



INTRACOM netMod





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Adjustments for Linux Installation

Installation of netMod

Connect the netMod at a free serial port of your PC and switch on netMod and the PC. The Linux operating system does not need a special driver for netMod's operation.

Cogin as a root user and type the following command:

ln –s /dev/ttyS<n> /dev/modem

where ttyS < n > is the serial port of your PC connected with the netMod. For the correct value of the parameter < n > please consult the following table:

DOS COM Port	Linux COM Port
COM1	ttyS0
COM2	ttyS1
COM3	ttyS2
COM4	ttyS3

Table 1: The serial ports

Example:

If you have connected netMod on the COM2 port, type the following command:

ln –s /dev/ttyS1 /dev/modem



Connection with the Internet

After netMod's succesful installation, you can use it to get connected to the Internet. Make sure you get the appropriate account from your Internet Service Provider that shall have an ISDN infrastructure. The most common way is via the **kppp** software of the X-Window System

Attention: You need a dial-up connection for the Internet via ISDN. Your old account of simple dial-up will not work.

Connection via the kppp S/W from the X Window System

Step 1 Root Password

If you start the kppp S/W as a normal user and not as a root user, the window *<Input>* will appear on your screen. Type the root password to lunch the program.

— Input	
In order to run "	kppp" with root's privileges, additional information is required.
	Password for root
	OK Cancel

Step 2 Main Screen

If you start the **kppp** S/W as a root user, the window <*kppp*> will appear on your screen:

Select <*Setup*> to provide the necessary information for the connection.

😕 🗝 kppp		· ×
Connect to:	_	
Login ID:		1
Password:		[
E Show Log Window		
Quit Setu	up Help Connec	:t



 \Rightarrow The next window will appear on your screen:

😕 kppp Con	figuration					\times
Accounts	Device	Modem	PPP	Graph	About	1
- Account	Setup —					ī
				Edit		
				New		
				Сору		
				Delete		
Phone						
			Fie	eset Costs		
Volum	ie:		V	iew Logs		
			ОК		Cancel	

Step 3 Device

Select the option *<Device>* to define the parameters related to the device that will use the **kppp** S/W.

😕 kppp Con	figuration	
Accounts	Device Mod	em PPP Graph About
_ Serial de	vice	
Mode	em Device:	/dev/modem 💌
Flow	Control:	CRTSCTS
Line	Termination:	CR
Conr	ection Speed:	115200 💌
U 되	se Lock File	
Mode	em Timeout:	60 Seconds
		OK Cancel

Modem Device:

This is the communication port between the operating system and the netMod.

The possible values are:

- /dev/ttys<n>, where <n> is a number (please refer to Table 1)
- /dev/cua<n>, for older Linux versions
- /dev/ttyl<n>, for internal ISDN cards. In case of the netMod, it shall NOT be used.
- /dev/modem, if the link is already established.

Suggested value:

/dev/modem



Flow Control:	 The flow control used by the device. The possible values are: CRTSCTS (Hardware Flow Control) XON/XOFF (Software Flow Control) No Flow Control
	Suggested value: CRTSCTS (Hardware)
Line Termination:	The line termination character ("Enter").
	If you use a script for the connection, you may need to change the default value.
Connection Speed:	The communication speed between the serial port and netMod.
	Suggested value:
	115200
Use Lock File:	Select the activation of the Lock File.
Modem Timeout:	The time needed for the kppp S/W to receive the "CONNECT" signal from the modem. If during this time period, no signal is received by the kppp S/W, the S/W detects a fault connection.



Step 4 Modem

Select the *<Modem>* option to define the parameters related to netMod's operation.

😕 kppp Config	juration				\times
Accounts [Device	Modem	PPP	Graph	About
Modem —					[
Bu	sy Wait:	0 S	econds		
Mo	dem volu	ime 🏳	1	1	
	М	odem Comr	nands		
		Query Mod	lem		
		Termina	I		
			ОК		Cancel

• Select <**Query Modem**> to assure that the operating system has recognized correctly the netMod device.

During the device control by the operating system, the next window will appear on your screen:

ATI Query	×
ATI 1	
	Cancel

After the completion of the diagnistics tests, the next window will appear on your screen, indicating the correct operation of netMod:

Mod	em Query Results	X
ATI :	Hardware Version 05	
ATI 1:	019A7726 (Download Flash)	
ATI 2:	ок	
ATI 3:	Software Version V 2.22 Mexico	
ATL4:	Intracom NetMod V 1.00	
ATI 5:		
ATI 6:		
ATL7:		
	Close]



- Select *<Terminal>* if you wish to enter AT commands to your netMod.
- Select *<Modem Commands>* to display the parameters configuration window for netMod.
- ! Here you can define netMod's various parameters, as well as the Multilink PPP support. Before proceeding, please read carefully the following:
- It is very important before activating this operating mode, to subscribe as Internet user for a rate of 128kbps, and to assure that your ISP supports connections with the Multilink-PPP protocol.
- ! The usual ISDN connections offered by the most Internet Providers operate with a maximum data rate of 64kbps, activating only the one B-channel.
- I The ML-PPP connections can provide a maximum data rate of 128kbps, thus activating both B-channels, but only in the case where this is needed, i.e. by high data transfer volume.
- In case of an Internet connection with a data rate of 128kbps using both channels and when an incoming call at the POTS connections is arriving, one of the B-channels will be freed to answer the call. Tha same happens also, if you would like to make a call from a POTS device.

