RCCMD – Multiple Server Shutdown Software

User manual

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Inhalt

1	Introduction	4
2	Operation of RCCMD	4
2.	1 Network Shutdown with RCCMD	4
	2.1.1 RCCMD Version 2 or higher	5
3	Installation / Configuration of RCCMD for Windows	6
3.	1 Installation of RCCMD	6
	3.1.1 Silent Installation of the RCCMD Installation	. 10
•	3.1.2 RCCMD Silent Installation and Takeover of own Configuration	. 12
3.	2 Console Installation of RCCMD Installation	. 13
2	3.2.1 Example of a Console Installation	.13
з.	3 RCCIVID Weblinterface Remote Access	. 10
З	A BCCMD Client as Relay Station	. 22
3. 3	5 Automatic Reset of the Redundancy Alarm	. 23
3.	6 RCCMD with SSL for Windows	. 25
0.	3.6.1 RCCMD with own SSL certificates	. 26
3.	7 Settings of the Authorization of the RCCMD Service	. 27
3.	8 Testing of the Shutdown.Bat Files	. 29
3.	9 Testing the RCCMD connection	. 31
	3.9.1 Testing the RCCMD 2 connection	. 31
3.	10 RCCMD on Windows 95/98	. 32
3.	11 RCCMD for Windows NT/2000/XP/2003/2008	. 33
3.	12 RCCMD for Windows 2008 Server Core x64	. 33
3.	13 Older RCCMD Configuration	. 34
	3.13.1 RCCMD Client as Relay Station	. 38
4	RCCMD on UNIX (with graphical interface)	. 41
4.	 RCCIVID Installation on UNIX OS Silent Installation of DCCMD Installation of UNIX OS 	. 41
4. 1	2 Silent Installation of RCCMD Installation of UNIX US	. 40
4.	4 3 1 Example of a Console Installation	. 47 78
4	4. RCCMD WebInterface (from Version 4.2.0.0.)	. 40
	5 RCCMD WebInterface Remote Access	. 56
4	6 Automatic Reset of the Redundancy Alarm	. 56
4.	7 RCCMD with SSL for UNIX	. 58
	4.7.1 RCCMD with own SSL certificates	. 59
4.	8 Alternative RCCMD Configuration with Editor	. 60
4.	9 Older RCCMD Configuration on UNIX OS	. 62
	4.9.1 RCCMD Client as Relay Station	. 65
4.	10 UNIX RCCMD Configuration with CURSES Library	. 66
5	RCCMD on VMware	. 76
5.	1 Requirements	. 76
5.	2 Setup and Configuration of vMA	. 77
5.	3 Preparing RCCMD installation	. 82
5.	4 Installation of RCCMD	. 82
5.	5 Configuration of RCCMD	. 87
5. 5	6 Configuration of VMW are and RCCMD	. 91
с. С	PCCMD on Citrix XEN Server	. 94
7		95
' 7	1 RCCMD WebInterface (from Version 4.2.0.0.)	100
7.	2 RCCMD WebInterface Remote Access	106
7.	3 Old RCCMD Configuration on MAC OSX	106
8	RCCMD on NovellNetWare	110
9	RCCMD on DEC VMS	113
10	RCCMD AS400-Client	114
11	RCCMD FAQ	114
Арр	endix	118
A	OpenSSL	118
В	Syntax for the switching of the outputs	118
C	Know How Pool	118
U -		119
E	rigures	121

1 Introduction

RCCMD is a network client software, which enables receiving shutdowns or messages from UPS status senders like UPSMAN UPS Software, CS121/CS141 SNMP Adapters or any other kind of RCCMD capable network-cards and/or software of other licensed partners. RCCMD is the most successful multiple server shutdown and messaging tool in the entire UPS world.



Fig. 1: Schema RCCMD

RCCMD is designed to execute a command on a remote system in a TCP/IP network. RCCMD works like the Remote Shell (RSH) known in the Unix environment. Inside the UPS-Management Software RCCMD is used to shutdown sev-reral servers that are all powered by a single UPS. For this job, one of these computers is configured as UPS-master server.

2 Operation of RCCMD

RCCMD Client acts as a listener and will only trigger configured jobs when configured to do so. RCCMD has to be installed on every single client you want to shutdown in case of a certain event (eg. power fail). Note that you need a license for every client. Using the same license key in your environment will stop the RCCMD service on the affected clients. RCCMD comes with a webinterface you can access with every browser. This interface is password protected. After logging in, you can adjust the settings and behaviour of the client, examine the log files and start / stop the service. You can access the webinterface by entering the IP address of your client on port 8443.

2.1 Network Shutdown with RCCMD

The program RCCMD is designed to execute a command on a remote system in a TCP/IP network. RCCMD works like the Remote Shell (RSH) known in the Unix environment. Inside the UPS-Management Software RCCMD is used to shutdown sev-eral servers that are all powered by a single UPS. For this job, one of these computers is configured as UPS-master server.

Install the UPS-Management Software UPSMAN on your UPS server and connect it to the UPS. Alternatively, a SNMP adapter CS-111 or CS-121 can be used for this as well. The other servers are only connected to the UPS power supply, no RS-232 connection is necessary. On these remote systems, install RCCMD (copy the modules) and create a shutdown routine for every system. This shutdown routine may be a batch file, shell script or ncf-file, that contains the down and other commands for this system. After that, add RCCMD to the shutdown job or to the EVENT configuration of the computer running as UPS master server.

So now you have a computer in your server network supervising the UPS. The other servers execute RCCMD and wait for the RCCMD signal of the UPS server. If a power failure forces the master computer to shutdown the server-network, the shutdown-job of the UPS-server will start RCCMD. RCCMD now sends the RCCMD-signal to all computers in its list. The comput¬ers receive this signal and the installed RCCMD will execute the programmed command.

