Virtual Floppy howto

Virtual Floppy howto :
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Table of Contents

Preface

Copyright

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Chapter 1. Accessing the Virtual Floppy Area

Login into the eRIC express

Open your web browser. Type in the address of your eRIC express which you configured during the installation process. The address used might be a plain IP address or a host and domain name, in case you have given your eRIC express a symbolic name in the DNS. For instance, type the following in the address line of your browser when establishing an unsecured connection:

```
http://192.168.1.22/
```

When using a secure connection type in:

```
https://192.168.1.22/
```

This will lead you to the eRIC express login page as shown in Figure 1-1 .

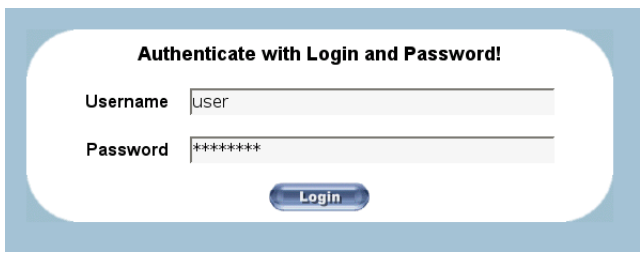

Figure 1-1. Login screen

The eRIC express has a built-in super user that has all permissions to administrate your eRIC express :

Table 1-1. Standard User Settings

Parameter	Value
Login	super
Password	pass

Note: The user “ super ” is not allowed to login via the serial interface of the eRIC express .

Warning

Please make sure to change the super user password immediately after you have installed and accessed your eRIC express for the first time. Not changing the pass phrase for the super user is a severe security risk and might result in unauthorized access to the eRIC express and to the host system including all possible consequences!

Warning

Your web browser has to accept cookies or else login is not possible.

Navigation

Having logged into the eRIC express successfully, the main page of the eRIC express appears (see Figure 1-2). This page consists of three parts, each of them contains specific information. The buttons on the upper side allow you to navigate within the front end (see Table 1-2 for details). The lower left frame contains a navigation bar and allows you to switch between the different sections of the eRIC express . Within the right frame, task-specific information is displayed that depends on the section you have chosen before.

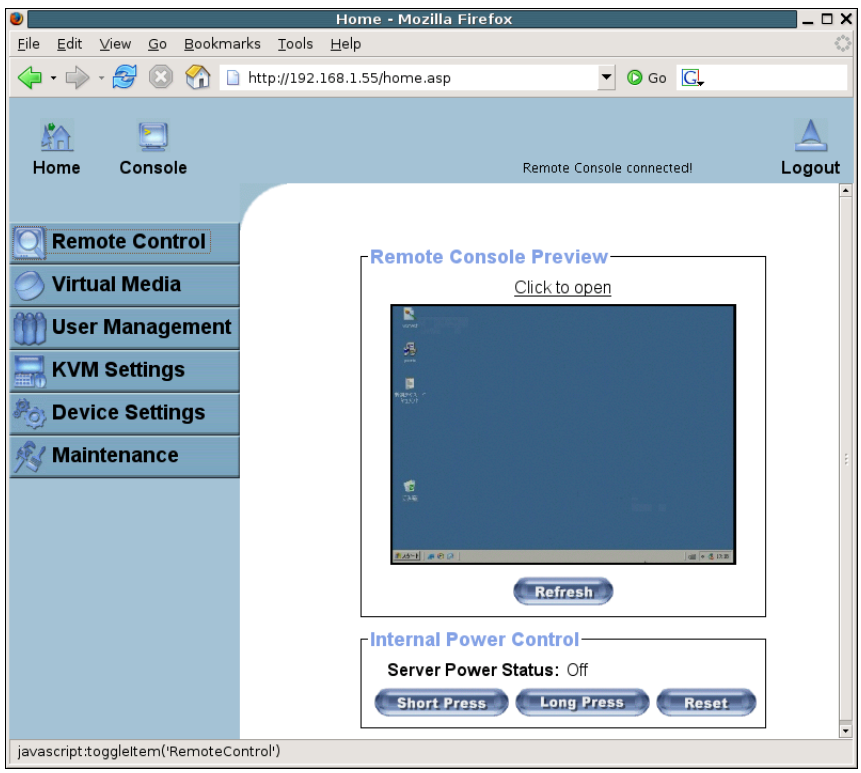

Figure 1-2. Main page

Table 1-2. Buttons from the front end

	Return to the main page of the eRIC express .
	Open the eRIC express Remote Console.
	Exit from the eRIC express front end.

Warning

If there is no activity for half an hour, the eRIC express will log you out automatically. A click on one of the links will bring you back to the login screen.

Logout from the eRIC express

This link logs out the current user and presents a new login screen. Please note that an automatic logout will be performed in case there is no activity for half an hour.

