Command Line Interface Setup

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This lab will setup your local PC environment and familiarise you with key operations we will use each week. The lab PCs have most of the software required already installed.

1 Using your own computer

If you're on a lab computer then skip ahead to section 2. I only support the lab configuration but you are welcome to try out and use your own machine (incl. MacOS, Linux etc) if you can support it yourself. All of the software used here is cross-platform.

Mac, Linux, Unix users will have no problems installing the AWS CLI, and the commands work identically to those on Windows.

1.1 Software installation

Required software:

PowerShell on non-MS systems

from `https://github.com/PowerShell/PowerShell/releases/tag/v7.2.6`

Git from `https://git-scm.com/downloads`

AWS CLI from `https://aws.amazon.com/cli/`

1.2 PowerShell usage

The difference between Mac/Linux and Windows centres on the use of Bash/zsh by Mac/Linux/UNIX vs PowerShell on Windows. The AWS CLI is perfectly scriptable using Bash, particularly in conjunction with `jq` to parse JSON. However, some of the scripts you will be provided with in this module will be PowerShell only due to time constraints.

The good news is that PowerShell Core 7 can be installed easily on a Mac with no issues. You *do not* need a Windows VM on your Mac to use any of the PowerShell or AWS commands in *this* course. Please go to the PowerShell page on GitHub for instructions.

When you have PowerShell installed, open the Terminal app and type `pwsh` and you'll be at a PowerShell prompt.

2 PowerShell execution policy

(Not needed on non-Windows systems.) We will use a number of PowerShell scripts throughout the module. PowerShell by default will not allow scripts to run that were downloaded from online. Run the following command to change this behaviour:

```
Set-ExecutionPolicy -ExecutionPolicy RemoteSigned -Scope CurrentUser
```

Answer *all* when prompted.

3 Setup AWS command-line interface

1. Log in to the AWS CLI.
2. Click your name in the top right and then Security Credentials.
3. Scroll down to the Access Keys section and hit Create access key.
4. For now check the box beside *I understand creating a root access key is not a best practice, but I still want to create one* prompt and hit Create access key.
5. In PowerShell run:

   ```
   aws configure
   ```

   It will prompt first for an access key.
6. Copy the Access key from your web browser using the copy button to the left. Paste into Powershell (right click pastes). Press enter. You should see a prompt for the secret key.
7. In your web browser press Show beside Secret access key.
8. Click the copy button left of the secret access key. Paste into Powershell (right click pastes). Press enter. You should see a prompt for default region name.
9. Type `eu-west-1` and press enter.
10. At the next prompt for output format, just press enter again.

3.1 Check script

Run the `lab_checks.ps1` powershell script from the main folder to confirm that your environment is set up correctly. You can ignore the SSH key warnings, we will set this up next.

3.2 Saving credentials to onedrive

The college maps your OneDrive as Drive O:. I have provided scripts to let you save your credentials from the local machine to your OneDrive.

```
# Save credentials to onedrive
./save_credentials_to_onedrive.ps1

# Load credentials from onedrive
./load_credentials_from_onedrive.ps1
```

4 SSH key

Last year we used SSH keys given to us by the AWS Academy environment. This year we will generate and use our own.

If you already have an SSH key that you use already: you should continue to use it. Talk to me **before** attempting any of the instructions below as some steps are unnecessary and may erase your key.

4.1 Generating keys

We will generate an SSH keypair using the following command:

```
ssh-keygen -t rsa -b 4096
```

You can hit enter to bypass the passphrase requirement. The default save location is fine.

4.2 Importing your SSH key

The following command will import the public key into your AWS account with the name `MAIN_KEY` (ignore the line breaks):

```
aws ec2 import-key-pair --key-name MAIN_KEY
 --public-key-material fileb://~/.ssh/id_rsa.pub
```

4.3 Saving keys to onedrive

As with your AWS credentials, I have provided scripts to let you save your keys from the local machine to your OneDrive.

```
# Save key to onedrive
./save_key_to_onedrive.ps1

# Load key from onedrive
./load_key_from_onedrive.ps1
```