Cccam English tutorial

This tutorial will help you master the full potential of this excellent CAM

The following tools are required to be able to use the CCcam on your Dreambox
1) Linux compatible editor, such as Ultraedit32,Notepad ++ or Crimson Editor (freeware)
2) FTP software like FlashFXP
3) A syslog utility like 3csyslog (freeware)
4) A Telnet utility, the Windows integrated tool will do the job

PART I

The first part is for beginners.

Installing CCcam

The CCcam archive is composed of 2 files, a bin file and a config file. In the original RAR archive, the authors have saved the Dreambox binary file as CCcam.ppc, whilst the config file is the same as for any version. It is suggested to rename the binary file in CCcam as it will help make the following Telnet procedures easier.
Copy the bin file to /var/bin and set the rights (attributes) to 755. Copy the config file to /var/etc/

We are now ready to check in details how CCcam really works, using the Telnet utility

In Windows,
Start → RUN → and type Telnet 192.168.1.10 (or your Dreambox IP number) and click OK
Login (root)
Now do the following.Type cd /var/bin to go to /var/bin, check whether you are in the correct directory (for Linux ls=dir), check the file colour, the CCcam file should be green.

At the prompt, type “CCcam –dv” making sure to match the file name as well as capital letters
The –dv command will give you the possibility to see each step that CCcam does, through an activity log that should look like the following one

1) 16:09:26.209 CCcam: ==========
2) 16:09:26.212 CCcam: starting CCcam 1.2.0 compiled on Jul 5 2006@21:12:46
3) 16:09:26.212 CCcam: ==========
4) 16:09:26.276 CCcam: online using nodeId 578103ff60952939
5) 16:09:26.305 CCcam: DM70x0 detected
6) 16:09:26.307 CCcam: create 2 cam device(s)
7) 16:09:26.920 CCcam: provider num: fff830
8) 16:09:26.920 CCcam: provider key: (hier steht die abonummer)
9) 16:09:27.120 CCcam: provider num: 021c00
10) 16:09:27.121 CCcam: provider key: (hier steht die abonummer)
11) 16:09:27.215 CCcam: card added to broker with caid 500
12) 16:09:28.018 CCcam: card added to broker with caid 4a70
13) 16:09:28.072 CCcam: added 389 keys from /var/keys/SoftCam.Key
14) 16:09:28.132 CCcam: added 541 keys from /var/keys/AutoRoll.Key
15) 16:09:28.133 CCcam: static cw not found or bad
16) 16:09:28.134 CCcam: read_ignorefile: cannot open /var/keys/CCcam.ignore or not found
17) 16:09:28.135 CCcam: server started on port 12000

If you suspect something is not correct, and would like to check the ECMS answers, these will appear directly on your DB when zapping channel. Just start a second Telnet session, type the command ps and press Enter. The active processes will be displayed and should look like the following example:

1: root@dm7020:~> ps
2: PID Uid VmSize Stat Command
3: 1 root 608 S init [2]
4: 2 root SWN [ksoftirqd/0]
5: 3 root SW< [events/0]
6: 4 root SW< [khelper]
7: --- extra lines removed---
8: 599 root 2100 S /var/bin/CCcam_1.2.1
9: 600 root 2100 S /var/bin/CCcam_1.2.1

Reading Log entries

4) online using nodeId 578103ff60952939
This is a unique identity number created for each server/client user upon connecting

5) create 2 cam device (s) 7020
2 CAM devices have been found.

The following lines 7) 8) and 9) display data about the subscription card provider id number.
9) provide num :021c00 is the provider number, which is Redlight/FullX

11) card added to broker with caid 500
This line identifies the CAId (Conditional Access Identification) in use to provide access to the service, which, in this case, is Viaccess. The subscription card is identified by both the CAId and the Provider, and therefore, in our example 0500:021c00.
Some providers use many CAId's. This is why in our log, Redlight/FullX is also listed as 0600:021c00, where 0600 is the IRDETO CAId. It is very important to understand the system caid/provider as it will be taken into consideration again in this tutorial

13) added 389 keys
there are 389 keys read from the static key file

15) cw not found or BAD
there are no static cw available; this does not represent a problem (optional)