Performing a Call using only one B-channel

In order to use only one B-channel, type the following Initialization String:

ATB40

	Edit Modem Commands
Pre-Init Delay (sec/100):	50
Initialization String:	ATB40
Post-Init Delay (sec/100):	50
Init Response:	ОК
Dial String:	ATDT
Connect Response:	CONNECT
Busy Response:	BUSY
No Carrier Response:	NO CARRIER
No Dialtone Response:	NO DIALTONE
Hangup String:	+++ATH
Hangup Response:	ОК
Answer String:	ATA
Ring Response:	RING
Answer Response:	CONNECT
Escape String:	+++
Escape Response:	ОК
Guard Time (sec/50):	50
Volume off/low/high	
	OK Cance



Performing a Call using both B-channels

In order to use both Bchannels, type the following Initialization String:



	Edit Modem Commands
Pre-Init Delay (sec/100):	50
Initialization String:	АТВО
Post-Init Delay (sec/100):	50
Init Response:	ОК
Dial String:	ATDT
Connect Response:	CONNECT
Busy Response:	BUSY
No Carrier Response:	NO CARRIER
No Dialtone Response:	NO DIALTONE
Hangup String:	+++ATH
Hangup Response:	ОК
Answer String:	ATA
Ring Response:	RING
Answer Response:	CONNECT
Escape String:	+++
Escape Response:	ОК
Guard Time (sec/50):	50
Volume off/low/high	
	OK Cancel

Step 5 PPP

Select the *PPP*> window to define parameters related to the PPP protocol.

👌 kppp Con	figuration				×
Accounts	Device	Modem	PPP	Graph	About
└─ ^{kppp Set}	up ———				
pppd Tim	ieout:	30		Seconds	
	Dock int	o Panel on	Connec	t	
	Automati	c Redial o	n Discor	nect	
L I	Show CI	ock on Ca	ption		
L. I	Z Disconn	ect on X-s	server sh	utdown	
Г	Quit on [Disconnec	t		
R.	Minimize	Window o	on Conne	ect	
			ок		Cancel

pppd TimeoutThe kppp S/W waits for this time period after the
execution of the pppd until the establishment of the
connection.**Dock into Panel on Connect**If you select this option, the kppp S/W icon is
docked in the system tray.**Show Clock on Caption**If selected, displays on the window title of kppp, the
duration of the connection.**Disconnect on X-server shutdown**If selected the connection is terminated if the user
exits the X window environment.



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Quit on Disconnect

Minimize Window on Connect

If selected, the kppp is terminated after disconnection by the user.

If selected, the kppp window becomes minimized after the establishment of the connection.

Step 6 Accounts

Select <**Accounts**> to continue with the establishment of a new account.

😕 kppp Configuration	
Accounts Device Modem	PPP Graph About
r Account Setup	
	Edit
	New
	Сору
	Delete
Phone Costs:	
	Reset Costs
Volume:	View Logs
	OK Cancel

Select <New> to start. The next window appears on your screen.



Step 7 Dial	8 New Account
	Dial IP DNS Gateway Login Script Accounting
	Dial Setup
	Connection Name: ISDN Connection
	Phone Number: 123456789
	Authentication:
	☑ Store password
	Execute program upon connect: Execute program before disconnect: Execute program
	upon disconnect:
	Edit pppd arguments: Arguments
	OK Cancel
Connection Name	Unique descriptive name for the new connection.
Phone Number	The called telephone number (provided by the ISP). If your ISP has given you more than one telephone number, you can separate them with the symbol «:». Example:
	096511111:096522222:096533333
Authentication	The way your ISP verifies your connection identification. You should ask your ISP, if he uses PAP, CHAP or a manual authentication procedure.
Store Password	Storage of your password in order to be recognized by the kppp S/W during each following call.
Execute program upon connect	A program to be executed when pppd establishes the connection.
Execute program before disconnect	A program to be executed before pppd terminates the connection.
Execute program upon disconnect	A program to be executed after pppd terminates the connection.
Edit pppd arguments	Modification of pppd's parameters. Before proceeding to parameter's modification, it is suggested to consult pppd's manual (man pppd).



