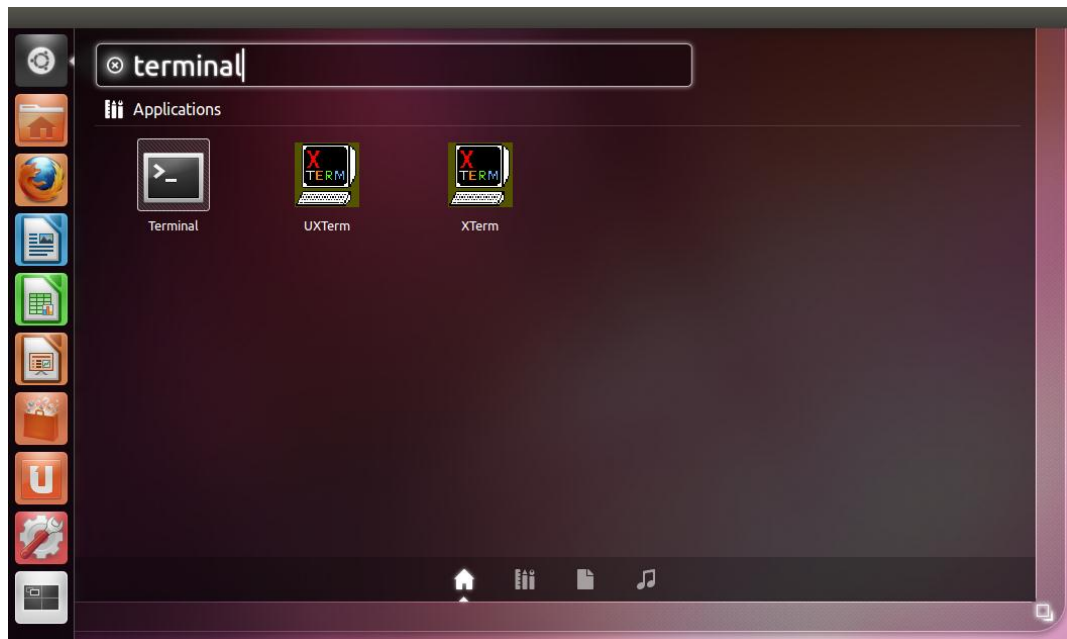# Setting up Kerberos on Ubuntu

Note: It is assumed that you are already connected to the internet when following these steps.

Installing Kerberos

1) **Open a terminal and run the command** `sudo apt-get install krb5-user`

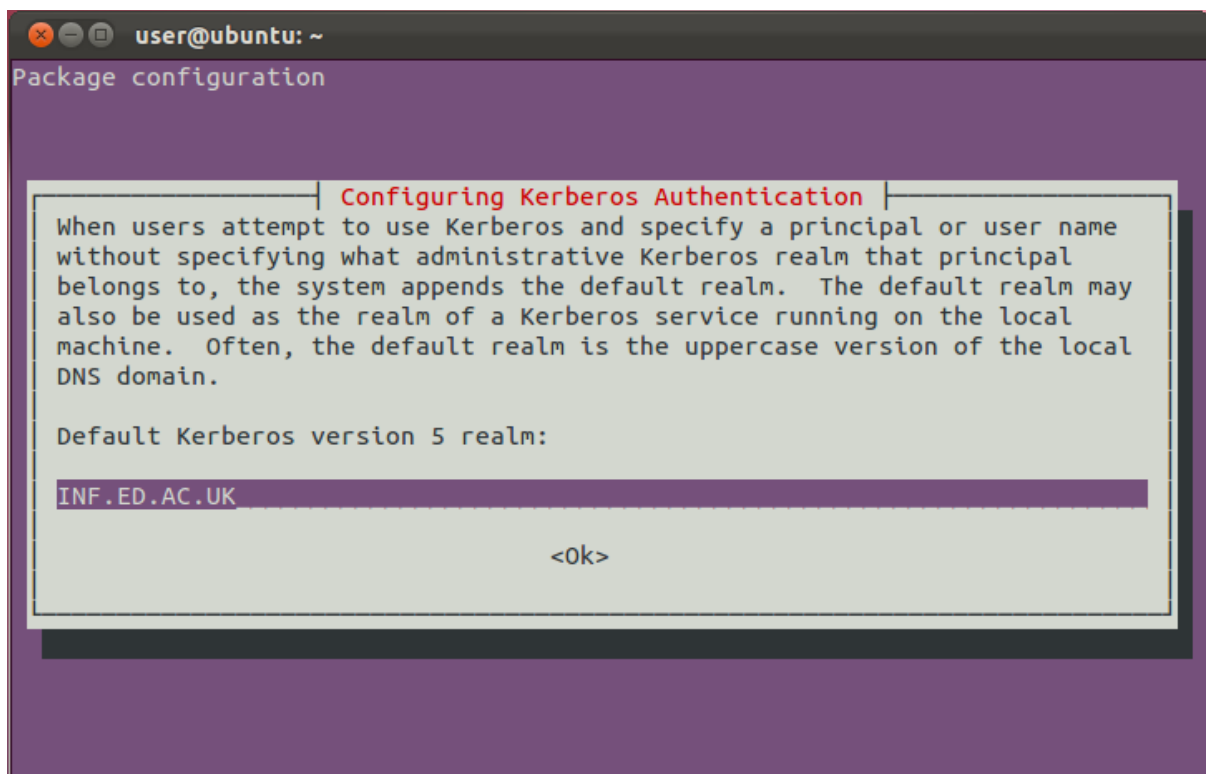Note: On newer versions of Ubuntu you may have to open the dash and then search for "terminal"

