



# Remote Administrator<sup>®</sup> v2.2

*Radmin<sup>®</sup> is the fastest remote control software. It is ideal for helpdesk and network management.*

Last updated: 23 June 2005

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E-mail: [support@radmin.com](mailto:support@radmin.com) (technical support)

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# INTRODUCTION

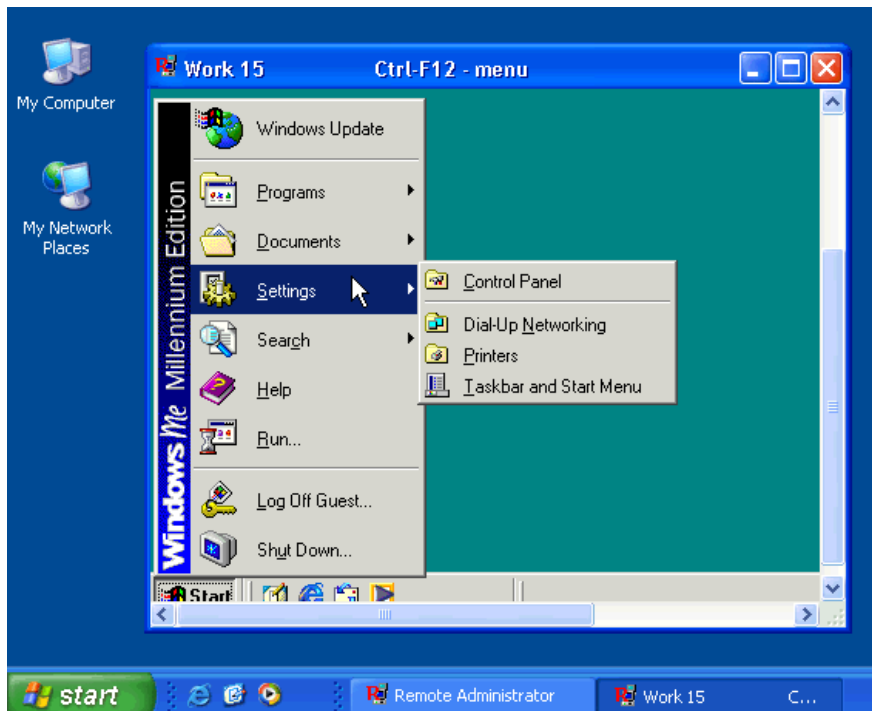
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## What is Remote Administrator?

Remote Administrator (Radmin) is an award-winning multifunction **remote control** program. Radmin enables you to remotely monitor or work on one or more network computers right from your own workstation. It is a complete remote control solution with such features as **File Transfer**, **NT security**, **Telnet** and **Multilanguage** Support built-in.

You view the remote computer's screen on your own monitor either in a window or full screen. All your mouse movements and keyboard signals are transferred directly to the remote computer. You work on the remote computer just as if it were right there in front of you. According to our tests and user feedback, Radmin outperforms all other remote control software in **speed**, **usability** and **features**.

With Radmin you can work with any remote computer so long as it is connected to the Internet or your local area network. You don't even need a fast network connection! A 56K modem is fast enough to provide **5-10** screen updates a second. On a LAN, **real-time** speeds of **100-500** screen updates per second is normal. Radmin's speed can be adjusted up or down to save your bandwidth.



*Radmin working...*

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## Radmin Structure

Radmin consists of two parts:

- The **Server** on the remote computer that sends the remote computer's screen display.
- The **Client** — also called the **Viewer** — that shows the remote screen display on your own monitor.

To get started you need to run Radmin Server on the remote computer. Then run Radmin client on your own computer. The current version of Radmin requires a **TCP/IP connection** between both computers, so you'll need to set this up if they are not already connected.

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## What Makes it Different from Other Products

Radmin outperforms all other remote control software in speed, security and usability.

**Speed.** Radmin is the fastest remote control software available. It is optimized for low-bandwidth connections such as modems. Connecting via modem, screen refreshment rate reaches 5-10 updates per second. If connected to a LAN you can work on remote computer with real-time speed, reaching over 100 screen updates per second.

**Security** is a critical consideration when implementing the remote control software. To maintain the security of data and corporate network resources, Radmin supports the existing level of environment security and provide its own level as well. Radmin offers the highest levels of encryption available in its category.

**Usability.** Radmin simple interface is devoid of useless "value added features" that bloat software and make it hard to work with. Radmin is extremely easy to learn and use.

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## What's New in Version 2.2?

**New features in v2.2:**

- Radmin prevents incorrect Server configurations. Radmin Server 2.2 does not allow empty passwords.
- New, fully OS-integrated NT security system with NTLMv2 support. Now permissions for Radmin connections can be set to users from trusted domains and active directories.
- Smart protection from password guessing. This protection includes such features as password anti-guessing security delays, banning IP addresses with excessive number of password guess attempts, etc.
- Server password protection. Radmin Server 2.2 actively protects its settings, which are stored in the system registry. Only a user with administrator rights can access this registry branch.
- Radmin Server 2.2 starts as a service and doesn't start as an application on Windows NT/2000/XP/2003 for additional security.
- Separate installation of Server and Viewer.
- Improved Radmin Server settings interface.

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## Features

### Run as a Service

Radmin Server can work as a **service** under Windows 95/98/ME/NT4.0/2000/XP/2003\*. This lets you log a user on or off remotely.

### Multiple Connections Support

Radmin Server supports simultaneous multiple connections to the same remote screen.

### Full-Screen, Scaled and Windowed View Modes

Full-screen mode shows the remote screen full-size on your own monitor.

Scaled mode lets you see the remote screen in a window on your monitor scaled to the remote screen's defined size.

### Video Hook Driver Technology is Used

Radmin uses video hook kernel mode drivers under Windows NT to capture screen changes. This boosts the speed to hundreds of screen updates per second.

### File Transfer

Lets you transfer files easily between computers with Windows Explorer like interface. Allows continuing copy operation after network faults from the place where fault occurred and not from the beginning.

### Shutdown connection mode

Allows to reboot or shutdown remote computer in 2 mouse clicks.

### Telnet mode

Radmin provides Telnet-like access to remote computers (except on Win9x/ME).

### Windows NT Security Support

You can allow Full Control, Remote View, Telnet and File Transfer access to specific users or user groups from an NT domain or Active Directory. If a user is logged into a WinNT domain connects to Radmin Server, the user's current username/password are employed by Radmin Viewer to authorize a connection to the Radmin Server.

### Password Protection

If Windows NT security support is switched off, access to a remote computer is controlled by a password. Radmin uses a challenge-response password authentication method based on 128 bit strong encryption.

### 128 Bit Strong Encryption of All Data Streams.

In the version 2.2 encryption is always enabled, it causes just 5% performance loss.

### IP Filter

Allows an access to the Radmin Server only from specified IP addresses and subnets.

