensure the training proceeds as desired, with all participants having fulfilled all basic requirements. Steps everybody needs to perform:

1. You will generate your own unique [keypair](#).
2. You will send your public key to your trainer.
3. Your public key will be given to your [VM](#), which will then be able to recognize and authenticate your [SSH](#) session.
4. You will download [UMP](#), to be able to interact with the [DSH](#).

Optionally, if you don't already have it, you may need to set up a way to use SSH.

If you are already familiar with SSH and creating a keypair, you can skip straight to your preferred version of 'connecting'.

## Options to connect over SSH

- Linux and Mac have an SSH client built in. [Proceed to Generating a keypair in Linux/Mac](#).
- Windows sometimes comes with ssh. To check, you open Powershell (WIN+X, A, click [yes](#)) and type [ssh](#). You will either get feedback stating:
  - you didn't supply required parameters (meaning you have it, and should proceed to [generating a keypair in PowerShell](#)).
  - ssh is unknown, meaning you don't have it, so you should continue to the next step.
- If Windows doesn't have ssh, you have several options:
  - [Windows Subsystem for Linux \(WSL\)](#) allows you to run Linux commands (including SSH) on your Windows system.
  - [Git for windows](#) allows you to run git commands, through a bash shell. There is even a portable version that does not require admin rights.
  - Many more options. You can use whatever you're comfortable with. *(note that the format in which PuttyGen stores the keys is not standard; you will need to copy the generated key in a new text file)*

WSL has our preference, with Git for Windows acting as a backup-option. Guide for both options have been included.

## Generating a keypair in Windows PowerShell

1. In PowerShell, type the following commands (press ENTER after each)

```
mkdir %userprofile%\.ssh
cd %userprofile%\.ssh
ssh-keygen -t rsa -C "your_email@example.com"
```

2. Follow the instructions. Note that you will have to set a password.
3. It will save the key in the folder %userprofile%/.ssh. Use a file explorer to navigate to this folder.
4. Mail the [public key](#) file to the trainer.

The rest of the instructions are the same as those under [Using WSL](#)

## Getting WSL

1. Open PowerShell (WIN+X, A), and run the following command:

```
Enable-WindowsOptionalFeature -Online -Featurename Microsoft-Windows-Subsystem-Linux
```

2. Reboot when prompted.
3. After rebooting, open the Windows Store, and search for [Ubuntu](#).
4. Click [install](#) or [download](#), and wait for it to complete.
5. When it's done, there should be an icon for Ubuntu. Click it, set (and remember!) your password.

## Generating a keypair in WSL

6. In your Ubuntu terminal, type

```
sudo apt install ssh  
ssh-keygen -t rsa
```

7. Follow the instructions. Note that you will have to set a password.
8. Open the [run](#) dialog in Windows (WIN+R), and enter %LocalAppData%\Packages\  
[CanonicalGroupLimited.Ubuntu18.04onWindows\\_79rhkp1fndgsc](#)
9. Find the folder that has [Ubuntu](#) in its name. For example
10. Drill down to \LocalState\rootfs\home\  
[CanonicalGroupLimited.Ubuntu18.04onWindows\\_79rhkp1fndgsc](#)
11. Open the folder corresponding to your Ubuntu username, and open the .ssh folder.
12. Mail the [public key](#) file to the trainer.

## Using WSL

After you've mailed your public key to the trainer, you will receive the IP of your [VM](#). So:

- Your [ssh key](#) is in [.ssh](#), and is called [id\\_iot](#).
- The IP you got is 52.59.203.96. You will then run:

```
ssh -i .ssh/id_iot ubuntu@52.59.203.96
```

Where the -i flag stands for [identity](#), and [ubuntu](#) is the default username.

## Getting Git Bash

1. Download Git for Windows.
  - If you have admin rights, use the [installer](#).
  - If you do *not* have admin rights, use the [portable version](#).
2. Install or unpack Git for Windows.
3. Start Git Bash
  - If Git for Windows was installed, it will create an entry in the context menu, allowing you to open a Git Bash in whatever folder you prefer.
  - If the portable version is used, you will need to start the bash from the executable found in the unpacked folder.
4. If needed, navigate to a preferred folder. (use `pwd` to figure out where you are, use `cd` to navigate)

## Generating a keypair in Git Bash

1. In Git Bash, type `ssh-keygen -o`, and follow the instructions.
  - Note that you will have to set a password.
  - If the `.ssh` folder does not exist, it will give an error. You can solve this by navigating to `%userprofile%` and running `mkdir .ssh`.
2. Locate the keypair, which by default ends up in `%userprofile%/.ssh`.
3. Mail the [public key](#) file to the trainer.

## Using Git Bash

After you've mailed your public key to the trainer, you will receive the IP of your [VM](#). So:

- Your `ssh key` is in `.ssh`, and is called `id_iot`.
- The IP you got is 52.59.203.96. You will then navigate to the folder where your private key exists, and run:

```
ssh -i id_iot ubuntu@52.59.203.96
```

Where the `-i` flag stands for `identity`, and `ubuntu` is the default username.

## Generating a keypair in Linux/Mac

1. In your terminal, type

```
ssh-keygen -t rsa
```

2. Follow the instructions. Note that you will have to set a password.
3. It will state in which folder your keypair will have been saved. Use a file explorer to navigate to this folder.
4. Mail the [public key](#) file to the trainer.

The rest of the instructions are the same as those under [Using WSL](#)

## Getting UMP

Use one of the following links to download UMP, and install it.

[Linux](#)

[Mac](#)

[Windows](#)

You will be guided through the usage of UMP during the training.

## Glossary

- VM: Virtual Machine. The trainer made one for everyone. These will be identified based on their IP.
- SSH: secure shell. A way to interact with remote systems (such as our VM).
- Authentication: the VM only allows SSH connections from systems it knows. So, you'll need to authenticate.
- A keypair authenticates you as a user. These files should start with `id_` followed by your name (`id_jan`), and consists of two parts:
  - A private key. You do *NOT* share this, ever.
  - A public key, which you can share. This file tends to end in `.pub`