

802.1X (wireless) in Mac OS X 10.4 Tiger

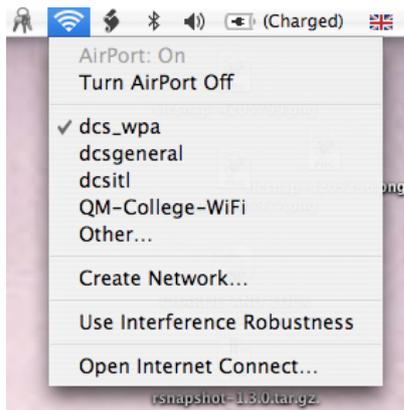
802.1X is an authentication mechanism for making connections, wired or wireless, to managed networks. In our case, you present your username and password at the very beginning of making a network connection. Once authentication has succeeded you can, for example, use DCS printing services, check your email, and browse the Internet.

Mac OS X 10.4 tries very hard to help you get your networking up and running, which leads to a myriad of possible user experiences. In what follows I'll describe what appears to be the normal experience "out of the box". However, you will at some point have other experiences so it's worthwhile, because it's ultimately less confusing, to do some explicit setting up. I describe this under "Advanced".

Getting Started

You should already have a Wifi icon in your menu bar. If you don't, open the "Internet Connect" program from the Applications folder, and tick the check box in the Airport tab.

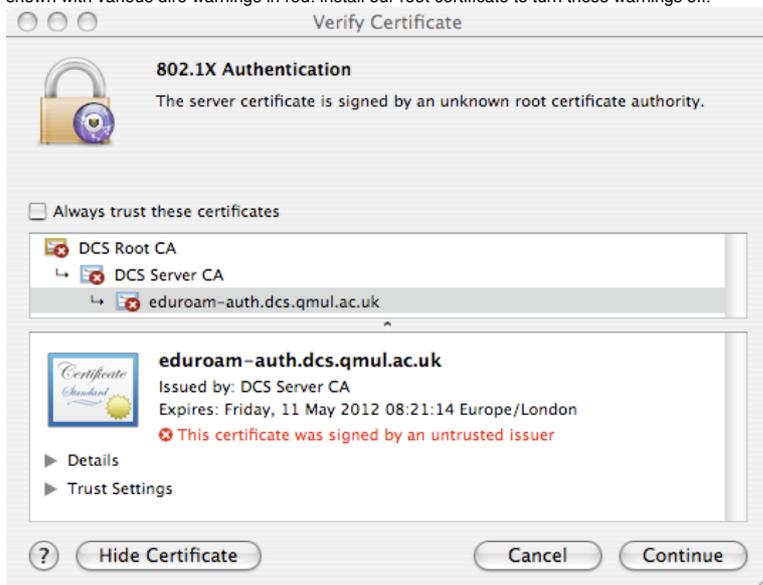
Choose "dcs_wpa" or "eduroam" from the WiFi menu:



You're going to be asked for a username and password. You *really* don't want to give your DCS password to a machine that you're not sure about, so this machine has to offer a "server certificate" to prove that it's one of ours. You'll see the following dialog box:



Click the "Show Certificate" button and you'll see a "chain of trust" going back to the DCS "root certificate authority". In the screenshot below this chain is shown with various dire warnings in red: install our root certificate to turn these warnings off.



If you don't see this certificate chain, it means you're about to offer your username and password to someone else's server and **you should STOP**.

You will normally have the DCS root certificate installed in your Keychain ("X509 Certificates"); if not, it can and should be downloaded from <http://webmail.dcs.qmul.ac.uk/>. Double-click it to install.

Clicking the "Continue" button brings up a password dialog. If you want to use the Janet Roaming Service, you should enter your DCS username with "@dcs.qmul.ac.uk" appended (so it looks like an email address, but you can't use any mail aliases that we may have set up for you). Use your usual DCS network password, not your laptop password.

Completion of the password dialog connects you to the network.

Advanced

Certificate Trust

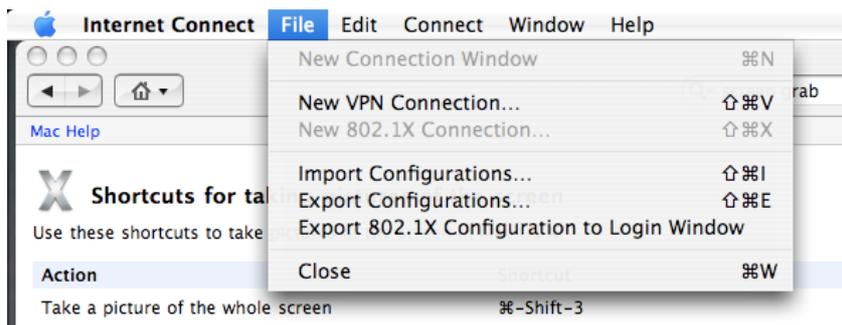
You may like to tick the "Always trust these certificates" checkbox in the dialog above. This notion of trust is particular to the 802.1X authentication mechanism we're using, over and above the usual meaning of having a root certificate in your X509 keychain. So you get a slightly odd dialog box where you're asked if it's OK for the "eap1strust" application to modify the system keychain. It is.