### Radmin Supports High-Resolution Modes

Display resolutions up to 2048 X 2048 X 32 bit color are supported by Radmin.

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\* Radmin Server 2.2 is fully compatible with Windows XP except "fast user switching" function. Do not use "switch user" feature while Radmin Server is running. Use normal log off / log on instead. There are no known issues with Radmin Viewer 2.x under WinXP.

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## System Requirements

No special requirements for hardware: If your computer can run Windows 95 or higher, the program will run. It even runs on a 386 with 8 MB RAM.

**NOTE:** Radmin still operates successfully when the display, mouse and keyboard are disconnected from the remote computer, however some computers do not boot successfully without a keyboard plugged in.

**For all operating systems (Win9x/ME/NT/2000/XP/2003):**

The computer must have TCP/IP installed, the most-used protocol for networking computers.

**Windows NT 4.0:**

Service Pack 4 or higher and administrative rights are required.

**Windows 2000/XP/2003:**

Administrative rights are required.

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## Technical Support

If you have any problems installing or using **Radmin**, we can offer you various resources to help you at no charge:

- This manual and the help on your installation media contains all the information you need to solve the problem you may have.
- Visit our on-line forums at <http://forum.radmin.com>.
- You can and send your problem reports to our support staff [support@radmin.com](mailto:support@radmin.com).
- Visit our World Wide Web server at <http://www.radmin.com>.

# SECURITY

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## Radmin Security

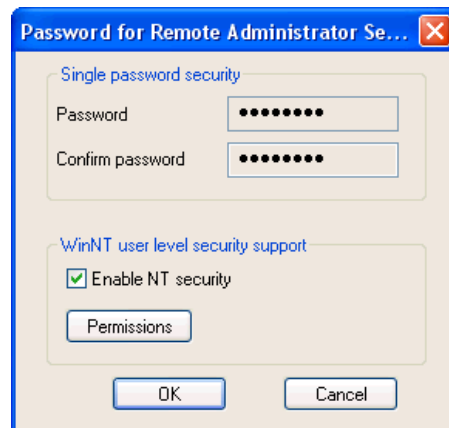
A lot of attention was paid to security issues in the **Radmin** design. Here are some reasons that Radmin operation are completely secure:

- **Radmin 2.2** supports WindowsNT/2000/XP/2003 **user-level security**. You can grant permission of remote control to specific users or user groups. Version 2.2. introduces new, fully OS-integrated NT security system with **NTLMv2** support. Permissions for Radmin connections can be given to users from trusted domains and active directories. The security settings interface is unified with the Windows standard.
- Even when Windows NT security support is switched off, access to a remote computer with Radmin is restricted by a **password**. Radmin uses a **challenge-response password** authentication method (**MD5** and **Twofish**). This method is similar to the authentication method used in Windows NT, but uses a much more sophisticated encoding.
- Radmin **prevents incorrect** Server configurations. Radmin Server 2.2 does not allow empty passwords.
- **Radmin** Server 2.2 **actively protects** its settings, which are stored in the system registry. Only a user with administrator rights can access this registry branch.
- **Radmin** provides the highest protection possible against any third party intervention by using **Twofish 128-bit encryption**. This encryption algorithm is known for its combination of speed, flexibility and conservative design. All data, including screen images, cursor movements and keyboard signals is **always encrypted**. The encryption is impossible to turn off for Remote Administrator v2.1 and higher.
- **Remote Administrator server** has a logging feature. All actions are written to the **log file**. Event Log support is also included.
- **Remote Administrator** has an **IP filter table** that lets you restrict remote access to specific IP addresses and networks.
- **Radmin** has a built-in **code-testing defense mechanism** that prevents a program's code from being altered.
- Radmin generates **unique 128 bit private keys** for each connection using a large random bit sequence that achieves unsurpassed protection. The access password resides in the encrypted form and is never transmitted between computers in any form, preventing third persons from intercepting or generating the keys.
- **Smart protection** from password guessing. This protection includes such features as password anti-guessing security delays, banning IP addresses with excessive number of password guess attempts, etc.
- Radmin Server 2.2 starts as a service and **doesn't start as an application** on Windows NT/2000/XP/2003 for additional security.

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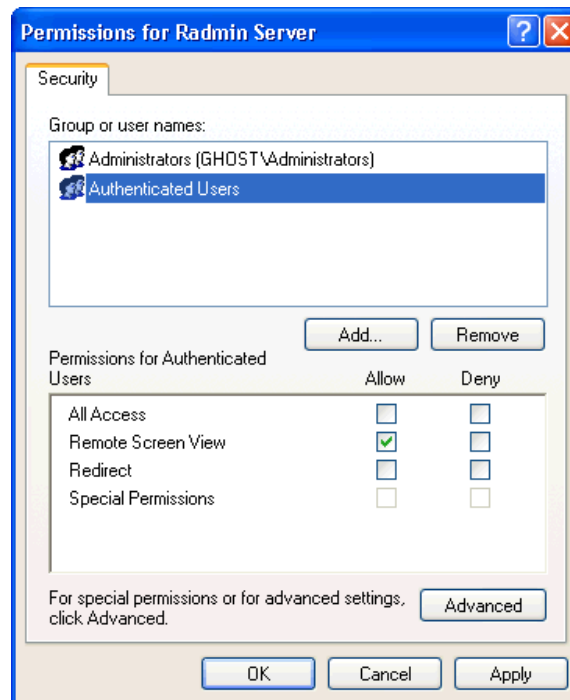
## NT Security

To view or change **Radmin** security settings activate “*Options for Remote Administrator server*” and choose “*Set password*”. Click “*Enable NT security*” and then “*Permissions*”.



*Enabling NT security*

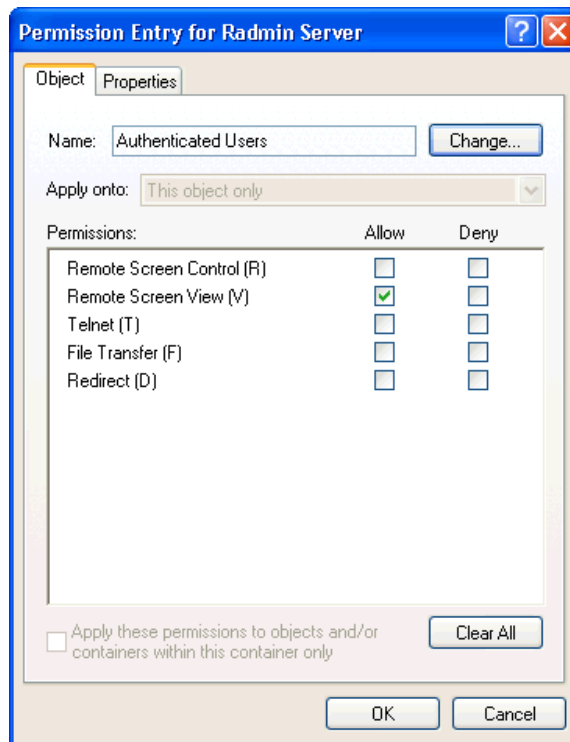
The standard Permissions window lets you change the security features for a Radmin connection just like any other Windows' security change:



*Registered users*

Note, that you need to click **Advanced** and then **Edit** to manually set any of the five access rights: Redirect, Telnet, File transfer, Full control of screen and View of screen:

**Redirect** right allows connecting only with "**Connect through host**" option enabled. Avoid redundant permissions! This permission may be granted if a computer provides access to another PC. It's especially helpful for system administrators to ensure additional security. A client who is granted redirect right should use "Connect through host" option to connect to the host and be forwarded to another server (see "Connect through host" option section for details).