Please note that it is required to install RCCMD in two different operating ways:

- 1. As a sending process on the UPS-server
 - (RCCMD -s) (send)
- 2. As a receiving process (background-process) on the receiving computers (RCCMD –I) (listen)

In contrast to the RSH, RCCMD does not include the command that is to be executed in the sending process, but instead deposits the command with the receiving process. This provides a security advantage in comparison to the RSH. Furthermore the receiving process may check, which computer sends the RCCMD-signal and determines whether to accept it or not.

Attention : If a name resolution is achieved via DNS, please always use the IP-address (and not the computer name) for a network shutdown with RCCMD. In case the DNS is not available, the network shutdown will not work, if this method is not used.

2.1.1 RCCMD Version 2 or higher

The extended Version of RCCMD is also able to execute commands on remote computers, execute the shutdown batch in the same TCP/IP port 6003, execute an e-mail batch, enable log file entries etc. The RCCMD 2 sender (UPSMAN or CS121/CS141 SNMP adapter) sends the corresponding RCCMD signal and the RCCMD 2 client starts the corresponding batch file, which lead to the execution of the net send message.

The initial command will always come from the UPSMAN or CS121/CS141 where as the execution will always be on the RCCMD client side.

Example: The CS121/CS141 should send a net send (network message) to a Windows NT network. The CS121/CS141 can be programmed so that during the event "Powerfail" a "RCCMD message" will be send. The text of the message is configurable by the user.

Upon on receiving the message by the RCCMD 2 client, the client is starting a batch file and sends the net send message. Sender of the message will be the client and initiator is the UPSMAN or CS121/CS141.

This way it is possible to send messages, e-mail etc. in the different networks and operating systems, initiated by an UPS alarm.



Fig. 2: RCCMD and UPSMAN in a network environment

Installation / Configuration of RCCMD for Windows 3

Note:

The RCCMD Installer is using our delivered Java Runtime Environment version, which is used for the installation or rather uninstallation only. In addition the RCCMD Web Configurator is using a Java web-server (jetty). You can deactivate the RCCMD service RCCMDWebIf into the services administration and RCCMD is running without Java!

3.1 Installation of RCCMD

Prior of the start, please make sure that you have full administrator rights in order to complete the installation.

Put the CD into the CD-ROM drive of your computer or download the software into a specific directory.

Please execute the installation program installRCCMD.exe in order to copy the files to your system.

Menu "Introduction":

In the next menue you can see the progress column where the next steps are visible.

Click the "Next" button to continue.



Fig. 3: Introduction

Please enter your license key an choose your corresponding Windows OS from the list. The used license determines, which module can be installed.

You need a special license key for your RCCMD software. You can identify the key with the "RX3" in the first part of the license key. Most of the times you need to order the key separately.

Click the "Next" button to continue.



Fig. 4: License Key Entry



Attention: If you enter a wrong license number at this stage, the RCCMD client software will be set to a 30 day trial version. Please contact your UPS dealer for the full, correct license if it was not with the original CD-ROM.

🖫 RCCMD Menu "License Agreement": License Agreement Read and confirm the license agreement. Introduction Following License Agreement: Ə License Agreement Choose Install Folder Copyright Choose Shortcut Folder Click the "Next" button to continue. Pre-Installation Summary product is nonconditional Installing... Install Complete the reseller of this product undertakes no obligations with this



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Introduction	Jactari Set Typical	
License key verification Choose Install Folder Choose Shortcut Folder Pre-Installation Summary Installing	₩ RCCMD	
O Install Complete		
	<	P.
	This installs the application feature.	
InstallAnywhere		

Fig. 6: Choose Install Set





Attention: If you want to execute a program or a batch file with RCCMD, it is required that this program or batch file is located into the RCCMD installation folder \RCCMD (Not into "Program files\RCCMD like default) or a search path is set on the folder.

Menu " Choose Install Folder": Select the features you want to install.

Click the "Next" button to continue.

In the next window enter the path where you want to install the software. Default is the subdirectory "RCCMD" into the program files folder onto the hard disk "C:".

Click the "Next" button to continue.

It will be signalized Into the next window, that **firewall exceptions** will be created for the RCCMD.exe (6003, 5769 TCP), the RCCMDTray.exe (971 TCP) and the RCCMD Weblf (8080 TCP).

Click the "Next" button to continue.



Fig. 8: Firewall Exceptions

The RCCMD tray provides the appearance of the RCCMD message box as pop-up into the foreground. If you do not want to receive messages from the RCCMD, please close the RCCMD tray via the context menu. To disable the RCCMD tray permanently, you can disable it into the RCCMD configuration.

The **RCCMD tray** appears into the taskbar.

The red point means, that the RCCMD service is not started or rather a problem has occured (powerfailure, communication lost). Green means, that the UPS status is okay.



Fig. 9: RCCMD Tray

Menu "Choose Shortcut Folder": In next menu you can choose to create a new program group (default) or to choose icons elsewhere or not at all.

Click the "Next" button to continue.



Fig. 10: Shortcut Folder Selection

Menu "Pre-Installation Summary": Please check your selection!

Click the "**Install**" button to beginn the installation.



Fig. 11: Summary

Menu "Installing...":

Select these default values for **port** and **protocol** for RCCMD Weblf or select new ones.

Click the "Next" button to continue.





It is possible to use an own password for the RCCMD Web interface. Otherwise, the system uses the standard password "cs121-snmp".

Click the "Next" button to continue.



Fig. 13: Password entry

In the next you can create an own password hint!

Click the "Next" button to continue.



Menu "Install Complete":

RCCMD has been installed successful.

Click the "**Done**" button to finish the installation.



Fig. 15: Install Complete

3.1.1 Silent Installation of the RCCMD Installation

The RCCMD Software provides a silent installation, but it is required to enter some settings into the "Installer.Properties" file. This file is located into the CD folder \Rccmd\Windows\12.