Chapter 2. Virtual Media

Floppy Disk

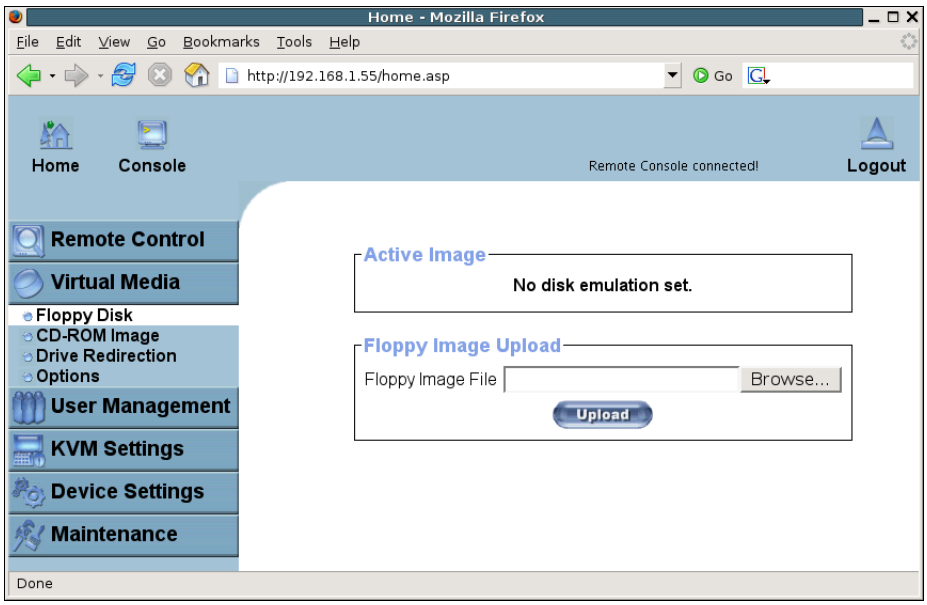

Figure 2-1. Virtual Floppy Area

Upload a Floppy Image

Within two small steps working on the basis of a certain (floppy) image can be achieved.

- First the path of the image has to be specified. You can do that either by hand or by using the file selection dialog of your web browser. To open the file selection dialog click on the button " Browse " and select the desired image file.

Figure 2-2. Select Image File

The maximum image size is limited to 1.44MB. To use a larger image mount this image via Windows Share (or SAMBA) (see the Section called *Use Image on Windows Share (SAMBA)* for details).

- Secondly, click on the button " Upload " to initiate the transfer of the chosen image file into the eRIC express 's on-board memory. This image file is kept in the on-board memory of the eRIC express until the end of the current session, until you logged out or initiated a reboot of the eRIC express .

Options

Figure 2-3. USB mass storage option

Set this option to disable the mass storage emulation (and hide the virtual drive) if no image file is currently loaded. If unset and no file image will be found, it may happen that the host system will hang on boot due to changes in the boot order or the boot manager (LILO, GRUB). This case was reported for some Windows versions (2000, XP), other OS may not be fully excluded. This behaviour depends on the BIOS version used in that machine.

> **Note:** On default, this option is enabled for the eRIC express to handle USB multi-function devices correctly and to ensure the availability of both keyboard and mouse.

To set this option press the button " Apply " .

CD ROM

Use Image on Windows Share (SAMBA)

To include an image from a Windows share select “ CD-ROM ” from the submenu.

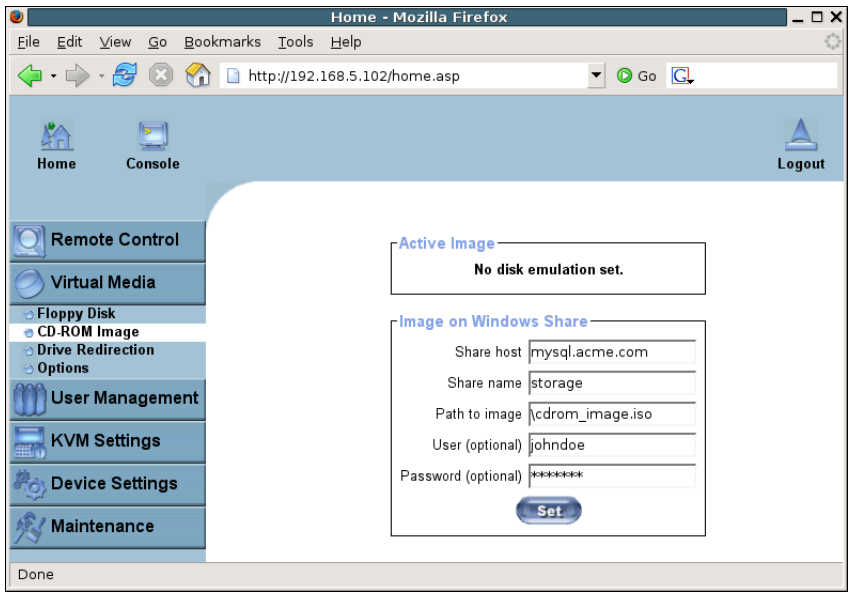

Figure 2-4. Selecting CD ROM and Windows Share

The following information has to be given to mount the selected image properly:

Share host

The server name or its IP address. On Windows 95, 98 and Windows ME do not specify the IP address but the server name (“ NetBIOS Name ”).