*Advanced permissions*

## IP Filter

Remote Administrator Server has an IP filter table that restricts remote access to IP addresses and networks you specify. To configure IP filter, go to Start->Programs->Remote Administrator v2.2->Settings for Remote Administrator server and press "Options" button. Then press "Add" button in IP Filter group and follow instructions.

To add a single IP address, specify **the address** in the IP address field and **255.255.255.255** in the mask field.

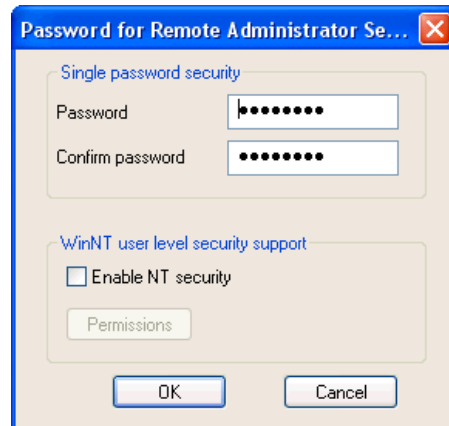
To add a class **C** network, **195.10.10.xx** for example, specify **195.10.10.0** in the IP address field and **255.255.255.0** in the mask field.

If client's IP address AND MASK equals Filter's entry, the connection is successful, else you get "Connection I/O error, connection may be closed due to IP Filter settings on the remote side" message.

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## Setting/Changing a Password for Radmin Server

You can set and change the Radmin Server password directly from the *Settings for Radmin Server*.



*Setting the password...*

If your server runs under WinNT4.0/2000/XP/2003 you can enable NT security support in the Radmin Server settings. You will be able to give users and user groups various rights to access the server (Full control/View only/Telnet/File transfer/Redirect).

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# INSTALLATION

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## Before Installation

Two computers need to be connected by TCP/IP, either on a local network or the Internet. Radmin must be installed on each computer.

### Before installation for all users:

Uninstall any earlier version of Radmin, before installing a newer version.

### For Windows 2000/XP/2003 users:

You need administrator rights to install Radmin Server.

### For Windows NT 4.0 users:

You need administrator rights to install Radmin Server with its driver.

Before installing Radmin's video hook driver be sure that any other Remote Control software that uses video hook driver technology has been removed. Running more than one video hook driver can lead to a system crash while booting.

Sample applications that use a video hook driver: **NetMeeting 3.0+**, **SMS**, **Timbuktu**, other remote control tools. If a problem occurs while booting with the Radmin driver, you can press the "1" (number one) key repeatedly during booting and the Radmin driver will not load.

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## Installing Radmin Files

- Unpack the installation files.
- Run **radmin22.exe** from the unpacked distribution.
- Follow the setup instructions.

After installation the **Radmin Server** or the **Radmin Viewer** (client) can be started from Start menu.

You can also start the "Settings for Remote Administrator Server" from the Start menu. "Settings for Remote Administrator Server" allows setting Radmin Server startup mode, changing password for network access to Radmin Server and other options.

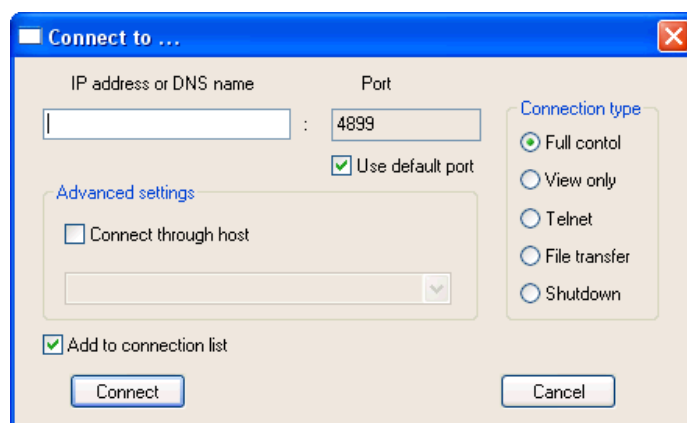
"**Silence**" installation is possible. See **Network installation** for details.

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## Setting up the Connection

Run Radmin Server on the remote computer. If Radmin Server is working, the tray icon should appear on the Windows toolbar. When the cursor is over this tray icon you can see the list of computer IP addresses. Double-clicking opens the connection list. The icon can be disabled in Radmin Server settings using "Hide Tray Icon" option.

On the local computer run Radmin Viewer. Select "Connection/Connect to..." from the menu. In the "IP address or DNS name" entry specify the IP address (example: 10.0.0.1) or DNS name (example: *comp1.company.com*) of the remote computer.



"Connect to..." menu

## Network Installation of Radmin Viewer and Server

**Radmin Viewer** doesn't need installation. Just copy **radmin.exe** and **help.hlp** files to a folder on the local computer.

**Radmin Server** does need to be installed. Here is a sample script for Windows, which installs Radmin Server as a system service on the computer. Change the file paths to your values. To execute the script on network computers, use logon scripts in Windows NT networks.

```
net use z: \\server\d
copy "z:\install\radmin\r_server.exe" "c:\winnt\system32\r_server.exe"
copy "z:\install\radmin\raddrv.dll" "c:\winnt\system32\raddrv.dll"
c:\winnt\system32\r_server.exe /install /silence
regedit.exe /s z:\install\settings.reg
net use z: /delete
```

**NOTE:** Under Windows NT/2000/XP/2003, user executing this script must have administrator rights to install the service.

This script:

- 1) Maps a disk drive z: to \\server\d
- 2) Copies Radmin Server files to the Windows system folder.
- 3) Installs Radmin Server as a system service.
- 4) Saves server settings to the registry.
- 5) Delete the z: drive

**Radmin Server settings** (tray icon options, port, logfile options, IP filter settings, password) are stored in the registry. You can copy these settings from one computer to another:

- You need to define these settings on some computer, you can do it using the "Settings for Remote Administrator server" from the Start menu.
- Run *regedit.exe* and export some settings from the registry to the file (*settings.reg*).
- Save these settings from the file to the registry of another computer executing:  
*regedit.exe settings.reg*

Locations of some keys are listed below:

[HKEY\_LOCAL\_MACHINE\SYSTEM\RAAdmin\v2.0\Server\Parameters\FilterIp]

**Enable the IP filter** flag. The key type is binary with possible values of "01 00 00 00" (use) and "00 00 00 00" (don't use).