Usage:

#

To record a new response file start the installer from command line

with parameter '-r'.

Use the new Values for the provided Variables from this file.

#

To perform a silent install, start the installer on the commandline.

The installer also needs the parameters '-f <path/to/resonsefile>'.

Choose Install Folder

Uncomment this variable to set a new default Folder into which the program will be installed.

The example represents the default, that will be used, if no folder is provided.

According to the example backslash characters ('\') need to be escaped by a backslash.

Spaces in the path also require a backslash as an escape character.

USER_INSTALL_DIR=C:\\RCCMD

Choose Link Location

You can tell the installer in which folder the shortcuts should be installed.

The absolute path must be given.

options are: "Do Not Install" if you do not want any shortcuts,

or a path to the folder in which the shortcuts should be created.

Here are two examples:

USER_SHORTCUTS=Do Not Install

USER_SHORTCUTS=C:\\Dokumente und Einstellungen\\<Windows User>\\Startmenü\\Programme\\UPS

Choose Feature List

If you want to install a subset of features from this installer,

make a list of all the features you want to be installed.

The List must be entered in the CHOSEN_INSTALL_FEATURE_LIST variable.

Options for the list are: RCCMD, WebIf

CHOSEN_INSTALL_FEATURE_LIST=RCCMD,WebIf

Choose OEM

Enter your OEM number here.

OEM=0

Choose locatization

If you want to install a different language than English

you will want to provide the valid country code here

This is only important for silent installations.

Valid codes are: zh_cn, de, en, fr, el, it, ja, ko, pt, ru, es, tr

INST_LANG=de

Choose License Key

For silent installation your License Key must

be provided here.

GXLICENSEKEY=yournumber

Choose Installer User Interface

For installation in console modus, pass the parameter: "-i console" to

the installer.

If you want to use the installer in silent mode with no user interaction,

you can set this variable to "silent".

Default is "gui".

INSTALLER_UI=silent

#INSTALLER_UI=gui

Weblf Settings

Here you can override default settings for access to the RCCMD Weblf. ## These settings are ignored, if the variable CHOSEN_INSTALL_FEATURE_LIST

is set and does not contain the Weblf feature.

In interactive install modes (gui, console) the installer will check, whether

the chosen port is free to be used.

Valid values are: 1-65535

WEBIF_PORT=8080

Valid protocols are: http, https

WEBIF_PROTOCOL=http

Fig. 16: Content of the "installer.properties"

It is required to remove the hash mark prior of the variable INSTALLER_UI=silent. In addition the setting of the license key is required behind the variable GXLICENSEKEY=.

If you don't want to install RCCMD not in the default directory C:\Program Files\RCCMD, please note that backslashes and blankets need another backslash, for example:

USER_INSTALL_DIR=C:\\program\ files\\RCCMD

The language can be set with the variable INST_LANG=en, so all tooltips are in your desired language when configuring RCCMD.

3.1.2 RCCMD Silent Installation and Takeover of own Configuration

After you have finished the edition of the "installer.properties" file, it is possible to create an own RCCMD configuration and to "silent" install.Thereto it is required to execute the RCCMD configuration manually once. Then export this configuration out of the registry into a file as follows:

- Click the right mouse button on "Parameters" into the directory HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\rccmd, select "Export" and save the file with the name "rccmd.reg" as "WIN95/NT4 Registration File".
- Store the file "rccmd.reg" into the directory, where the RCCMD-Installer packet is located.
- Open the file "rccmd.reg" with an editor and delete the complete line, which contains the license key.
- Create a new Windows batch-file (*.bat) with an editor, e. g. with the name "InstalAndConfigRCCMD.bat", which should look like as follows:
- •

```
@echo off
cls
echo *** Installation of RCCMD, please wait... ***
installRCCMD.exe
echo *** Importing RCCMD configuration file ***
regedit.exe -s rccmd.reg
echo Ready
```

Fig. 17: Windows-Batch-Datei

Now you can start a combined RCCMD silent installation and configuration via executing of your Windows batch-file "InstallAndConfigRCCMD.bat".

Click "Install" to continue.

3.2 Console Installation of RCCMD Installation

This console installation works interactive and will ask for user input, defined in the installation script file "installer.properties" (see above).



This concerns the installation only. The configuration will be performed via editor into the "rccmd.cfg" file.

For the activation of the console installation, it is required to remove the hash mark prior of the variable INSTALLER_UI= and to enter console. This is the interactive RCCMD installation onto the console. Execute the "installRCCMD.exe" file.

By the configuration you can change the language, to receive the right Tooltips! Please use the variable INST_LANG=de .

3.2.1 Example of a Console Installation

Adjust the file "installer.properties" accordingly like described above or execute the following command:

installRCCMD.exe -i console



Fig. 18: RCCMD Console Installation - Language Selection, Introduction

Enter your license key Enter your license key and note the license Enter your license key Usually the license key is located on the installation booklet, or on a label on the reverse side of the CD sleeve. Enter license key 12SHARX3-23456789 Test version - On y meant for testing purposes, key only valid for 30 days. Would you like to enter a different license key? (Yes/No): No agreement. Confirm with "ENTER" License Agreement Installation and Use of RCCMD Requires Acceptance of the Following License Agreement: Copyright The information contained in the manual of this product is nonconditional and may be changed without due notice. GENEREX nor the reseller of this product undertakes no obligations with this information. The software described in this brochure is given on the basis of a license contract and an obligation to secrecy (i.e. an obligation not to further publicise the software material). The purchaser may make a single copy of the softwar material for backup purposes. No parts of this manual may be transfered to third persons, either electronically or mechanically, or by photocopies or similar means, without the express written permisson of the GENEREX or the royalty holder. are The UPSMAN management software includes for every serialnumber the licence for using the UPS service at one server with one UPS. The UPSMON/JAUAMON/Webinterface is freeware and may be copied and used from an unlimited numbers of connected workstations. The RCCMD client software requires a separate license key for every installation. Unless a RCCMD enterprise license is available, the user must NOT install PRESS <ENTER> TO CONTINUE:

Fig. 19: RCCMD Console Installation - License Key, License Agreement

Select the desired product features, enter an install folder and note the firewall exceptions.