Share name

The name of the share to be used.

Path to image

The path of the image file on the share.

User (optional)

If necessary, specify the user name for the share named before. If unspecified and a guest account is activated, this guest account information will be used as your login.

Password (optional)

If necessary, specify the password for the given user name.

For an example you may have a look on Figure 2-4 . First, the eRIC express will look for a server named “ mysql.acme.com ” . Then, the entered share name is selected (in our example we use the share “ storage ”) and the image file (“ \cdrom_image.iso ”) is opened. If this file can only be accessed with both an user name and password enter

the according values in the input fields for user name and password. In our case the file is owned by the user " johndoe " and protected by an user-specific pass-phrase (displayed as a number of stars).

To register the specified file image and its location click on the button " Set " .

The specified image file is supposed to be accessible from the eRIC express . The information above has to be given from the point of view of the eRIC express . It is important to specify correct IP addresses and device names. Otherwise, the eRIC express may not be able to access the referenced image file properly, leave the given file unmounted and will display an according error message, instead. So, we recommend to state correct values and repeat this step if necessary.

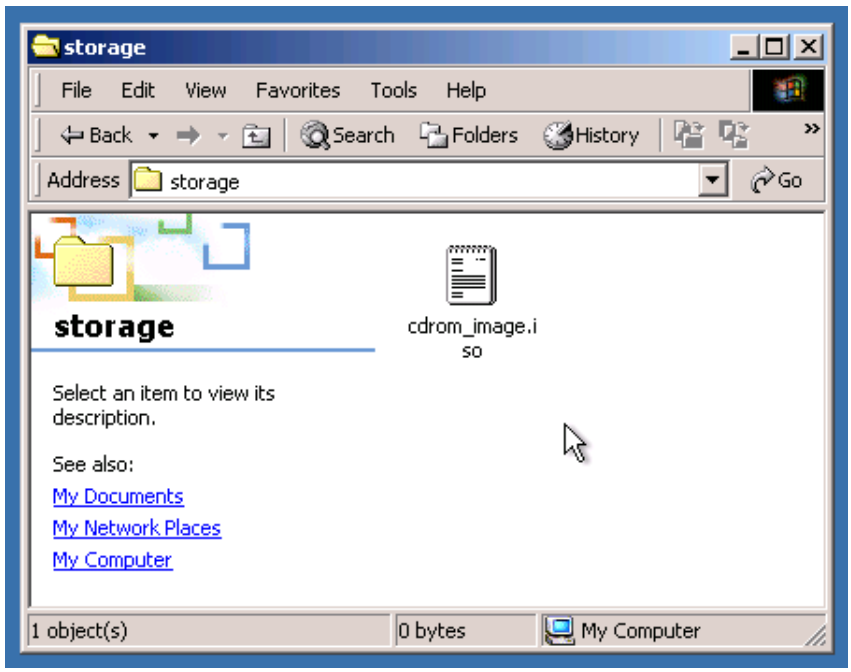

Figure 2-5. The image file on the share

Furthermore, the specified share has to be configured correctly. Therefore, administrative permissions are required. As a regular user you may not have these permissions. You should either login as a system administrator (or as " root " on UNIX systems) or ask your system administrator for help to complete this task.

Windows 2000/XP

Open the Explorer, navigate to the directory (or share) and press the right mouse button to open the context menu. Select " Sharing " to open the configuration dialog (see Figure 2-6).