*[HKEY\_LOCAL\_MACHINE\SYSTEM\RAAdmin\2.0\Server\iplist]*

The **list** of IP addresses in Radmin's IP filter.

*[HKEY\_LOCAL\_MACHINE\SYSTEM\RAAdmin\2.0\Server\Parameters\AskUser]*

Show **confirmation** dialog option. The key type is binary with possible values of "01 00 00 00" (ask) and "00 00 00 00" (don't ask).

*[HKEY\_LOCAL\_MACHINE\SYSTEM\RAAdmin\2.0\Server\Parameters\Timeout]*

**Timeout** for the confirmation dialog. The key type is binary (decimal seconds converted to hexadecimal format).

*[HKEY\_LOCAL\_MACHINE\SYSTEM\RAAdmin\2.0\Server\Parameters\AutoAllow]*

**Allow** or **deny** connection automatically **when timeout expires**. The key type is binary with possible values of "01 00 00 00" (allow) and "00 00 00 00" (deny).

*[HKEY\_LOCAL\_MACHINE\SYSTEM\RAAdmin\2.0\Server\Parameters\DisableTrayIcon]*

**Disable** tray **icon** flag option. The key type is binary with possible values of "01 00 00 00" (disable) and "00 00 00 00" (enable).

*[HKEY\_LOCAL\_MACHINE\SYSTEM\RAAdmin\2.0\Server\Parameters\EnableLogFile]*

**Enable log** file flag. The key type is binary with possible values of "01 00 00 00" (enable) and "00 00 00 00" (disable).

*[HKEY\_LOCAL\_MACHINE\SYSTEM\RAAdmin\2.0\Server\Parameters\LogFilePath]*

**Path** to **log** file. The key type is string (full path to log file).

*[HKEY\_LOCAL\_MACHINE\SYSTEM\RAAdmin\2.0\Server\Parameters\Parameter]*

**Password** for Radmin Server (encrypted).

*[HKEY\_LOCAL\_MACHINE\SYSTEM\RAAdmin\2.0\Server\Parameters\Port]*

**Port** number setting. The key type is binary (decimal port number converted to hexadecimal format).

*[HKEY\_LOCAL\_MACHINE\SYSTEM\RAAdmin\2.0\Server\Parameters\NTAuthEnabled]*

**Enable NT Security** flag. The key type is binary with possible values of "01 00 00 00" (enable) and "00 00 00 00" (disable).

*[HKEY\_LOCAL\_MACHINE\SYSTEM\RAAdmin\2.0\Server\NtUsers\]*

**User list** for NT security.

*[HKEY\_LOCAL\_MACHINE\SOFTWARE\RAAdmin\1.01\ViewType\Data]*

Registration **key** (encrypted).

*[HKEY\_LOCAL\_MACHINE\SYSTEM\RAAdmin\2.0\Server\Parameters\DisallowChanges]*

**Forbids changing** Radmin Server **settings**. The key type is binary with possible values of "01 00 00 00" (disallow) and "00 00 00 00" (allow).

*[HKEY\_LOCAL\_MACHINE\SYSTEM\RAAdmin\2.0\Server\Parameters\DisableBeep]*

**Disables beep** on connection. The key type is binary with possible values of "01 00 00 00" (disable) and "00 00 00 00" (enable).

*[HKEY\_LOCAL\_MACHINE\SYSTEM\RAAdmin\2.0\Server\Parameters\DisableRedirect]*

**Blocks Redirect** connections to this Radmin Server. The key type is binary with possible values of "01 00 00 00" (disallow) and "00 00 00 00" (allow).

*[HKEY\_LOCAL\_MACHINE\SYSTEM\RAAdmin\2.0\Server\Parameters\DisableScreen]*

**Blocks Full control** connections to this Radmin Server. The key type is binary with possible values of "01 00 00 00" (disallow) and "00 00 00 00" (allow).

*[HKEY\_LOCAL\_MACHINE\SYSTEM\RAAdmin\2.0\Server\Parameters\DisableView]*

**Blocks View Only** connections to this Radmin Server. The key type is binary with possible values of "01 00 00 00" (disallow) and "00 00 00 00" (allow).

*[HKEY\_LOCAL\_MACHINE\SYSTEM\RAAdmin\2.0\Server\Parameters\DisableTelnet]*

**Blocks Telnet** connections to this Radmin Server. The key type is binary with possible values of "01 00 00 00" (disallow) and "00 00 00 00" (allow).

*[HKEY\_LOCAL\_MACHINE\SYSTEM\RAAdmin\2.0\Server\Parameters\DisableFile]*

**Blocks File Transfer** connections to this Radmin Server. The key type is binary with possible values of "01 00 00 00" (disallow) and "00 00 00 00" (allow).

#### **Uninstallation:**

To uninstall Radmin Server execute:

1. *c:\winnt\system32\r\_server.exe /stop*
2. *c:\winnt\system32\r\_server.exe /unregister*
3. *c:\winnt\system32\r\_server.exe /uninstall /silence*
4. Delete all Radmin files

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# NETWORK AND TCP/IP QUESTIONS

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## Sample TCP/IP Settings for a One Segment Local Network

To set IP addresses in the one segment local network you can go to the TCP/IP settings of the network card on the first computer

set IP address to *10.0.0.1*,  
set subnet mask to *255.255.255.0*

On the second computer  
set IP address to *10.0.0.2*,  
set subnet mask to *255.255.255.0*.

Try to ping one computer from another.

### Example:

*ping 10.0.0.1*

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## Connection through the Internet

You can establish a connection between the remote and local computers through the Internet as well as a local network connection. The only problem might be the IP address on the server side. It could be dynamically assigned, so you need to get it after the connection to the Internet and pass it somehow to the client side.

- 1) Install **Radmin** on both computers.
  - 2) Run **Radmin Server** on the remote computer.
  - 3) Connect the remote computer to the **Internet**.
  - 4) People from the remote side must tell you the **IP address** of the remote computer.
  - 5) Connect the local computer to the Internet.
  - 6) Run **Radmin Viewer** on the local computer, click menu "*Connect/Connect to*"; enter the IP address of the remote computer.
- 

## Connection through a Firewall

**Radmin** uses 4899 **TCP** port by default. You can open such a port on the firewall.

Another solution is to change the Radmin port number — on both the server and the viewer — to the value of a port that is already open on your firewall.

If your firewall works under Windows you can install and start the Radmin Server on it. Then you can connect using "Connect through host" feature of the viewer.