Confirm with "ENTER"



Fig. 20: RCCMD Console Installation – Produkt Auswahl, Pfad, Firewall Ausnahmen



Fig. 21: RCCMD Console Installation - Link Location, Pre-Installation Summary

Set the Weblf **port** and the **protocol** and RCCMD has been installed successful.

Press "ENTER" to exit the Installation.

Set WebIf Protocol
This is the default protocol to access the RCCMD WebIf. Select your preferred protocol here:
->1- http 2- https
ENTER A COMMA-SEPARATED LIST OF NUMBERS REPRESENTING THE DESIRED CHOICES, OR PRESS <enter> TO ACCEPT THE DEFAULT:</enter>
Set WebIf Port
This is the default network port to access the RCCMD WebIf. Select your preferred port here: Port: (DEFAULT: 8080):
Installation Complete
Congratulations. RCCMD has been successfully installed to: C:\Program Files\RCCMD PRESS <enter> TO EXIT THE INSTALLER:</enter>

Fig. 22: RCCMD Console Installation - Set Weblf Protocol, Port

3.3 RCCMD WebInterface (from version 4.0.1.9)

RCCMD provides its own web-interface from version 4.0.1.9 or higher. Therefore it is possible to configure and control RCCMD remotely. After the successful installation, your default web-browser of your OS starts automatically.



Use the access data User: "admin" Password: "cs121-snmp"

Click the "Login" button.







Fig. 24: RCCMD Configurator

Menu "Connections":

You can enter the **IP addresses** of the allowed RCCMD senders (CS121/141/UPSMAN) into the **"Connections"** menu. Click the **"Insert Sender**" button to enter the IP address of the 1st ender. Click the **"Remove Sender**" button, if you want to remove the already entered IP address. Click the **"Edit Sender**" button, if you want to edit the entered IP address.



You can define under **"Protocol"**, if RCCMD should use SSL certificates. Enable the **"Reject expired SSL certificates**", if you want to reject connections with expired certificates. Please take a look into chapter 3.9 for further information about RCCMD with SSL.



Fig. 25: RCCMD WebInterface Configurator – Connections

Click the "**Save Changes**" button prior of the leaving of this site to save your changes.

Menu "Heartbeats":

You can enable the "UPSMAN Alive Check" feature into the menu "Heartbeats". This check is a signal, that will he send to the CS121/CS141/UPSMAN via port 5769, if the UPSMAN service still got UPS data. If not, the script file "alive.bat" will be executed, which will trigger an accordant pop-up message.

The feature "by the of use CS121/UPSMAN Traps' provides UPSMAN/RCCMD/UNMS messages, which will display the UPS status as message. If enabled, this feature will trigger a message, if the UPS status of the UPSMAN/RCCMD servers has changed.

The feature "**by polling CS121/UPSMAN every x seconds**" provides the pure signal polling without receiving UPS data or rather messages.

The polling rate (default 1800 seconds) defines the polling of the UPSMAN service, connection retries (default 100) means after 100 unsuccessful connection tries an alarm will be triggered.

Menu "Redundancy":

You can enable the redundancy management feature into the menu "**Redundancy**". The **redundancy level** defines the number of redundant senders in the redundancy group. This means, that level 1+ senders must have sent a shutdown signal before this RCCMD starts its shutdown sequence.

When redundancy suppresses a shutdown, then RCCMD will trigger the "suppressed.bat". You can edit this file, if you click the "**Edit file...**" button.

Please note, that it is required to configure a reset of the redundancy alarm on the sender (CS121/CS141/UPSMAN). You can use the function "Send RCCMD cancel shutdown", to discard a previously sent shutdown automatically. If a shutdown was suppressed, because of the existing redundancy at this point of time, but the problem was solved at the UPS intermediate, you can reset the shutdown with the function "Send RCCMD cancel shutdown". The client, which received the shutdown, will be encouraged to reset it.



Fig. 26: RCCMD WebInterface Configurator - Heartbeats

Die You can test the UPS connection, if you click the "**Run** alive check now..." button (the port 5769 will be tested).

Click the "**Save Changes**" button prior of the leaving of this site to save your changes.

View Event Log System Status	Redundancy The redundancy level defines the number of redundant senders in the redundancy arguin. This means that level at senders must have sent a		
Logout	shutdown signal before this RCCMD starts it's shutdown sequence.		
Options	Enable RCCMD redundancy function		
Connections	Group Sender Addresses		
Redundancy Shudown settings	V 192.168.200.97		
 E-mail Settings Notification Settings Advanced Settings Web Configuration 	♥ 192.168.200.98		
User Settings	Redundancy Level: 1		
 Manual Info 	When redundancy supresses a shutdown, then RCCMD will use the following setting:		
	Run this command file : C:\Program Files\RCCMD \ShutdownSuppressed.bat		

Fig. 27: RCCMD WebInterface Configurator - Redundancy

Please take a look into chapter 3.4 or rather 3.4.1 for further information about RCCMD with redundancy.

Click the "**Save Changes**" button prior of the leaving of this site to save your changes.

Menu "Shutdown Settings":

You can change or rather extend the shutdown sequence into the "Shutdown Settings" menu.

If you want to execute a powershell script, you can edit or add desired scripts here. If you want to edit the shutdown.bat, mark "Shut down System", click the "Edit Command" button and the "Save Changes" button. Please note to restart RCCMD.