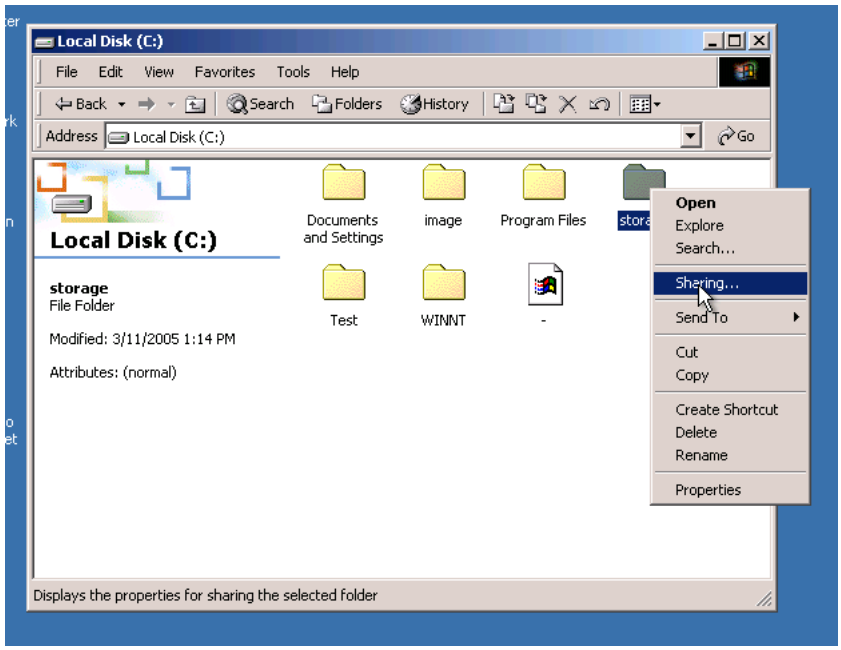

Figure 2-6. Explorer Context Menu

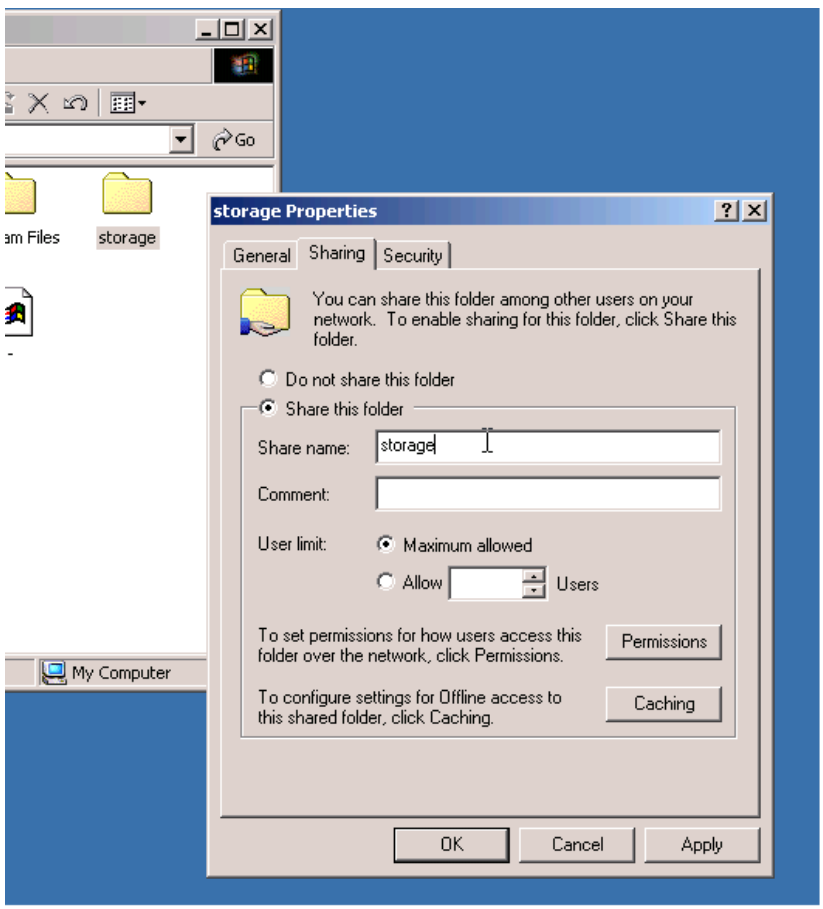

Figure 2-7. Share configuration dialog

Adjust the settings for the selected directory.

- Activate the selected directory as a share. Select " Share this folder " .
- Choose an appropriate name for the share. You may also add a short description for this folder (input field " Comment ").
- If necessary, adjust the permissions (button " permissions ").
- Click " OK " to set the options for this share.

UNIX and UNIX-like OS (UNIX, Solaris, Linux)

If you like to access the share via SAMBA, SAMBA has to be set up properly. You may either edit the SAMBA configuration file `/etc/samba/smb.conf` or use the Samba Web Administration Tool (SWAT) or WebMin to set the correct parameters.

For additional options see the Section called *Options* for details.

Drive Redirection

The Drive Redirection is another possibility to use a virtual disc drive on the remote computer. With Drive Redirection you do not have to use an image file but may work with a drive from your local computer on the remote machine. The drive is hereby shared over a TCP network connection. Devices such as floppy drives, hard discs, CD ROMs and other removable devices like USB sticks can be redirected. It is even possible to enable a write support so that for the remote machine it is possible to write data to your local disc.

