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Installing RouterOS with NetInstall

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NetInstall

Description

NetInstall is a program that allows you to install MikroTiK RouterOS on a dedicated PC or RouterBoard via Ethernet network. All you need is a blank floppy or an Ethernet device that supports PXE (like RouterBoard 100, RouterBoard 200 and RouterBoard 500 series), an Ethernet network between workstation and dedicated computer, and a serial null-modem console cable (for RouterBoard routers).

NetInstall Program Parameters

iouters/Drives						
Label MAI	C address / M	ledia Status	Software ID	J6NA-R2T		Help
🗊 mikrotik 👘 00:0	02:B3:A3:6C:0	CE Ready	Key:	C:\1.key		Browse
			☐ Keep ol	d configuratio	m	Get kev.
			IP address:	172.16.0.1	1 / 24	
			Calaman	17010.01		
elected 9 package	(s)		Gateway:	1172.16.0.1		
			Baud rate:	9600	•	
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The program runs on Windows 95/98/ME/NT/2000/XP platforms.

Netinstall parameters:

- Routers/Drives in this list you can see all the devices waiting for installation.
- Software ID a unique ID that is generated for licensing purposes.
- **Key** a key that is generated for the Software ID. When you purchase a license, you get a **key** file. Click the **Browse...** button next to the **key** field to select your **key** file.
- Get Key... obtain software key from MikroTIK server:

Please enter your user and select license	name and password e level you want
Software ID: J6N	A-R2T
Username:	
Password:	
icence	Pay method C Debit keys
	C Credit keys
	C Credit money

- $^{\circ}$ **Software ID** ID for which the key will be generated (depending on the license level).
- Username client's username in the Account data base.
- **Password** client's password.
- Level license level of RouterOS.
- **Debit key** a key that you have paid for, but haven't generated yet.
- **Debit money** money that you have on your account. To add money to your account, use the 'add debit' link in the account server.
- **Credit key** a key that you can take now, but pay later.
- **Credit money** paying with credit money allows you to get your keys now and pay for them later.
- **Keep old configuration** used for reinstalling the software. If checked, the old configuration on the router will not be overwritten, otherwise it will be lost.
- **IP address/mask** address with subnet mask that will be assigned to **ether1** interface after the packages are installed.
- Gateway specifies the default gateway (static route).
- Baud rate this baud rate will be set for serial console (bps).
- **Configure script** a RouterOS script to execute after the package installation. Note that not all the devices (especially, wireless cards) may be discovered at the time this script is run, so it is suggested to put a delay (about 20 seconds) at the start of the script to be sure that all devices are up and running.
- Make floppy make a bootable NetInstall floppy.
- **Net booting** opens the Network Booting Settings window. Enter an IP address from your local network. This address will be temporarily assigned to the computer where RouterOS will be installed on.
- **Install** installs the RouterOS on a computer.
- Cancel cancel the installation.
- Sets an entry in this list represents the choice of packages selected to install from a directory. If you want to make your own set, browse for a folder that contains packages (*.npk files), select needed packages in the list, and press the **Save set** button.
- From type the directory where your packages are stored or press the **Browse...** button to select the directory.
- Select all selects all packages in the list
- Select none unselects all packages in the list

Note: some of the Get key... parameters could not be available for all account types.

NetInstall Example

This example shows step-by-step instructions how to install the software on a RouterBoard 200.

1. Connect the routerboard to a switch (or a hub) as it is shown in the diagram using ether1 interface (on RouterBoard 230 it is next to the RS-232 interface):



2. Run NetInstall program on your workstation (you can download it <u>here</u>. It is necessary to extract the packages (*.npk files) on your hard drive.

NetInstall v1.10

outers/Drive	8		20 XA XA	
Label	MAC address / M	fedia Status	Software ID:	Help
			Key:	Browse
			📕 Keep old configuration	Get key
			IP address:	√ □ □ □ □
			Gateway:	
			Baud rate:	
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ackages			· · · · · · ·	
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ets:		Save set	Delete set	
ets: rom: C:\		Y bave set	Browse	elect all Select none
ets: rom: C:\ Name	Version	Description	Browse	elect all Select none
ets: rom: C:\ Name	Version	Description	Browse	elect all Select none
ets: rom: C:\ Name	Version	Description	Browse	elect all Select none
ets: rom: [C:\ Name	Version	Description	Browse	elect all Select none
ets: C:\ rom: C:\ Name	Version	Description	Browse	elect all Select none

3. Enter the Boot Server Client's IP address. Use an address from a network to which belongs your NIC (in this case **172.16.0.0/24**). This IP address will be temporarily assigned to the routerboard.

twork Booting Settings	
There you can set parameters for PX and Etherboot server that can	E (Pre-boot eXecution Environment boot your router over network
🔽 Boot Serve	er enabled
Client IP address:	172.16.0.5
OK I	Cancel

4. Set the RouterBoard to boot from Ethernet interface. To do this, enter the RouterBoard BIOS (press any key when prompted):

