

Advantech AE Technical Sharing Documentation

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Category	■FAQ □ SOP	Related OS	Linux
Abstract	How to set up the 3G module if the Ubuntu Network Manager require the username, password and APN information of SIM card?		
Keyword	Ubuntu		
Related Product	PCM-24S33G, PCM-24S34G		

■ **Problem Description:**

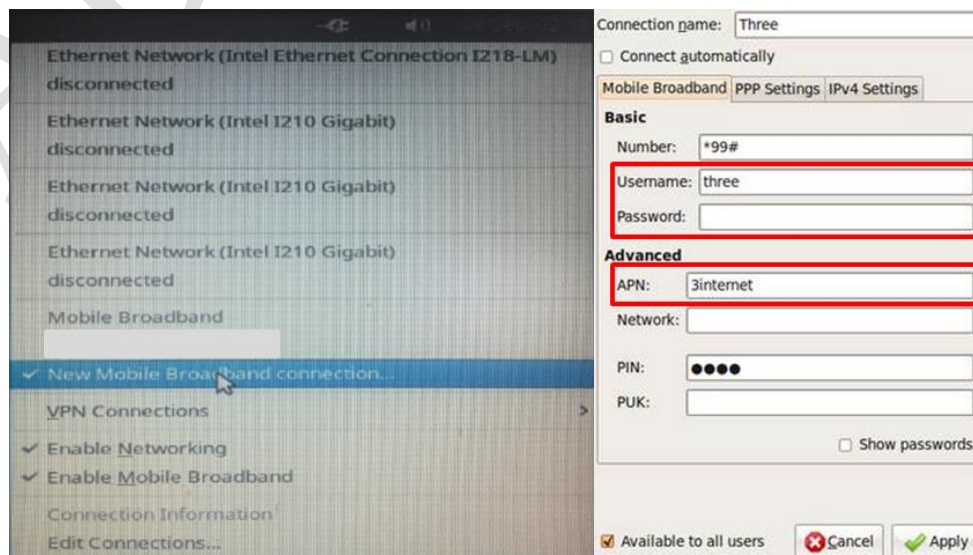
Some telecommunications providers do not automatically update utility items such as usernames, passwords, and APN information. You need to set it manually; otherwise you will not be able to connect to the Internet. This FAQ will teach you how to set up the details of the information.

■ **Brief Solution - Step by Step:**

Please follow the description below to continue the steps.

Insert your dongle into your PC. It should pop up a "New 3G Broadband" Windows. Select the options you need and click next until the configuration is complete. Note that if you have a PIN set on your SIM card. It will ask you for this when you come to connect. -> Continue from step 1

If nothing pops up, right click the "network Manager" icon in the system tray by your clock, and select "Edit Connections", click the "Mobile Broadband" tab, click "Add", select your device from the drop-down menu, click "Forward", select "Britain (UK)", click "Forward", select "3", click "Forward", select "Internet" as your Plan and "3internet" as your APN, click "Forward", click "Apply". Now in the window that opened... ->Continue from step 3. (The APN and username/password need to be provided by SIM Card Company.)



1.) Now, before you try to connect. You will need to change a few settings. If you right click on the network manager icon in your tool tray (top right) and select Edit connections, the network connections box should appear.

2.) Now click on the Mobile Broadband tab, highlight "3" (or whatever you decided to call your connection when it was auto-added) and click on Edit. Note in the example below I called the connection "Three" rather than "3".

The image displays two side-by-side screenshots of the 'Network Connections' dialog box in a Linux environment. Both windows show the 'Connection name' field set to 'Three'. The left window is on the 'Basic' tab, showing fields for 'Number' (*99#), 'Username' (three), 'Password', 'APN' (3internet), 'Network', 'PIN', and 'PUK'. The right window is on the 'PPP Settings' tab, showing 'Authentication' (Allowed methods: PAP), 'Compression' (Use Point-to-Point Encryption (MPPE), Allow BSD data compression, Allow Deflate data compression, Use TCP header compression), and 'Echo' (Send PPP echo packets). Both windows have 'Available to all users' checked and 'Cancel' and 'Apply' buttons at the bottom.