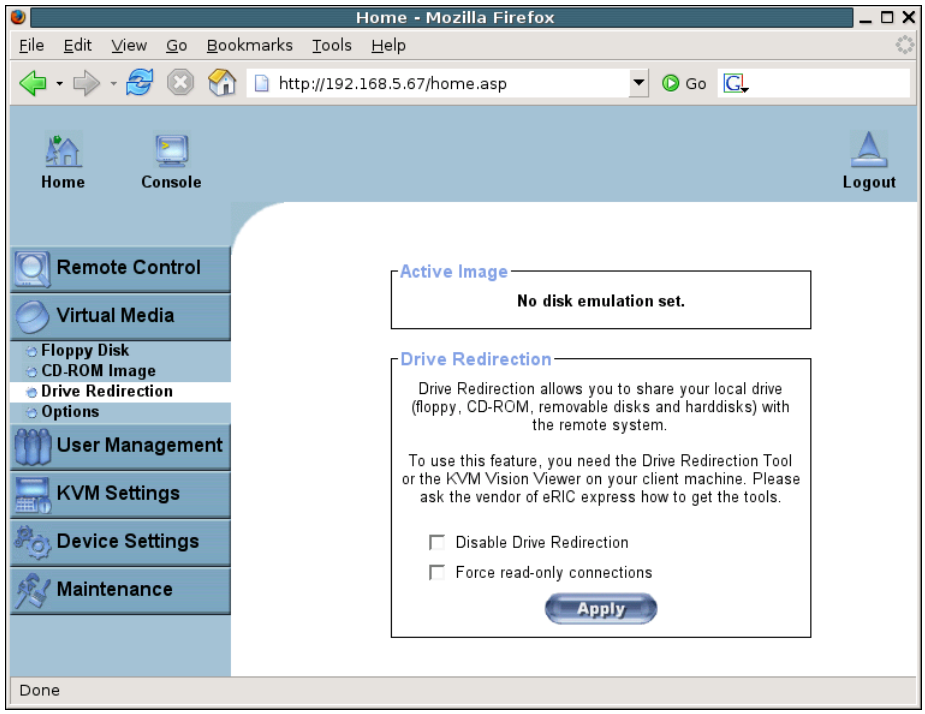

Figure 2-8. Drive Redirection

Please note that Drive Redirection works on a level which is far below the operating system. That means that neither the local nor the remote operating system is aware that the drive is currently redirected, actually. This may lead to inconsistent data as soon as one of the operating systems (either from the local machine, or from the remote host) is writing data on the device. If write support is enabled the remote computer might damage the data and the file system on the redirected device. On the other hand, if the local operating system writes data to the redirected device the drive cache of the operating system of the remote host might contain older data. This may confuse the remote host's operating system. We recommend to use the Drive Redirection with care, especially the write support.

Options

As shown in Figure 2-8 the following options may be enabled:

Disable Drive Redirection

If enabled the Drive Redirection is switched off.

Force read-only connections

If enabled the Write Support for the Drive Redirection is switched off. It is not possible to write on a redirected device.

Click " Apply " to submit your changes.

Software Requirements

To use this feature, you have to install the Drive Redirection software that is currently only available for Microsoft Windows. This software can be found on the product CD ROM.

Configuration

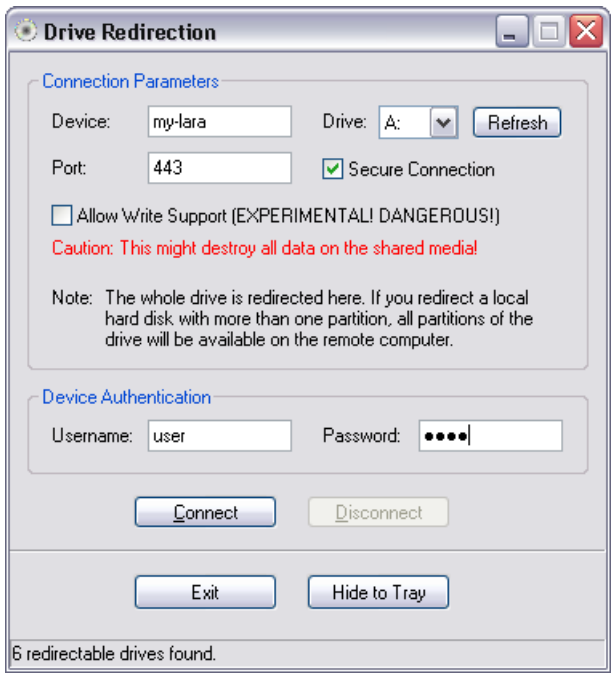

Figure 2-9. Main View

Specify the parameters of the network connection (see Figure 2-9).

Device

This is the address (either the DNS name or the IP address) of the eRIC express you would like to connect to.

Port

This is the network port. By default, eRIC express uses the remote console port (#443) here. You may change this value if you have changed the remote console port in your eRIC express 's network settings.

Secure Connection

Enable this box to establish a secure connection via SSL. This will maximize the security but may reduce the connection speed.