Sometimes only the router has a public IP address. In this case you have to configure "Forwarding" on a router/firewall. Configure the router to forward connections from some port on the router to a specific IP address and port (the default port of Radmin Server is 4899) of the computer on your internal network. You need to assign a port on the router for each computer you

need to access. After that, to connect to a computer behind the router/firewall from the Internet you need to specify the IP address of the router and the port on the router that corresponds to your computer in the internal network. The router will then forward connections to computers in the internal network.

If you are using Internet connection sharing — a feature on Win98 SE — Radmin's Viewer won't be able to find Radmin Server. The problem is that a port needs to be mapped so the Viewer can find which computer the Server is on.

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## Modem to Modem Connection

**Remote Administrator** doesn't work with a modem directly. To use it in a modem to modem connection you need to configure dial-up networking on both the server and client sides.

**Radmin** uses a **TCP/IP** connection between computers. So, you need to install and configure this service on the computer which will accept calls:

- Routing and Remote Access Server for Windows XP/2003
- Remote Access Server for Windows NT/2000
- Dial-Up Networking Server for Windows 95/98/ME

Then configure the server to use **TCP/IP** protocol.

On the client side you should install dial-up networking, configure it to use the TCP/IP protocol only and make a call using dial-up networking. After connecting you can find the IP address of the remote server in the properties of the Dial-Up connection (usually some tray icon appears). Alternatively, you can find this address in the Dial-Up monitor from the Control Panel.

Use this **IP address** as the host address to connect to the server using **Radmin Viewer**. As a rule in a modem to modem connection 192.168.55.1 IP address is used.

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## Working with a Serial Port/Null Modem Connection

First install the modem driver (Null modem/Dial-Up networking serial/Communication cable between two computers) if not already installed.

Then configure the system as with **Modem to modem connection**.

# USING REMOTE ADMINISTRATOR

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## Finding the IP Address

Run IP Config program from the command prompt:

1. Go to **Start->Run**.
2. Type **command.com** and press the Enter key.
3. Type **ipconfig.exe** (**winipcfg.exe** for Windows95) and press Enter.
4. The list of your IP addresses will be shown.

Another way to know the IP address of the computer is to move your mouse pointer over the Radmin Server tray icon. It will show you the list of IP addresses.

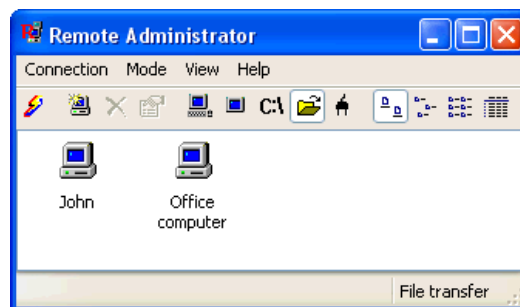


*Finding IP address*

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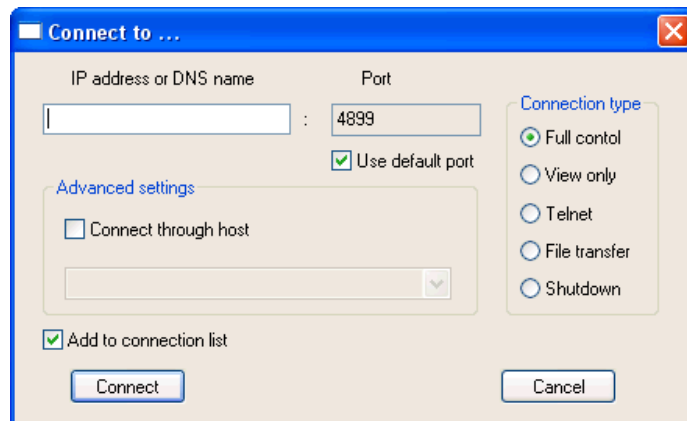
## Connection Menu

You can make a new connection or use connections that were used before. By default all connections are added to the connection list. The connection modes are set directly from the Remote Administrator viewer menu.



*Radmin Viewer window*

You can use either "Connect to..." or "New" options to establish a connection. "Connect to..." option allows enabling or disabling "Connect through host" option, setting custom port number, setting connection type, etc



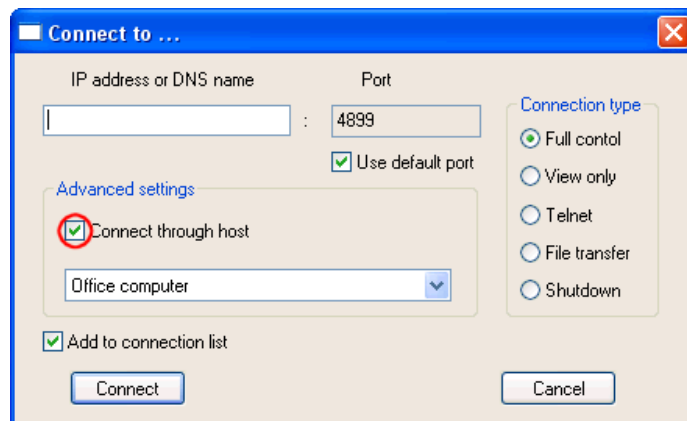
'Connect to...' menu

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## "Connect through host" Option

This lets you connect through an intermediate host when there is no direct TCP/IP connection with the computer you want to administer, but an intermediate computer (or host) does have a direct TCP/IP connection to both your target computer and to your computer. Radmin Server must be running on such an intermediate (host) computer for this to work.

*Example:* You have a local network without a direct connection to the Internet. However, there is one computer on that network that does have a direct connection to the Internet. If you install Radmin Server on that computer to make it an intermediate host, you can connect the other computers in the local network to the Internet through that intermediate host.



**NOTE:** If NT security permissions are used, it's advisable to grant users **Redirect Right**.

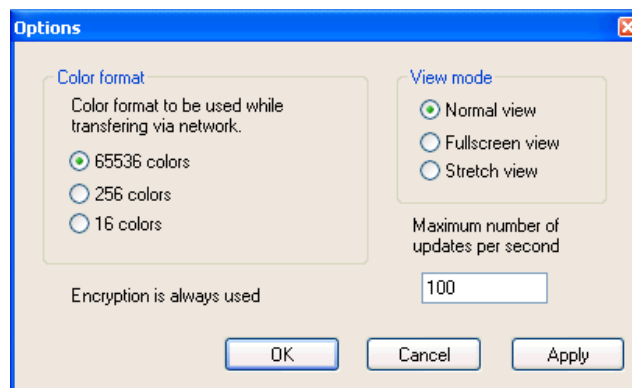
---

## "Options" Dialog

If you have a high processor load on the remote computer, set the "*Maximum screen updates per second*" entry to a smaller value in the "*Options*" dialog of the RScreen window menu or try updating server's video card drivers.

To speed up, you can disable wallpaper and Active Desktop on the remote computer. Also, you can set "Color format" to "16 colors" mode in the Options dialog of the Remote Screen window. Note, if you are connected via a modem you can't have update rates higher than 10 per second, just because signals can't go there and back more than 10 times per second (ping > 100ms).