RCCMD	IP: 0:0:0:0:0:	0:0:
Status • View Event Log • System Status • Logout	Shutdown Settings When RCCMD shuts down your operating system, it sequence:	will use the follow
Options Connections Heartbeats Deductors Connections Heartbeats Connections Heartbeats Connections Heartbeats Connections Heartbeats Connections Heartbeats Connections Conn	Command sequence: Shut down System	Insert Remove Edit
Advanced Settings Advanced Settings Web Configuration User Settings	Settings file: C:\Program Files\RCCMD\shutdown.ba	Edit File
• Manual • Info	Cantel	Save Change

Fig. 28: RCCMD WebInterface Configurator – Shutdown Setting

The shutdown.bat will be executed by default:

rem created by setup

@echo off

set path=%path%;C:\Program Files\RCCMD

ExitWin.exe shutdown force

@cls



Fig. 29: RCCMD WebInterface Configurator – Shutdown Settings – Edit File

The following commands are available for the shutdown sequence configuration:

Attention: The shutdown sequence will be executed from top to down. The "Shutdown Windows" command should be at the bottom, because after the execution of the shutdown, no other commands will be executed.

Shut down System:	Ends your session and shuts down Windows, so that you can safely turn off the power.
Log Off from System:	Ends your session, leaving the workstation on full power.
Power off System:	Ends your session, shuts down Windows and turns off the power.
Restart System:	Ends your session, shuts down Windows and restarts Windows.
Hibernate System:	Hibernates your session, the content of the RAM will be written on hard disk.
Suspend System:	Suspends your session, the content of the RAM will NOT be written on hard disk.
Quit Lotus Notes:	Closes Lotus Notes prior of the shutdown of Windows. Please configure a "Wait" delay after this command.
Quit Siemens SIMATIC:	Closes WIN CC Database prior of the shutdown of Windows. Please configure a "Wait" delay after this command.
Quit Windows Applications:	Closes all applications prior of the shutdown of Windows.
Wait some seconds:	Waits a duration in seconds until the next command will be executed.
RCCMD shut down relay:	Relays RCCMD shutdown command to another workstation. Enter the IP address or the hostname of the remote station you want to shutdown.

Click the "Save Changes" button prior of the leaving of this site to save your changes.

Menu "E-mail Settings":

You can define the email settings of the sender in the menu "E-mail Settings". In addition you can enable the **encryption** or rather enter another **SMTP port**.

Click "**Save Changes**" prior leaving this site to save your changes.



Fig. 30: RCCMD WebInterface Configurator - E-mail Settings

Menu "Notification Settings":

You can change or rather extend the default **bat files for E-Mail**, Message and Execute, if you click the "Edit File..." button.

Click the "**Save Changes**" button prior of the leaving of this site to save your changes.





Menu "Advanced Settings":

You can define the **maximum size of the event logfile** into the menu "Advanced Settings", where the overwriting of older entries will start, the **RCCMD bindings** for the IP address, the RCCMD listener TCP port and the RCCMD Tray Message Port, which will be used for the RCCMD messages.

In addition you can enable the "**Start Jobs as interactive user**" feature, that means, if disabled, that RCCMD will execute jobs only, if somebody is logged in on the system and the RCCMD Tray is active!



Click the "**Save Changes**" button prior of the leaving of this site to save your changes.

RCCME	D IP: 0:0:0	0:0:0:0:0:1
Status • View Event Log • System Status • Logout	Event Logfile When the event log file reacher deleted.	s the size below then older entries will be
Ontions	Maximum file size (KB):	512
	The information below defines Listener. IP address: Port:	P address and TCP-port of the RCCMD 127.0.0.1 IP address 0.0.0.0 means every local address 6003
		default TCP Port is 6003
	Message Port	
	Use this Port to send message Message Port:	
	Start John on internetive Us	er:
	start Jobs as interactive Us	

Fig. 32: RCCMD WebInterface Configurator – Advanced Settings

Menu "Web Configuration":

You can change the default password for the user "admin" into the menu "Web Configuration". In addition you can disable the **HTTPS protocol**, if you just want to use the HTTP protocol.

The RCCMD version 4.0.2.1 or higher provides the feature of changing the default ports for HTTP and HTTPS.

Click the "**Save Changes**" button prior of the leaving of this site to save your changes.

Afterwards you have to restart the RCCMD service!

RCCMD	IP: 0:0:0:	0:0:0:0:1
Status	Web Access	
View Event Log	Configure the web server settings her	·P
 System Status Logout 	Select the access protocol for this use	er interface
	Note: Changes in protocol will become	e active upon the next start-up.
Options	Protocol:	HTTPS - With Security
 Connections Heartbeats Redundancy Shutdown Settings 	Port for http:	8443
E-mail Settings Notification Settings Advanced Outlings Web Configuration	Port for https:	8443
• User Settings	Restart RCCMD Weblf	

Fig. 33: RCCMD WebInterface Configurator – Web Configuration

User Settings menu

Here you can change the default password for admin.

Afterwards you have to restart the RCCMD service!

Click the "Save Changes" button prior of the leaving of this site to save your changes.

KCCMD	IP: 0:0:0:	0:0:0:0:1
Status • View Event Log • System Status • Logout	User Settings Set login data. Administrator User Name:	admin
Options	Current Administrator	Current Password
Connections Heartbeats Redundancy Shutdown Settings F-mail Settings	Password: New Administrator Password:	New Password
Notification Settings Advanced Settings Web configuration	Password Hint:	"mamacita"
User Settings	Restart RCCMD Webif to apply saved	d changes to the password.