Drive Selection

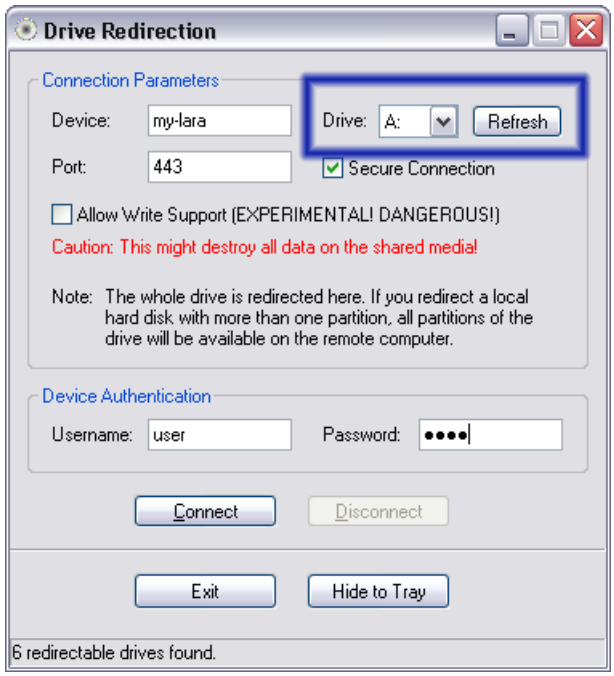

Figure 2-10. Selecting the desired drive

Select the drive you would like to redirect. All available devices (drive letters) are shown here. Please note that the whole drive is shared with the remote computer, not only one partition. If you have a hard disc with more than one partition all drive letters that belong to this disc will be redirected.

The Refresh button may be used to regenerate the list of drive letters, especially for an USB stick.

Write Support

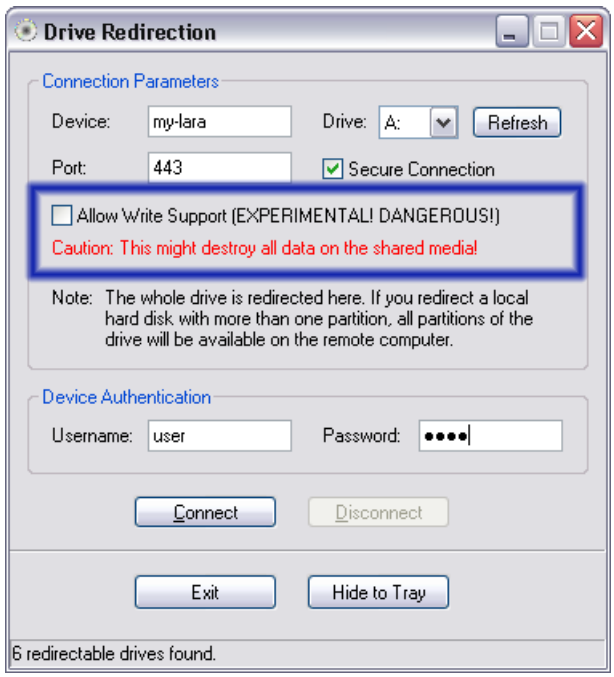

Figure 2-11. Selecting write support

This feature may be enabled here. Write support means that the remote computer is allowed to write on your local drive. As you can imagine, this is very dangerous. If both the remote and the local system try to write data on the same device, this will certainly destroy the file system on the drive. Please use this only when you exactly know what you are doing.

Device Authentication

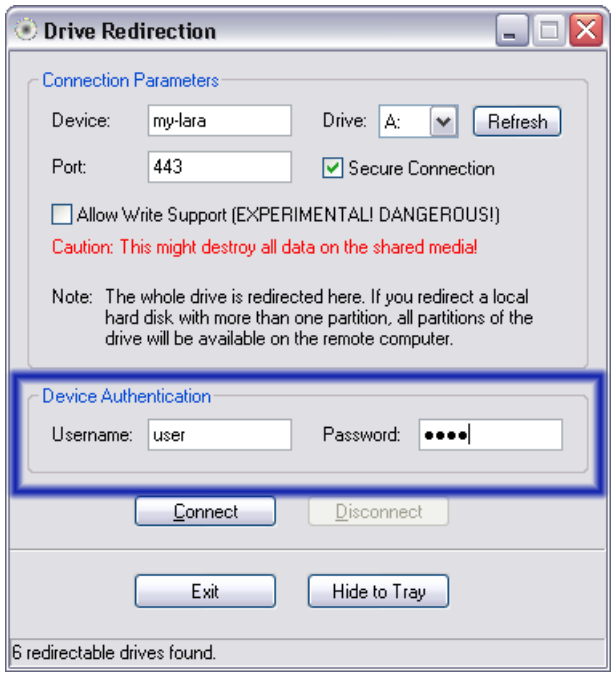

Figure 2-12. Device Authentication

To use the Drive Redirection, you have to authenticate on the eRIC express using a valid username and password. A permission to change the virtual disc configuration is necessary .

Navigation Buttons

Connect/Disconnect

To establish the drive redirection press the Connect button once. If all the settings are correct, the status bar displays that the connection has been established, the Connect button is disabled and the Disconnect button is enabled.