If you use Win9x/ME OS on the remote side, the speed depends on the screen resolution of the remote computer. So set a lower screen resolution on the remote computer. Also set a lower color format 8bpp (256 colors) or 16bpp (65536 colors). On some systems 8bpp is faster, on others 16bpp. Make sure your update speed is not limited by the "*Maximum updates per second*" field from the option dialog of the RScreen window.



"Options" dialog

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## Switching between Normal and Full-Screen Views

Press **F12** key to switch between normal, stretch and full-screen modes.

If you want to send F12 to a remote computer, use **Send F12** from the RScreen window menu.

When the remote computer screen is larger than the local one you can use mouse "scrolling" feature (just move your mouse to the screen edges) to navigate within this larger screen. However it is possible to stretch the RScreen window to see the whole screen of the remote computer. You can set the window size as you like using this feature.

---

## Send Ctrl+Alt+Del Command

To send Ctrl+Alt+Del to a remote computer, use "Send Ctrl-Alt-Del" from the Remote Screen window menu. This feature works in the "Full control" connection type. You can also use **Ctrl+Alt+F12** keyboard shortcut.

**NOTE:** This feature works only when the remote computer is running Windows NT4.0/2000/XP/2003.

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## "Send key" Option

You can use this option for sending such commands as "*Ctrl+Esc*", "*F12*", "*Ctrl+F12*", "*Alt+F12*", "*Ctrl+Alt+F12*".

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## Get and Set Clipboard Commands

To get the remote clipboard:

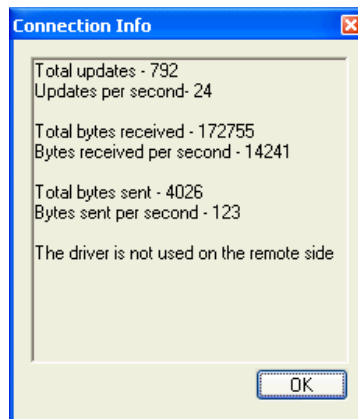
1. Select the text in the Remote Screen.
2. Execute a standard **Copy** command or press **Ctrl+C**.
3. Click **Get clipboard** from RScreen menu.
4. Execute a standard **Paste** command or press **Ctrl+V** on the local computer.

To sent the local clipboard:

1. Select the text on the local screen
  2. Execute a standard **Copy** command or press **Ctrl+C**.
  3. Click **Set clipboard** from RScreen menu.
  4. Execute a standard **Paste** command or press **Ctrl+V** on the remote computer
- 

## Statistics of the Connection

Use "*Connection info*" entry from the RScreen window menu to monitor updates per sec, bytes per sec etc.



*Current connection information*

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## Full-screen Text Mode

When a remote computer is running an MS-DOS application (or console Windows application) in full-screen mode Radmin cannot register screen changes.

Drawing on the screen isn't performed by the GDI (Graphic Display Interface) when the remote computer is in such mode. Windows works with full-screen text modes in an undocumented way via a video card driver.

Switch MS-DOS applications to a windowed mode to fix this (just press Alt+Enter on the local computer while connected to the remote one).

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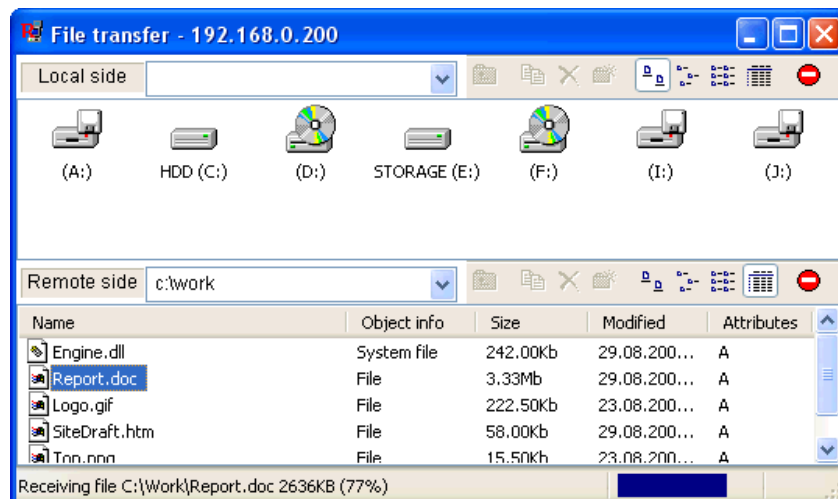
## File Transfer Mode

This feature was added in version 2.0. Radmin's file transfer mode supports files up to 2 GB and folders with up to 20,000 files.

Choose the "File transfer" option from the "Mode menu" or press the button on the toolbar. The interface of Radmin's file transfer is similar to Windows Explorer except it works with two windows — local and remote.

You can choose to display file icons on the toolbar buttons.

To copy a file or folder you can drag-and-drop it or use the **Copy** button on the toolbar or right-click and chose **Copy** from the pop-up menu. Use the **Stop** command to cancel a file transfer.



*File Transfer*

Radmin has a feature used when copying files that allows updating only a part of the file which is different on both machines. This feature is called "Delta Copy" since only files difference ("delta") is copied. It allows continuing copy operation after network faults from the place where fault occurred and not from the beginning.

This feature is used automatically when any file is being copied to or from the remote machine. For each section of source and destination files, Radmin Server and Radmin Viewer calculate control sum, and this sum (several bytes) is transferred over a network and compared. If sum is equal, this means that corresponding files portions are equal, so no data for this portion is set and

next portion of both files are examined. Actual file data will be transferred only for parts that are different; witch allows continuing interrupted copy operation and updating only part of files that are actually different.

**NOTE:** File transfer does not work with mapped drives for security reasons.

**NOTE:** File transfer supports files up to 2GB and folders with up to 20,000 files.

---

## Telnet Mode

You can only use Telnet mode for connecting to computers running Windows NT/2000/XP/2003. You cannot connect to computer running Windows 95/98/ME in Telnet mode because of the limitations of command.com, the command-line interpreter of Win9x.

Some Win32 console applications use direct access to the console. Such applications cannot work via Telnet mode, since Telnet mode on the server uses standard input/output streams to interact with applications. Just do not run such applications via Radmin's Telnet mode. Instead, run them in Full Control mode.

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## Shutdown Mode

This feature lets you turn off, restart, switch off and log off the remote computer. It is available from the Remote Screen menu and from the Radmin Viewer mode menu.



*Shutdown menu*

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## Radmin Phonebook

Radmin Viewer connections list (phonebook) is stored in the registry. You can make copies by running **regedit.exe**.

Export all keys from **[HKEY\_CURRENT\_USER\Software\RAdmin\v2.0\Clients]** Registry branch to a file. You can import such registry file to other computers to copy phonebook.