Fig. 34: RCCMD WebInterface Configurator – User Settings

RCCMD	IP:	0:0	:0:0:0:0:0:0
Status	Event Lo	na	
View Event Log System Status	The are the	events that	have occured on this computer.
• cogosi	2014-09-09	16:27:18	RCCMD: RcvThreadUdp angehalten
Options	2014-09-09	16:27:20	RCCMD: Copyright (c) 1996-2014 Generex GmbH
Connections Heartbeats	2014-09-09	16:27:20	RCCMD: RCCMD Listen Mode started.
Redundancy Shutdown Settings	2014-09-09	16:27:20	RCCMD: RCCMD Trap client hat sich angemeidet auf 192, 168, 200, 97
Notification Settings Advanced Settings	2014-09-09	16:27:20	RCCMD: RCCMD V4.0.2.5 - Windows Remote Console Command Program
 Web Configuration User Settings 	2014-09-09	16:27:20	RCCMD: RcvThreadUdp gestartet
Help	2014-09-09	16:27:20	RCCMD: SendThreadCheckUpsman gestartet
Manual	2014-09-09	16:27:49	RCCMD: RCCMD Listen Mode stopped
• info	2014-09-09	16:27:49	RCCMD: RcvThreadUdp angehalten
	2014-09-09	16:27:50	RCCMD: SendThreadCheckUpsman angehalten
	2014-09-09	16:27:52	RCCMD: Copyright (c) 1996-2014 Generex GmbH
	2014-09-09	16:27:52	RCCMD: RCCMD Listen Mode started.
	2014-09-09	16:27:52	RCCMD: RCCMD Trap client hat sich angemeidet auf 192.168.200.97
	2014-09-09	16:27:52	RCCMD: RCCMD V4.0.2.5 - Windows Remote Console Command Program
	2014-09-09	16:27:52	RCCMD: RcvThreadUdp gestartet
	2014-09-09	16:27:52	RCCMD; SendThreadCheckUpsman

Fig. 35: RCCMD WebInterface Configurator – View Event Log

Menu "Status, View Event Log":

You can see the **logging of the events** into the menu "Status, Event Log".

Menu "System Status":

You can check the current status of RCCMD into the menu "Status, System Status", update the status and restart or rather stop/start the RCCMD service.

<u>"Logout"</u>

You can logout here when you finished configuration.

RCCMD	IP- 0-0-0-0-0-0-1
Status	System Status Current status of RCCMD is: Starting Status
Options	Restart
Connections Heartbeats Redundancy Shutdown Settings E-mail Settings Notification Settings Advanced Settings Web Configuration User Settings	Start Stop
Help	
Manual Info	

Fig. 36: RCCMD WebInterface Configurator – System Status

Menu "Help":

You can open the **RCCMD user manual** into the menu "Help" ad you can follow the link to <u>www.generex.de</u>.

With "Info" you can view the installer version.

Status	Help
 View Event Log System Status Logout 	Download RCCMD Manually locally: • RCCMD Manual
Options	Find more documentation online here.
Connections Heartbeats Redundancy Shutdown Settings E-mail Settings Notification Settings Advanced Settings Web Configuration User Settings	
Help	

Fig. 37: RCCMD WebInterface Configurator – Help

3.3.1 RCCMD WebInterface Remote Access

RCCMD provides its own web-interface from version 4.0.1.9 or higher. Therefore it is possible to configure and control RCCMD remotely. Please note, that the firewall port 8443 TCP is enabled. Enter the following into a web-browser, to connect to a workstation, where RCCMD is running:

https://IP address of the RCCMD client: 8443

Nun besteht die Möglichkeit, die Konfiguration bzw. Steuerung aus der Ferne auszuführen.

() 🔒 https:// 192.168.200.130 .8443/login.htm 🔍			
RCCMD	IP: 192.168.200.130		
System Login: Username: admin Password: Login	System Status Current status of RCCMD is : running		



3.4 RCCMD Client as Relay Station

In order to reach a bigger number of RCCMD receivers, one RCCMD client needs to be operated as relay station. The receiver will be configured so that it will receive a RCCMD signal and this signal will be used to start a batch file, which then starts even more RCCMD sender signals. This workstation is then sender and receiver at the same time and is therefore an important link in the UPS monitoring chain. Generally the usage of a RCCMD client as a relay station makes the management of several 100 RCCMD clients far easier than configuring this via the Web-interface of the CS121/CS141. Additionally, all Web-browser event configurations have a certain limitation so that it is required to use the relay function, if the number of jobs exceed 50 per event at the CS121 HW 131, at older CS121 adapters even earlier.

See the following script, which lets the RCCMDclient act as relay station:



Fig. 39: Example: Batch File RCCMD act as Relay Station

"start" is a Windows batch command to start the program call in several instances. This allows to execute programs simoultanously and speeds up the shutdown process. Please note that "start" is not supported in all Windows versions and it should be tested before using.

3.5 Automatic Reset of the Redundancy Alarm

You can use the function "Send RCCMD cancel shutdown", to discard a previously sent shutdown automatically. If a shutdown was suppressed, because of the existing redundancy at this point of time, but the problem was solved at the UPS intermediate, you can reset the shutdown with the function "Send RCCMD cancel shutdown". The client, which received the shutdown, will be encouraged to reset it.

This command can be set individually into your CS121/CS141, UPSMAN or BACS WEBMANAGER Events/Alarms configuration, but makes sense only, if the event, which will send the command, is true, if the UPS is back in normal condition. For this the events "**POWER RESTORED**", "**BATTERY LOW OFF**", "**UPSMAN STARTED**" and "**GENERAL ALARM OFF**" are suitable, if they are provided from your UPS into the CS121/CS141. The job "Send RCCMD cancel shutdown" would be set into these all-clear events, so that e. g. at restart of the UPS, the event "UPSMAN STARTED" would reset the accordant RCCMD client automatically.

Alternative: Should the job **"Send RCCMD cancel shutdown**" not be present into your CS121/CS141, UPSMAN or BACS WEBMANAGER, you can use the job **"Send RCCMD shutdown to remote client**" or rather **"Send RCCMD execute to remote client**" alternatively.