On an error, the status line shows the error message. The drive redirection software tries to lock the local drive before it is redirected. That means that it tries to prevent the local operating system from accessing the drive as long as it is redirected. This may also fail, especially if a file on the drive is currently open. In the case of a locking failure, you will be prompted if you want to establish the connection anyhow. This should not be a serious problem when the note above is respected. If the write support is enabled, a drive which is not locked might be damaged by the Drive Redirection.

With the Disconnect button, a connection via Drive Redirection connection is stopped.

Exit/Hide

If the Exit button is pressed, the Drive Redirection software is closed. If a Drive Redirection connection is active, the connection will be closed before the application terminates.

Using the Hide to Tray button the application is hidden, but not terminated completely. That means that an active connection will be kept active until it is closed explicitly. You can access the software by its tray icon. The tray icon also shows whether a connection is established or not. A double click on the icon shows the application window, or with a right click you may access a small menu (see Figure 2-13).

Figure 2-13. Tray Info

Creating an Image

Floppy Images

UNIX and UNIX-like OS

To create an image file make use of " dd " . This is one of the original UNIX utilities and is included in every UNIX-like OS (UNIX, Sun Solaris, Linux).

To create a floppy image file copy the contents of a floppy to a file. You can use the following command:

dd [*if=/dev/fd0*][*of=/tmp/floppy.image*]

dd reads the entire disc from the device `/dev/fd0` and saves the output in the specified output file `/tmp/floppy.image` . Adjust both parameters exactly to your needs (input device etc.)

MS Windows

You can use the tool " RawWrite for Windows " .

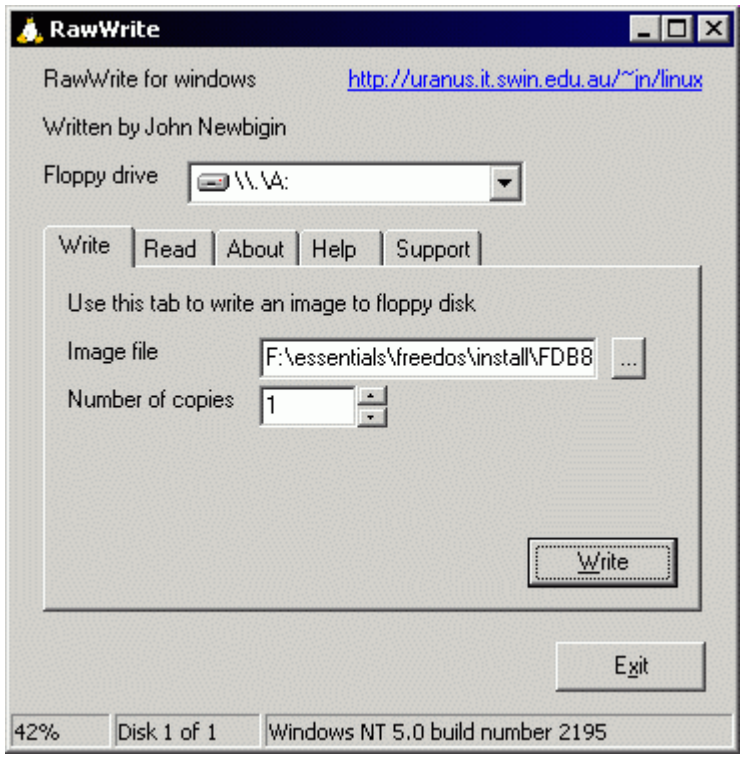

Figure 2-14. RawWrite for Windows selection dialog

Select the tab " Read " from the menu. Enter (or choose) the name of the file in which you would like to save the floppy content. Click on the button " Copy " to initiate the image creation process.

For related tools you may have a look at the homepage of the fdos project (`http://www.fdos.org/ripcord/rawrite/`).

CD ROM/ISO 9660 Images

UNIX and UNIX-like OS

To create an image file make use of " dd " . This is one of the original UNIX utilities and is included in every UNIX-like OS (UNIX, Sun Solaris, Linux).

To create a CDROM image file copy the contents of the CDROM to a file. You can use the following command:

dd [*if=/dev/cdrom*][*of=/tmp/cdrom.image*]

dd reads the entire disc from the device `/dev/cdrom` and saves the output in the specified output file `/tmp/cdrom.image` . Adjust both parameters exactly to your needs (input device etc.).

MS Windows

To create the image file use your favourite CD imaging tool. Copy the whole contents of the disc into one single ISO image file on your harddisk.

For example, with “ Nero ” you choose “ Copy and Backup ” . Then, navigate to the “ Copy Disc ” section. Select the CD ROM or DVD drive you would like to create an ISO image from. Specify the filename of the ISO image and save the CD ROM content in that file.