If you would like to copy your old phonebook, use **radmin.exe /copyphonebook** command to create Radmin 2.x phonebook from Radmin 1.11 phonebook.

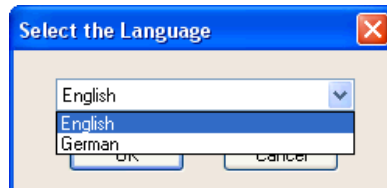
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## Multilanguage Support

Visit Radmin web-site to download language resources: [www.radmin.com](http://www.radmin.com).

All you need is to put the \*\*\*\*.lng file and unzip help\_\*\*.zip (if present) to Radmin folder. For example, to install German language support you have to place 1031.lng file in *C:/Program Files/Radmin* or other folder.

We are going to translate the documentation to all the languages listed on our web-site. So visit it in the future for the updates.



Switching to German...

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## Log File

All Radmin Server actions can be written to the logfile. To turn logging on, run "*Settings for Remote Administrator server*" from Radmin Start menu group. Click "*Options*" button. Check "*Use logfile*" checkbox and apply changes by clicking "*OK*" button. This should be done on the affected server computer.

Event Log support for Windows NT 4.0/2000/XP/2003 is also included.

---

## Port Option

Radmin uses port **4899** by default, but this port can be changed to any other free port.

To change port used by Radmin Server:

On the computer which is to be controlled remotely: run "*Settings for Remote Administrator server*" from Radmin Start menu group. Click "*Options*" button. Uncheck "*Use default port*" checkbox, input new port setting and apply changes by clicking "*OK*" button.

To change port used by Radmin Viewer:

On the computer you'll be using for controlling other computer: run "*Remote Administrator viewer*" from Radmin Start menu group. Go to "*Connection->Connect to...*" menu, uncheck "*Use default port*" checkbox, input new port setting along with remote computer's address and apply changes by clicking "*OK*" button.

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## Command-Line Switches

### Radmin Viewer Command-Line Switches

Radmin Viewer has command line options, which enable you to get connected to the host without using a phonebook.

**Usage:** `radmin.exe /connect:xxxxx:nnnn other_options`

Switch	Description	Examples
<code>/copyphonebook</code>	Creates Radmin 2.x phonebook from Radmin 1.11 phonebook	<code>radmin.exe /copyphonebook</code>
<code>/connect:aaa:nnn</code>	Specifies an address (aaa) and a port (nnn) of the server. This option is required for connection without a phonebook.	<code>radmin.exe /connect:server:1000 /fullscreen</code> <code>radmin.exe /connect:10.0.0.100:4000 /file</code> <code>radmin.exe /connect:192.168.0.9 /telnet</code> <code>radmin.exe /connect:server /through:gate</code>
<code>/through:aaa:nnn</code>	Specifies an address (aaa) and a port (nnn) of the intermediate server	<code>radmin.exe /connect:server /through:gate</code>

By default, connection mode is "Full control" (see remote screen, send mouse and keyboard input). To specify other connection modes use switches:

<code>/noinput</code>	Specifies a <i>View only</i> connection mode (view of remote screen)	<code>radmin.exe /connect: 192.168.0.102 /noinput</code>
<code>/shutdown</code>	Specifies a <i>Shutdown</i> connection mode	<code>radmin.exe /connect:helpdesk5 /shutdown</code> <code>radmin.exe /connect: 192.168.2.5 /shutdown</code>
<code>/file</code>	Specifies a <i>File</i> connection mode	<code>radmin.exe /connect:10.0.0.100:4000 /file</code>
<code>/telnet</code>	Specifies a <i>Telnet</i> connection mode	<code>radmin.exe /connect:192.168.0.9 /telnet</code>

These switches are used in "Full control" and "View only" modes:

Switch	Description	Examples
<code>/fullscreen</code>	Specifies the Full-Screen view mode	<code>radmin.exe /connect:server:4899 /fullscreen</code>
<code>/hicolor</code>	Specifies a 65536 color format, while transferring via a network	<code>radmin.exe /connect:srv /hicolor /updates:30</code>
<code>/locolor</code>	Specifies a 16 color format, while transferring via a network	<code>radmin.exe /connect:host /locolor /updates:5</code>
<code>/updates:nn</code>	Specifies a maximum number of screen updates per second (nn)	<code>radmin.exe /connect:192.168.0.1 /updates:5</code>
<code>/encrypt</code>	Specifies to encrypt data stream  <b>NOTE:</b> Encryption is enabled by default and cannot be disabled since v2.0. This switch should be used for backward compatibility only.	<code>radmin.exe /connect:192.168.0.15 /encrypt</code>

Other switches:

Switch	Description	Examples
<code>/?</code>	Shows a help screen	<code>radmin.exe /?</code>
<code>/unregister</code>	Deletes an already entered key for Radmin, so it can be register with another license	<code>radmin.exe /unregister</code>

## Radmin Server Command-Line Switches

Radmin Server has several command-line switches. Normally, all settings can be set during the installation process or by running the "Settings for Remote Administrator Server" shortcut from the Start Menu.

Most users don't need to use the command-line interface. These switches are intended to be used by System Administrators. Using these switches you can manually install/uninstall Radmin modules, such as the service and the driver, set a port number, etc.

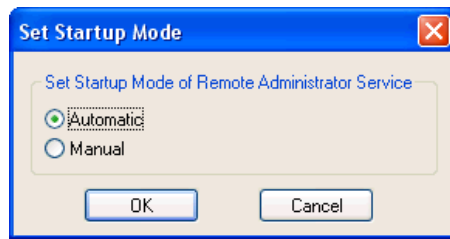
**Usage:** *r\_server.exe <switches>*

<b>Switch</b>	<b>Description</b>	<b>Examples</b>
<i>/setup</i>	Shows setup dialog box which allows you changing Radmin settings.	<i>r_server.exe /setup</i>
<i>/port:xxxx</i>	Specifies Radmin Server port. Optional switch. When the switch is not used, Radmin uses the port setting from the registry.	<i>r_server.exe</i> <i>r_server.exe /port:5505</i>
<i>/install</i>	Installs video hook driver (under WinNT 4.0 only) and Remote Administrator Service (under any OS)  <b>NOTE:</b> To be installed, the driver (raddrv.dll) must be placed in System32 folder under your Windows folder.	<i>r_server.exe /install</i> <i>r_server.exe /install /silence</i> <i>r_server.exe /install /port:5505</i>
<i>/uninstall</i>	Uninstalls video hook driver and Remote Administrator Service (if present)	<i>r_server.exe /uninstall</i> <i>r_server.exe /uninstall /silence</i>
<i>/installservice</i>	Installs service only without video hook driver	<i>r_server.exe /installservice</i>
<i>/uninstallservice</i>	Uninstalls service only without video hook driver	<i>r_server.exe /uninstallservice</i>
<i>/installdrv</i>	Installs video hook driver only without service (under WinNT 4.0 only)  <b>NOTE:</b> To be installed, the driver (raddrv.dll) must be placed in System32 folder under your Windows folder.	<i>r_server.exe /installdrv</i>
<i>/uninstalldrv</i>	Uninstalls video hook driver only without service (under WinNT 4.0 only)	<i>r_server.exe /uninstalldrv</i>
<i>/silence</i>	Do not show message boxes on <i>/install</i> or <i>/uninstall</i> commands	<i>r_server.exe /install /silence</i> <i>r_server.exe /uninstall /silence</i>
<i>/stop</i>	Stops Radmin Server. This command can stop service and application as well. To stop service under WinNT your user must have rights to do it.	<i>r_server.exe /stop</i>
<i>/?</i>	Shows a help screen	<i>r_server.exe /?</i>
<i>/unregister</i>	Deletes an already entered key for Radmin, so it can be register with another license	<i>r_server.exe /unregister</i>