RouterBIOS v1.3.0 MikroTik (tm) 2003-2004

```
RouterBOARD 230 (CPU revision B1)
CPU frequency: 266 MHz
Memory size: 64 MB
Press any key within 1 second to enter setup.
```

You will see a list of available commands. To set up the boot device, press the 'o' key:

```
RouterBIOS v1.3.0
What do you want to configure?
  d - boot delay
  k - boot key
  s - serial console
  l - debug level
  o - boot device
  b - beep on boot
  v - vga to serial
  t - ata translation
  p - memory settings
   m - memory test
  u - cpu mode
  f - pci back-off
   r - reset configuration
  g - bios upgrade through serial port
   c - bios license information
  x - exit setup
your choice: o - boot device
```

Press the 'e' key to make the RouterBoard to boot from Ethernet interface:

```
Select boot device:
* i - IDE
e - Etherboot
1 - Etherboot (timeout 15s), IDE
2 - Etherboot (timeout 1m), IDE
3 - Etherboot (timeout 5m), IDE
4 - Etherboot (timeout 30m), IDE
5 - IDE, try Etherboot first on next boot (15s)
6 - IDE, try Etherboot first on next boot (1m)
7 - IDE, try Etherboot first on next boot (5m)
8 - IDE, try Etherboot first on next boot (30m)
your choice: e - Etherboot
```

When this is done, the RouterBoard BIOS will return to the first menu. Press the 'x' key to exit from BIOS. The router will reboot.

5. When booting up, the RouterBoard will try to boot from its Ethernet device. If successful, the Workstation will give to this RouterBoard an IP address, specified in Network Booting Settings. After this process, the RouterBoard will be waiting for installation.

On the workstation, there will appear a new entry in Routers/Drives list:

iouters/Drives				1.0		
Label MA0	C address / M	fedia Status	Software ID	J6NA-R2T	-	Help
🗊 mikrotik 🛛 00:0	02:B3:A3:6C:I	CE Ready	Kev:	C:\1.kev		Browse
			E Keep of	d configurat	ion	Cathan
			I Keep of			Get Key
			IP address:	172.16.0.1	1 / 24	
-1	64		Gateway:	172.16.0.1	<u>k – – – – – – – – – – – – – – – – – – –</u>	
elected 3 packagel	(\$)		Baud rate:	9600	-	
an a ll n		E manage	1-			
	t booting	Install Cancel	Configu	re corint: If	Documente an	d Sattinga
vake rioppy Ne lackages jets: Previous Ins	t booting	Install Cancel	Configu ete set	ire script: [(C:\Documents an	d Settings
make noppyNe ackages iets: Previous Ins irom: [C:\RouterOS	tall	Install Cancel	Configu ete set pwse	rre script: 10	C:\Documents an	d Settings
make noppy ackages jets: Previous Ins from: C:\RouterOS Name	tall (2.8.11) Version	Install Cancel	Configueste set	rre script: [C:\Documents an	d Settings
make noppyNe ackages iets: Previous Ins irom: [C:\RouterOS Name ☑ advanced-tools	tall (Version 2.8.11	Install Cancel Save set Dele Bro Description email client, pingers, n	ete set	re script: 10	C:\Documents an	d Settings
make noppyNe ackages iets: Previous Ins irom: [C:\RouterOS Name ☑ advanced-tools ☐ arlan	tall Version 2.8.11 2.8.11 2.8.11	Install Cancel Save set Dele Bro Description email client, pingers, n Provides support for a	etwatch and oth	rre script: [0 ner utilities et Arlan card	C:\Documents an	d Settings
Make noppy Ne lackages liets: Previous Ins from: [C:\RouterOS Name I advanced-tools I arlan I dhcp	tall Version 2.8.11 2.8.11 2.8.11 2.8.11 2.8.11	Install Cancel Save set Dele Bro Description email client, pingers, n Provides support for a DHCP client and serve	ete set	ner utilities at Arlan card	C:\Documents an	d Settings
Make noppy Ne ackages jets: Previous Ins from: C:\RouterOS Name advanced-tools arlan arlan dhcp gps	tall Version 2.8.11 2.8.11 2.8.11 2.8.11 2.8.11 2.8.11	Install Cancel Save set Dele Bro Description email client, pingers, n Provides support for a DHCP client and serve Provides support for G	ete set over the s	rre script: [0 ner utilities net Arlan card	C:\Documents an	d Settings
Make noppy Ne ackages Sets: Previous Ins From: C:\RouterOS Name advanced-tools arlan arlan dhcp gps hotspot	tall Version 2.8.11 2.8.11 2.8.11 2.8.11 2.8.11 2.8.11 2.8.11	Install Cancel Save set Dele Bro Description email client, pingers, n Provides support for a DHCP client and servy Provides support for G Provides HotSpot	ete set	re script: [0 ner utilities et Arlan card	C:\Documents an	d Settings

You can identify the router by MAC address in the list. Click on the desired entry and you will be able to configure <u>installation parameters</u>.

When done, press the Install button to install RouterOS.

6. When the installation process has finished, press 'Enter' on the console or 'Reboot' button in the NetInstall program. Remember to set the boot device back to IDE in the RouterBoard BIOS.

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