Figure 2-15. Nero selection dialog

Chapter 3. BIOS Settings

USB Settings

If you boot via USB, the following BIOS settings have to be enabled:

- USB enabled
- Legacy USB enabled (partly required)

If these options are disabled, all USB related functions may not work.

Boot Order

Depending on the image origin, the boot order has to be adjusted.

For a floppy image, set " usb-floppy " as the first boot device. Sometimes, this BIOS entry is named " usb-zip " .

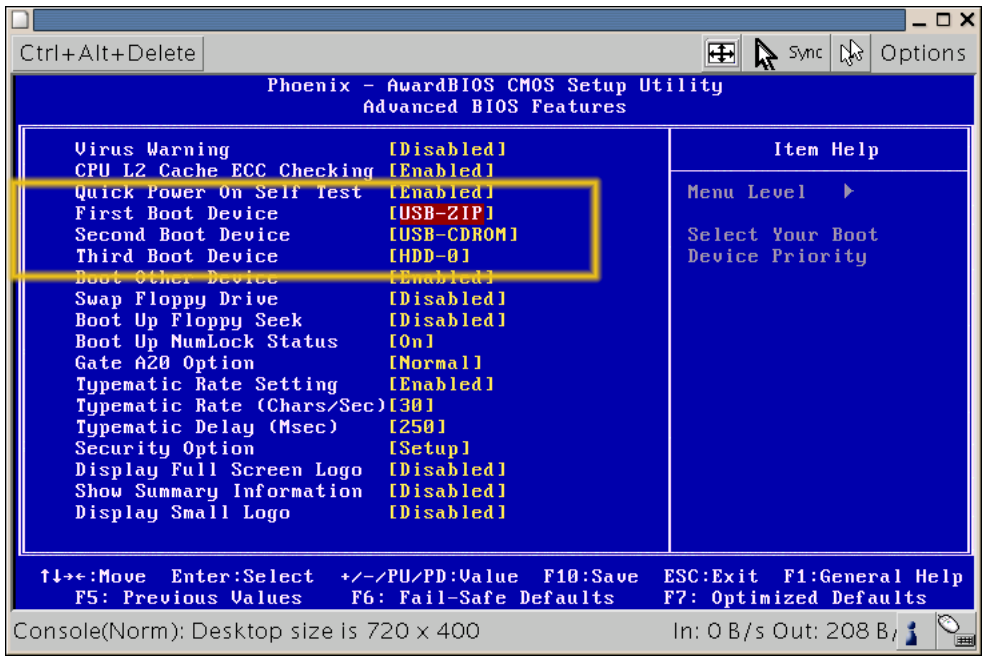

Figure 3-1. BIOS Settings: boot from floppy

For the CD ROM image, set " usb-cdrom " as the first boot device.

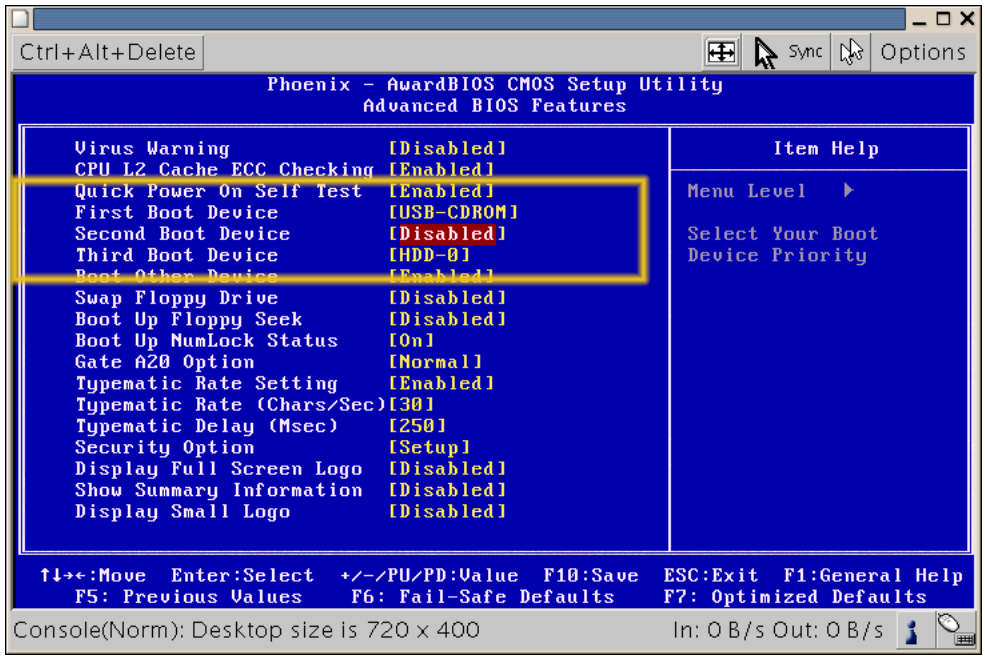

Figure 3-2. BIOS Settings: boot from cdrom