16) read_ignorefile: cannot open/var/keys/CCcam.ignore or not found
this is also not important for the upcoming instructions

17) server started on port 12000
the server runs on port 12000 TCP(this is very important for your Router/Firewall settings)

Keyfiles

Unless the destination folder has been changed, by default, the key file is found in the var/keys folder.
CCcam is using the SoftCam.key/Autoroll.key format, which is also used by other EMU systems.
For this reason, there is no need for a purpose built key file format for this CAM. Keyfiles are an option as CCcam works also without any of them

CCcam and cardsharing

To configurate and connect the CCcam, you need to go to the ETC folder and edit the CCcam.cfg file.The CCcam config file itself is a little help file. Indeed, you will find many text lines starting with #. These lines provide help to set the CCcam, and there is no need to delete them as they are ignored by CCcam. Therefore, they can also be used to add any note or comment.
The configuration lines can be written in any order. There is no standard order to respect. Indeed, when started, CCcam reads the first character of each line and executes the request. Let's look at each line syntax now.

F: Friends
F: user1 pass1 1

C: Connect
C: server.dyndns.org 12000 user1 pass1

The C line (where C stands for connect) enables the CCcam to connect to another server
The URL or IP after C: is necessary to identify the server in the sharing network. 12000 is the port used by the server to communicate and user1 pass1 identify the user
Note: each user is accepted only once by the server

How to connect a client to a server:
The F line launches the server, whilst the C line launches the client, and this is all you need. Should the client wish to share its subscription cards with the server, then you need to add a C line at the server, and an F line at the client.

Log Diagnostic
Should you wish to check whether the connections are working properly, then use the CCcam –dv Telnet command. This option will give you the possibility to check the log and make sure all is ok.It may be useful for beginners to do it with Telnet, and, once experienced, it may also be done using the the automatic script found in the blue panel.

This is what the dialogue between the 2 decoders should look like

1) 11:55:06.977 CCcam: found betacrypt caid: 0x1702 ecmpid: 0x100a id: 0x0
2) 11:55:06.978 CCcam: found betacrypt caid: 0x1722 ecmpid: 0x100a id: 0x0
3) 11:55:06.978 CCcam: found nagra caid: 0x1801 ecmpid: 0x1642 id: 0x0
4) 11:55:06.978 CCcam: cam[0] set PMT for sid=a
5) 11:55:06.979 CCcam: start EMM
6) 11:55:06.996 CCcam: cam[0] ecm even nok caid:0x1702 id:0x0 pid:0x100a Premiere Sat (19E)
tunneled Nagra (took 0.0010 seconds)
7) 11:55:07.061 CCcam: cam[0] ecm even nok caid:0x1722 id:0x0 pid:0x100a Premiere Kabel (19E)
tunneled Nagra (took 0.0003 seconds)

Lines 1) 2) and 3) display information about the service encryption
Pre***e is displayed with the 3 possidble CAId's:
1702 tunnel Nagra = betacrypt for DVB-S
1722 tunnel Nagra = betacrypt for DVB-C
1801 plain Nagra (not used or only on s04 card) = unused.

The Pre**er provider is usually written with 6 digits.In this case, the service ID is 100a and identifies Pre**er1.

Line 4) "Start EMM" marks the point where CCcam starts looking for keys

The 2 following lines list the local server replies.In this example, the replies are negative ecm even nok caid:0x1722. This is normal as there are no cards in the receiver. The query lasted 0.0003s.

We then find the queries sent to the server:
8) 11:55:07.194 CCcam: remote ecm -> 192.168.1.3:12000 0x1702(0x000)
9) 11:55:07.331 CCcam: remote ecm <- 192.168.1.3:12000 ok (took 0.1364 seconds)
10) 11:55:07.333 CCcam: cam[0] ecm even ok caid:0x1702 id:0x0 pid:0x100a Pre***re Sat (19E)
tunneled Nagra (took 0.1383 seconds)>code<

ecm even ok caid:0x1702 means that this query has been successfully transmitted through the LAN in 0.1383s

killall CCcam marks the end of the log

End of PART I