The parameter "WAKEUP" got the same function like the "Send RCCMD cancel shutdown" and resets the redundancy alarm of a RCCMD Client into initial state. For this the events "POWER RESTORED", "BATTERY LOW OFF", "UPSMAN STARTED" and "GENERAL ALARM OFF" are suitable too, to configure the function "Send RCCMD command to remote client" with the "WAKEUP" command.

'Power restored' Job 3				
Function:	Send RCCMD Command to remote client 👻			
Client IP:	192.168.200.17			
Client Port (Default: 6003):	6003			
Command:	WAKEUP			
	SS4 Command			

Fig. 40: CS121/CS141 Configuration "WAKEUP" Command

Menu "CS121/CS141":

Click into the CS121/CS141 menu "Events/Alarms" onto "Power restored" and add a new job. Select the function "Send RCCMD command to remote client", set the accordant IP address of the RCCMD client and enter the command "WAKEUP".

IDSMANI		52
Insert Function		x
Function: Send R	CCMD EXECUTE to remote client	
Parameter ADDRESS PORT SSL PARAMET Additional Parameters	Value 192.168.200.17 6003 Enable SSL WAKEUP	
 C Doimmediately, o C DoAlways C DoEvery 0 	ince C Do after 0 Seconds C Do after 0 Seconds, repeat. Seconds C Do at 0 Minutes remaining Cancel 0K	

Fig. 41: CS121/CS141 Configuration "WAKEUP" Command

Configuration "UPSMAN" Click into the UPSMAN configuration the buttons "Advanced Users", "Events", "Power restored" and "Insert". Add the function "Send RCCMD execute to remote client", set the accordant IP address of the RCCMD client and enter command the "WAKEUP".

01/05/2010,14:59:54,	RCCMD:	RcvThreadUdp started
01/05/2010,14:59:54,	RCCMD:	RCCMD Listen Mode started.
01/05/2010,14:59:54,	RCCMD:	SendThreadCheckUpsman started
01/05/2010,14:59:54,	RCCMD:	RCCMD Trap client logged on to 192.168.222.177
01/05/2010,14:59:54,	RCCMD:	RCCMD Trap client logged on to 192.168.222.246
01/05/2010,15:01:01,	RCCMD:	RCCMD Trying to start program/job: ".\message.bat" "UPSMAN Notification
01/05/2010,15:01:01,	RCCMD:	RCCMD program/job: ".\message.bat" "UPSMAN Notification [192.168.222.177
01/05/2010,15:01:03,	RCCMD:	RCCMD message received from 192.168.222.177
01/05/2010,15:01:04,	RCCMD:	Shutdown suppressed, redundancy-level = 1, failure count = 1.
01/05/2010,15:01:04,	RCCMD:	RCCMD Trying to start program/job: C:\RCCMD\ShutdownSuppressed.bat
01/05/2010,15:01:04,	RCCMD:	RCCMD program/job: C:\RCCMD\ShutdownSuppressed.bat executed. OK
01/05/2010,15:02:06,	RCCMD:	RCCMD Trying to start program/job: ".\message.bat" "UPSMAN Notification
01/05/2010,15:02:06,	RCCMD:	RCCMD program/job: ".\message.bat" "UPSMAN Notification [192.168.222.177]
01/05/2010,15:02:09,	RCCMD:	RCCMD message received from 192.168.222.177
01/05/2010,15:02:09,	RCCMD:	WAKEUP command received from 192.168.222.177.
01/05/2010,15:02:09,	RCCMD:	WAKEUP IP 192.168.222.177

Fig. 42: "WAKEUP" Befehl im RCCMD Log



3.6 RCCMD with SSL for Windows

The Secure Sockets Layer (SSL) protocol is a cryptographic protocol that provides security and data integrity for communications over TCP/IP networks. By sending a RCCMD message it will be encrypted (also with own certificates) and only executed if the codes with the client match and the time stamp is not to far apart.

Configuration menu "SNMP Adapter":

Use your Web-browser to navigate to the address of your UPS Web-Manager. Click the "Network & Security" configuration button and enable the SSL network feature.

Network & Security Settings				
MAC Address:	00-03-05-0E-09-E1		Enable Telnet Server:	V
Network Card Speed:	AUTO -		Enable HTTP Server:	V
Local Address:	192.168.202.98		HTTP Port:	80
Gateway Address:	192.168.202.1		HTTP Refresh Time:	10
Subnet Mask:	255.255.255.0		HTTP Default Page:	UPS Status
DNS Server:	192.168.202.8		Enable HTTP Tooltips:	V
			Enable UpsMon Server:	V
Change Administrator Password:			Use RCCMD2 Traps:	V
Confirm Password:			Enable RCCMD Listener:	
			RCCMD Listener Port:	6002
Change UpsMon & SS4 Password:		Clear	RCCMD Timeout:	180
Confirm Password:			Use RCCMD SSL:	
Use UpsMon Password for Web Pages:				

Fig. 43: RCCMD SSL Settings

Menu "Timeserver":

The SSL network feature requires correct time settings, so it is required to configure a timeserver. Click the **"Timeserver**" configuration button and enter the address of at least one timeserver.

Click the "Apply" button.

