

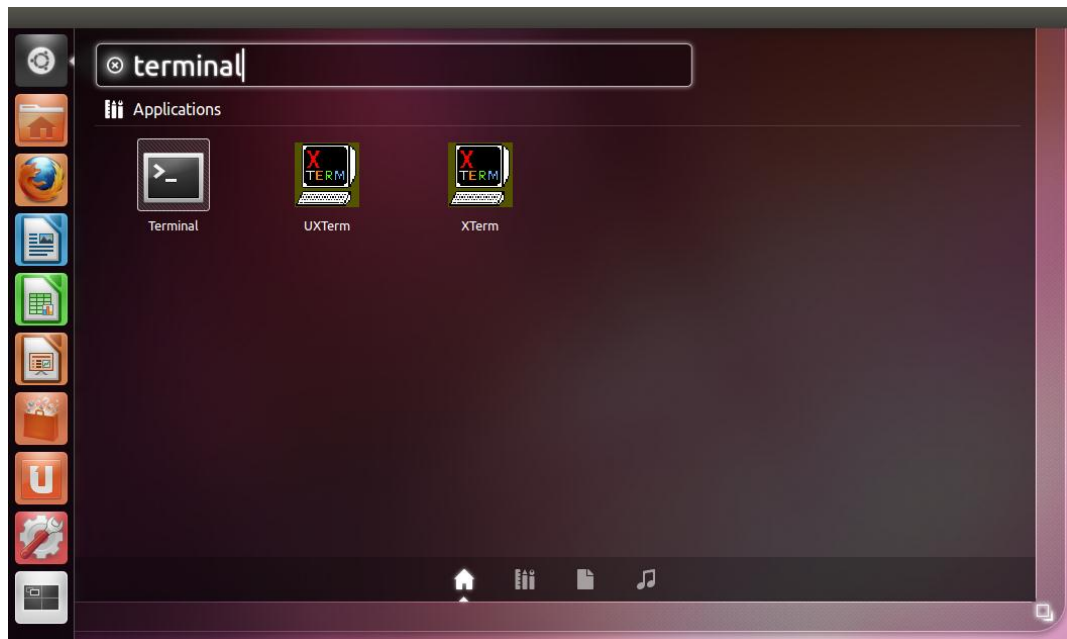
## Setting up Kerberos on Ubuntu

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”

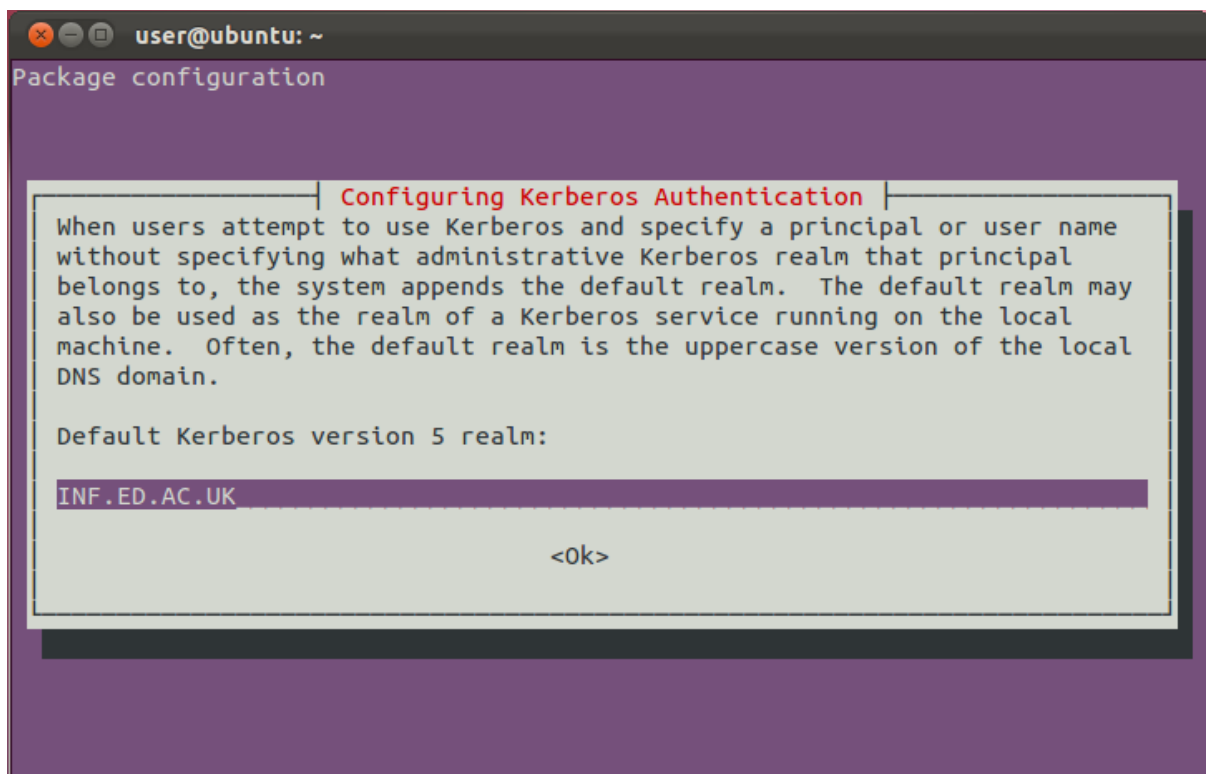


- 2) **Enter your local account password. When prompted to continue, press Y and then Enter**

```
user@ubuntu: ~
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

user@ubuntu:~$ sudo apt-get install krb5-user
[sudo] password for user:
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following extra packages will be installed:
  krb5-config libgssapi-krb5-2 libgssrpc4 libkadm5clnt-mit8 libkadm5srv-mit8
  libkdb5-5 libkrb5-3 libkrb5support0
Suggested packages:
  krb5-doc
The following NEW packages will be installed:
  krb5-config krb5-user libgssrpc4 libkadm5clnt-mit8 libkadm5srv-mit8
  libkdb5-5
The following packages will be upgraded:
  libgssapi-krb5-2 libkrb5-3 libkrb5support0
3 upgraded, 6 newly installed, 0 to remove and 260 not upgraded.
Need to get 811 kB of archives.
After this operation, 1,278 kB of additional disk space will be used.
Do you want to continue [Y/n]?
```

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

A terminal window titled 'user@ubuntu: ~' with 'Package configuration' at the top. A box titled 'Configuring Kerberos Authentication' contains text explaining that the system appends a default realm to a principal name if none is specified. It asks for the 'Default Kerberos version 5 realm:' and shows 'INF.ED.AC.UK' entered in a purple input field. Below the input field is '<Ok>'.

```
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]
```