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## Changing the way Radmin Server Starts

You can press the "Startup Mode..." button at Radmin Server settings dialog and use the following menu to change Radmin Server's startup mode:



If the startup mode is set to Automatic, Remote Administrator service will start before Windows "login" prompt. This mode is the default and highly recommended because it gives you the ability to login remotely if Windows asks for a login at startup.

If the startup mode is set to Manual, Remote Administrator service will not start until it's started directly from the Start menu shortcut or by executing `r_server.exe` with `/start` command-line switch.

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## Stop Remote Administrator Server

To stop Radmin Server, you can use either the shortcut from the Remote Administrator folder in the Start Menu or execute the command `r_server.exe /stop` from the command-line prompt.

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## Registering/Unregistering Radmin

If Radmin is run beyond its 30 day trial period, the message "Evaluation period has expired, enter the registration code to continue using the program" is displayed.

The registration information must be entered on both the viewer and server sides.

To register the Radmin Viewer press the **ENTER CODE** button and enter your registration code. You need to highlight your registration code and press CTRL-C. Then go to the registration edit box and press CTRL-V. Press Enter.

**NOTE:** Be sure to select the entire code, which is about 80 characters long.

To register the Radmin Server remotely, right-click the icon in the Radmin Viewer connection list and choose "Set registration code". Then follow the prompts. You can also do it from Radmin Server About box.

To unregister Radmin use one of the following commands:

```
radmin.exe /unregister  
r_server.exe /unregister
```

# FREQUENTLY ASKED QUESTIONS

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## **Q: How Can I Send Ctrl-Alt-Delete to the Remote Computer?**

**A:** If you want to send Ctrl-Alt-Del key to a remote computer, just press Ctrl-Alt-F12, also you can use "*Send Ctrl-Alt-Del*" entry from the Remote Screen window menu. This feature will work only when the remote computer OS is Windows NT and the Radmin Server runs as a system service on the remote computer. This feature will work in "*Full control*" connection type.

You can also use *Ctrl+Alt+F12* hotkey.

## **Q: I can not connect to the Radmin Server. What can I do?**

**A:** Test if you can get connected with the remote host via TCP/IP: Type in the command prompt:  
*ping remote\_host\_name*

**Example:** *ping 10.0.0.1*

**Example:** *ping myserver.mycompany.com*

Make sure that **Radmin Server** is running on the remote computer. Make sure that you are connecting to the correct port, that is the port on which **Radmin Server** is waiting for the incoming connection.

You can also find the solution using logfile. It can be turned on and off from the "*Options*" of Remote Administrator server setup menu.

## **Q: I'm getting an error " Connection I/O error, connection may be closed due to IP Filter settings on the remote side", when trying to connect to Radmin Server. What can I do?**

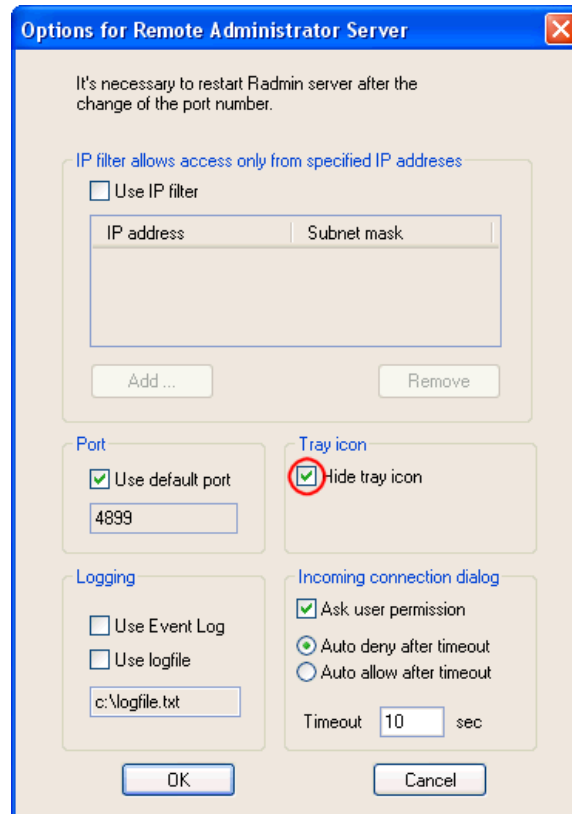
**A:** This error usually means that connection is broken by the server side due to IP filter restriction on the server. To see and change your IP filter settings, run "**Settings for Remote Administrator server**" from the Start Menu on the server side.

## **Q: How can I print during a remote session?**

**A:** If you want to print documents from remote computer to the local printer, the easiest way to do it is to copy the document via Radmin's file transfer mode and then print it locally. If it isn't possible, you'll need to share and map the local printer on the remote PC. It's only possible to print remotely in Microsoft networks. So, *Microsoft files and printer sharing service* is employed as probable solution. Map your local printer as remote printer to the remote computer and while printing select to print on your computer.

**Q: How can I hide Radmin Tray icon from desktop?**

**A:** Just run Remote Administrator server settings from Programs menu. Then click "Options". After that you can select "Hide Tray icon" option.



*Hiding Radmin Tray icon.*

# CONTACT US

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Feel free to contact us. All registered users of Remote Administrator can get free technical support by contacting technical support team directly at [support@radmin.com](mailto:support@radmin.com) or posting a question or suggestion to on-line forums at <http://forum.radmin.com>.

You can also ask your questions about Remote Administrator purchasing and inform us about your propositions if there are any.

General – [radmin@radmin.com](mailto:radmin@radmin.com)  
Purchasing questions – [sales@radmin.com](mailto:sales@radmin.com)  
Technical support – [support@radmin.com](mailto:support@radmin.com)  
Webmaster – [webmaster@radmin.com](mailto:webmaster@radmin.com)

If you lost your registration key, please use the following web page to restore the key:  
<http://www.radmin.com/support/key.php>

Visit our <http://www.radmin.com> web-site for latest news, new versions and updates.