3.) You should now see the screen shown below. Make sure you enter your PIN if there is one set up on your SIM card.

The image displays two side-by-side screenshots of a mobile broadband configuration window for a connection named 'Three'.
 The left screenshot shows the 'Basic' tab. It includes fields for 'Number' (*99#), 'Username' (three), 'Password', 'APN' (3internet), 'Network', 'PIN' (masked with four dots and highlighted by a red rectangle), and 'PUK'. There are checkboxes for 'Connect automatically', 'Available to all users', and 'Show passwords'. Buttons for 'Cancel' and 'Apply' are at the bottom.
 The right screenshot shows the 'PPP Settings' tab. It includes sections for 'Authentication' (Allowed methods: PAP, with a 'Configure Methods...' button), 'Compression' (with checkboxes for MPPE, BSD data compression, Deflate data compression, and TCP header compression), and 'Echo' (with a checkbox for 'Send PPP echo packets'). It also has 'Available to all users', 'Cancel', and 'Apply' options at the bottom.

Next you will need to click on the "PPP Settings", this stage in particular is CRITICAL as to an extent and whereas this is a show stopper unless you know it needs to be changed.

This image shows the same configuration window as above, but with different highlights. The left screenshot is identical to the first one, with the 'PIN' field highlighted by a red rectangle. The right screenshot shows the 'PPP Settings' tab, but the 'PPP Settings' tab label at the top is highlighted by a red rectangle, indicating the step to click on this tab.

4.) You should now see the second screen as shown in the screenshots at the bottom of this post. First you need to limit the authentication methods to PAP; this is done by clicking on the 'Configure Methods' button and unticking the other unwanted methods.

Connection name: Three

☐ Connect automatically

Mobile Broadband | **PPP Settings** | IPv4 Settings

Basic

Number: *99#

Username: three

Password:

Advanced

APN: 3internet

Network:

PIN:

PUK:

☐ Show passwords

☒ Available to all users

Connection name: Three

☐ Connect automatically

Mobile Broadband | **PPP Settings** | IPv4 Settings

Authentication

Allowed methods: PAP

Configure Methods...

Compression

☐ Use Point-to-Point Encryption (MPPE)

☐ Require 128-bit encryption

☐ Use Stateful MPPE

☐ Allow BSD data compression

☐ Allow Deflate data compression

☐ Use TCP header compression

Echo

☐ Send PPP echo packets

☒ Available to all users

5.) Next you need to turn off compression, in particular leaving boxes here ticked it likely to prevent the system from establishing a PPP connection with Three's servers, so although you will see 3G light on your modem, it won't actually produce a working connection.

6.) Click on Apply and we should be ready to attempt a connection.

Connection name: Three

☐ Connect automatically

Mobile Broadband | **PPP Settings** | IPv4 Settings

Basic

Number: *99#

Username: three

Password:

Advanced

APN: 3internet

Network:

PIN:

PUK:

☐ Show passwords

☒ Available to all users

Connection name: Three

☐ Connect automatically

Mobile Broadband | **PPP Settings** | IPv4 Settings

Authentication

Allowed methods: PAP

Configure Methods...

Compression

☐ Use Point-to-Point Encryption (MPPE)

☐ Require 128-bit encryption

☐ Use Stateful MPPE

☐ Allow BSD data compression

☐ Allow Deflate data compression

☐ Use TCP header compression

Echo

☐ Send PPP echo packets

☒ Available to all users

7.) Right click on the Network Manager icon in the tool tray and "3" should be listed under the connection name you chose. Select this option.

8.) Connecting will probably take around about a minute assuming it's working properly.

■ Troubleshooting

a) I've waited a minute but I still see a flashing light and have no connection

- Check you're actually within range of 3's 3G service
- Check your PIN setting / make sure it's clear if you have no PIN

b) I've waited a minute and have a 3G light, but no connection

- You've connected to 3, but PPP failed, so check you've turned off your compression settings.

■ Reference:

<https://linuxforums.org.uk/index.php?topic=3102.0>