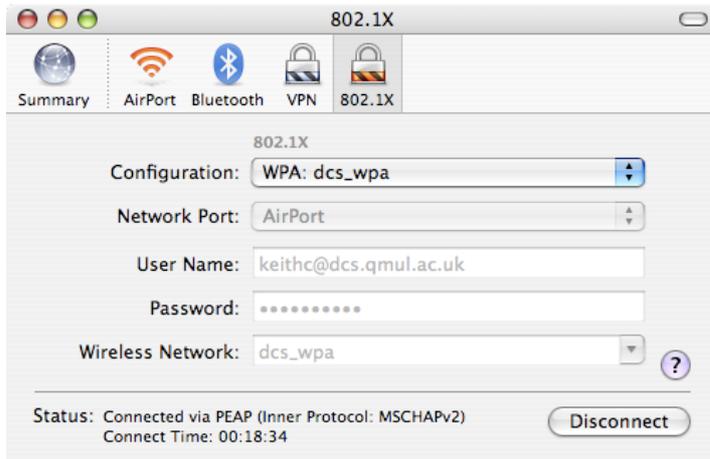
Internet Connect

You can configure an 802.1X connection in the "Internet Connect" application, so that you can see a little more of what's going on when you connect. In particular, this enables you to confirm that you're authenticating using a good encryption protocol (PEAP, with MSCHAPv2, in our case).

Launch Internet Connect from the WiFi menu in your menu bar. Then create a new "802.1X Connection" using the command in Internet Connect's File menu:

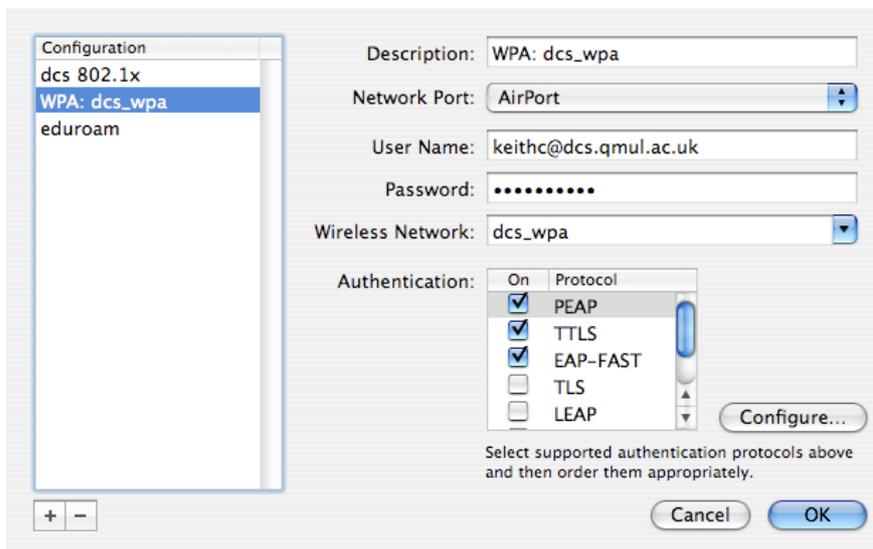


This command causes a new padlock icon to appear in Internet Connect's tool bar, from which you can create "802.1X Configurations" using the Configuration pop-up menu. When you're done it's going to look like this:



Pay particular attention to the Status text at the bottom. The "Connected via" text should look like this whenever you're connected to our authentication server, even if you're visiting another institution.

But at first, the Configuration pop-up will have no named configurations. It does however have a "Edit Configurations" command. Choosing that leads to the following reasonably intuitive dialogue box. Note the little "+" button for adding configurations to the set on the left.



In the above I've chosen a descriptive name (needs only make sense to you); specified that it's Wifi we're talking about here; put in the username and password; specified the WiFi network's name (SSID); and finally chosen PEAP as the preferred authentication method.

Wired Connections

Above, I've also created an 802.1X configuration in Internet Connect which I called "dcs 801.x" for authenticated wired connections. Set up is similar.