 $\ensuremath{\mathfrak{C}}$ Continue with the window **<IP>.**

Step	8	IP
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😕 New /	Accol	int				\times
Dial	P I	DNS	Gateway	Login Script	Accounting	L
⊢ IP Set	tup —					ī
		•	Dynamic IP .	Address		
		-0 :	Static IP Add	dress		
		IP Ad	dress:		_	
		Subre	et Mask:		_	
	Г	Auto-	configure ho	ostname from this	s IP	
				ОК	Cancel	
						_

Dynamic IP AddressSelect this option if your ISP has provided you with
a dynamic IP address.Static IP AddressSelect this option, if your ISP has provided you with
a static IP address. In this case you must type the
static address and the network mask.Auto-configure hostnameIt defines the device's name based on the IP address

It defines the device's name based on the IP address of the S/W given by the ISP. It is suggested NOT to activate this option.



© Continue with the *<DNS*> window.

Step 9 DNS

😕 New Acco	ount					\times
Dial IP	DNS	Gateway	Login Scr	ipt /	Accounting	1
C DNS Serv	ers —					ī
Domair	n Name:	you	-provider.c	om		
DNS IP	' Address		Add	Rei	move	
DNS A	ddress Li	st: 1.1.7 2.2.2				
		2.2.1	2.2			
₽ Disa	able exist	ing DNS S	ervers durin	ig Con	nection	
			ОК		Cancel	

Domain Name	The ISP's domain name.
DNS IP Address	The ISP DNS server's IP address. The address shall be always given arithmetically.
DNS Address List	The order according to which the kppp S/W will consult the DNS servers.
Disable Existing DNS	Deactivation of some predifined DNS servers during the connection.



Proceed with the window <**Gateway**>.

Step 10 Gateway	😕 New Account 🛛 🕹
	Dial IP DNS Gateway Login Script Accounting
	Gateway Setup © Default Gateway © Static Gateway Gateway P Address:
	Assign the Default Route to this Gateway
	OK Cancel
	Here is defined that the kppp S/W will use the default gateway of the device.
•	Definition of the IP address of the gateway to be used by the device.
Assign the Default Route	Do NOT modify this selection.

If the authentication procedure defined by the ISP is a manual one, then proceed to the *Login Script*> window, otherwise continue with the window *Accounting*>.



Step 11 Login Script

😕 New Account				\times
Dial IP DNS	Gateway L	.ogin Script	Accounting	1
Edit Script ——				i
Expect	•			
Add	Insert	Re	move	
			<u>~</u>	
	,			
		ок	Cancel	1

! If you intend to use a login script, consult your ISP for the structure of the login script.

Step 12 Accounting	😕 New Account	\times
(not for customers outside Greece)	Dial IP DNS Gateway Login Script Accounting	
	Enable accounting Denmark England France Germany Greece Hellas local Hungary Iceland Iceland Hundersia Selected: Greece/Hellas local Volume accounting: Bytes in and out OK Cancel	

Ŧ Select <*Greece*> and <*Hellas Local*> if you wish to keep logs about your connection. Selecting *Accounting*> you can keep statistics also about the total charging of your connection.



Select *<OK>* to exit the window *<New Account>*.

Step 13 Connect

🙆 🛏 kppp	· ×
Connect to:	ISDN Connection
Login ID:	myusername
Password:	*****
🔽 Show Log Window	
Quit Setur	Help Connect

Check the option *<Show Log Window>* in order to display a further window providing connection informations.

Ŧ	When ready, click on the button <connect< b="">>.</connect<>	Connecting to: OTEnet Dialing 096545555 Log	
Ē	If the call is performed successfully, the next window will appear on your screen:	Connecting to: OTEnet Logging on to Network Log	
⇒	In the <log b="" window<="">> window you should see some information as in the next window:</log>	Login Script Debug Window OK AT OK ATDT096545555 BUSY ATZ OK AT OK ATZ OK ATT OK ATT OK ATDT096545555 BUSY ATZ OK ATZ OK AT OK AT OK AT OK AT OK ATDT096545555 CONNECT 640000/115200 PPP	

Done

Close



⇒ After the establishment of the connection, the next window will appear on your screen:

OTEnet 00:00	_ 🗆 🗙
Connected at: 64	000 Details
Time connected: 00:0	D:26 Disconnect

In this example, only one B-channel is used)

In case you need more information related to your connection, click on the *<Details*> button.

⇒ In this window you can see the IP address provided by your ISP, information related to your connection (incoming and outgoing), as well as a diagram showing the throughput changes.

kppp Stati	sti c s		
Statistics -		Local Addr:	212.205.243.213
		Remote Addr:	195.170.0.190
bytes in	630	bytes out	400
packets in	17	packets out	15
vjcomp in	0	vjcomp out	0
vjunc in	0	vjunc out	0
vjerr	0	non-vj	15
			8 kb/s
			Close