2) **Enter your local account password. When prompted to continue, press** `Y` **and then** `Enter`

3) You will be asked to enter a default Kerberos 5 realm. Enter `INF.ED.AC.UK` **(all caps)**

```
⊗ ⊖ ▣  user@ubuntu: ~

Package configuration



         ┌─────────────┤ Configuring Kerberos Authentication ├─────────────┐
         │ When users attempt to use Kerberos and specify a principal or user name  │
         │ without specifying what administrative Kerberos realm that principal     │
         │ belongs to, the system appends the default realm.  The default realm may │
         │ also be used as the realm of a Kerberos service running on the local     │
         │ machine.  Often, the default realm is the uppercase version of the local │
         │ DNS domain.                                                              │
         │                                                                          │
         │ Default Kerberos version 5 realm:                                        │
         │                                                                          │
         │ INF.ED.AC.UK                                                             │
         │                                                                          │
         │                              <Ok>                                        │
         │                                                                          │
         └──────────────────────────────────────────────────────────────────────┘
```

4) Press Enter. Installation should complete itself from this point on.

Using Kerberos

Note: To use Kerberos authenticated services, you first need to obtain a ticket granting ticket. Tickets will be destroyed when you restart your computer, when you run the command `kdestroy`, or when they expire. You will need to run `kinit` again after any of these occur.

1) **Run the command** `kinit` **followed by your DICE username, e.g.**

```
user@ubuntu:~$ kinit yhuang
Password for yhuang@INF.ED.AC.UK:
```

Enter your DICE password and press enter. If successful, the command will return no output.

Note: If you have another realm set up as your default, append `@INF.ED.AC.UK` to your username

2) **To check, list, or show all your tickets, run the command** `klist`**:**

```
user@ubuntu:~$ klist
Ticket cache: FILE:/tmp/krb5cc_1001
Default principal: yhuang@INF.ED.AC.UK

Valid starting     Expires            Service principal
11/22/11 04:56:59  11/23/11 04:56:53  krbtgt/INF.ED.AC.UK@INF.ED.AC.UK
user@ubuntu:~$
```

3) **To SSH into a DICE machine using your Kerberos credentials, run the command:**

```
ssh -K username@server
```

for example:

```
user@ubuntu:~$ ssh -K yhuang@ssh.inf.ed.ac.uk
Last login: Fri Nov 18 16:59:45 2011 from gecko.inf.ed.ac.uk
This is student.ssh.inf.ed.ac.uk running Scientific Linux 6 (sl6) DICE.
It is just a gateway from the internet to our systems, so please now
'ssh student.login' before doing anything else, and remember to run
any heavy/demanding programs on the compute server student.compute
[rockefeller]yhuang: 
```

If this is your first time connecting to a particular host, you may be asked to verify the host key. The host keys for the main student and staff SSH servers are given below:

student.ssh.inf.ed.ac.uk	ff:13:e2:bb:1a:be:a8:29:a9:86:d4:95:2f:2c:82:1e
staff.ssh.inf.ed.ac.uk	fb:39:11:da:a7:2a:fb:a9:7b:39:08:b1:c3:b1:fb:f9

Note: You should only use the **-K** switch when connecting to a DICE machine via SSH – this forwards your credentials onto the target machine. Do not use it for non-DICE machines as this may allow whoever runs that machine to impersonate you.

The `kinit` command accepts a number of options to modify how long your ticket lasts, how long it can be renewed for, and options for forwarding and proxying. For further details, you can:

```
man [kinit | klist | kdestroy]
```