Time Settings				
RFC868 TCP compatible time To disable the timeserver feat	eserver listening on p ture set timeserver ac	ort 37 require ddress 1 to 0.0	d. . 0.0.	
Some public timeservers (cou 129.6.15.29 : National Institut 192.53.103.103 : Physikalisch	uld be used for both p te of Standards and T h- Technische Bunde	rotocols): 'echnology esanstalt		
Current system time:	Thu Dec 4 23:49:26	2008		
Timeserver Address 1:	192.53.103.103	SNTP -)	
Timeserver Address 2:	0.0.0.0	SNTP -		
Timeserver Address 3:	0.0.0.0	SNTP -		
Timezone:	(GMT+01:00) Amste	erdam, Berlin,	Bern, Rome, Stockholm, Vienna 💌	
Automatically adjust clock for daylight saving changes:	(implemented for	or european tir	mezones only)	
Connection Retries:	2			
Synchronize Time on incoming RAS connection:				
Synchronize Time on outgoing RAS connection:				
				Apply
	Test Timeserver 1	Test	Timeserver 2 Test Timeserver 3 Synchronize CS121 clock now	



<u>Menu</u>

<u>"Save Configuration":</u> Click the "Save Configuration" button and the "Save, Exit & Reboot" button to confirm your settings.

CS121 Configuration Manager Reset to Factory Settings \square Load the CS121 factory settings into the configuration editor **Cancel Recent Changes** È Reset all changes and reload the saved settings. Save Configuration Write all changes to flash memory. Changes will be used after the next reboot. **Backup Configuration** Store a backup of the configuration on your local harddisk. (Use right mousebutton and "save target as") NOTE: For UPLOAD older config files to new firmware versions please contact support. Reboot Reboot the CS121 without saving configuration changes. Save, Exit & Reboot Write all changes to flash memory and reboot the CS121. (Please be patient after clicking here)



Menu "RCCMD Web <u>Configurator":</u> Start the RCCMD Web Configurator again and enable the SSL network feature. If you want to accept

expired certificates, please enable the function "**Reject expired SSL certificates**".

Connections - Windows Internet Explorer	
🕒 🕞 🗢 🙋 http://localhost:8080/Option	ns/connections.htm
Datei Bearbeiten Ansicht Favoriten Ex	tras ?
🚖 Favoriten 🛛 👍 🙋 Web Slice-Katalog 🕶	
Connections	
	0:0:0:0:0:0:0:1
 Options <u>Connections</u> <u>Heartbeats</u> <u>Redundancy</u> <u>Shutdown Settings</u> <u>Notification Settings</u> <u>Advanced Settings</u> <u>Web Configuration</u> 	The list below identifies all senders that are allowed to connect to this listener. Note: An empty list means that every sender can connect to this listener. Sender IP Address 192.168.222.113 Insert Sender Edit Sender Edit Sender
> Help	Protocol The setting below increases the security of connections to this RCCMD Cancel SSL connections (requires restarting RCCMD) Cancel Save Changes

Fig. 46: RCCMD Web Configurator - SSL Konfiguration

3.6.1 RCCMD with own SSL certificates

In this chapter we will describe, how to use an own SSL certificate with RCCMD, e. g. OpenSSL (http://www.openssl.org/related/binaries.html):

Be your own CA

Using OpenSSL it is quite simple to become your own CA. Just run:

CA.pl -newca

Done! Just ensure, that you select a useful CN (common name)!

Create your RCCMD certificate

You need to create your certificate for RCCMD now. As it will use it for verification, it should contain the same useful common name (CN), that you selected for the CA. The private key must not be encrypted to let the RCCMD Client (service) start without trouble. Therefore we use the "-nodes" option and the "-newreq" command:

CA.pl -newreq -nodes

Sign with your CA:

CA.pl -sign

Now create an empty file named "rccmd.pem" and copy the cert information of newcert.pem (rccmd certificate), newkey.pem (private key) and cacert.pem (CA) into it. Please note, that the exact copying is required to use it without trouble!

Use your own RCCMD certificate

Do the following steps at the RCCMD Client and every sender (e. g. UPS Web Manager):

- Backup the existing "rccmd.pem"
- Replace the existing "rccmd.pem" with your own
- Restart the RCCMD Client
- Restart the RCCMD Sender!

3.7 Settings of the Authorization of the RCCMD Service

This function is used for the commitment of the user authorization of the UPSMAN service, which exceeds the system shutdown, e.g. execution of batch files, script files etc.

RCCMD Properties Menu "General":

Open the menu of the properties window for the RCCMD service (via control panel, administration and services).

Service name:	rccmd
Display <u>n</u> ame:	rccmd
Description:	4
C:\RCCMD\RC	Jao, DMD.EXE
Service status:	Stopped
<u>S</u> tart	Stop <u>P</u> ause <u>R</u> esume
You can specify from here.	the start parameters that apply when you start the service

Fig. 47: RCCMD Properties Window

RCCMD Properties Menu "Log On":

Click the "Log On" button on the upper left side.

Disable the "Local System account".

rccmd Properties (Local Cor	nputer)	? ×
General Log On Recovery	Dependencies	
Log on as:		
Collical System account		
Allo <u>w</u> service to intera	act with desktop	
O <u>I</u> his account:		Browse
Eassword:		
Confirm password:		
		-
You can enable or disable th	is service for the hardware pr	ofiles listed below:
Hardware Profile		Service
Undocked Profile		Enabled
DOCKEGTIONIE		
J		
	Enable	Disable
	OK Cance	Apply

Fig. 48: RCCMD Properties Log On Window

General Log On Recovery Dependencies						
Log on as:	Log on as:					
C Local System accour	nt					
Allo <u>w</u> service to in	iteract with desktop					
• Dis account	Browse					
Password:	•••••					
Confirm password:	•••••					
\underline{Y} ou can enable or disable this service for the hardware profiles listed below:						
Hardware Profile	Service					
Docked Profile	Enabled					

Fig. 49: RCCMD Properties Password Confirmation

passwords and click the "Browse..." button.

Check the "This account" ring and delete the

A new window opens. Click the "(examples)" button to select the object name.

Select User	? ×
Select this object type:	
User or Built-in security principal	Object Types
Erom this location:	
GX72	Locations
Enter the object name to elect (examples):	
	Check Names
Advanced	

Fig. 50: Select User Window

Choose the object name.

Coloradoria altitada			
Select this object User or Built-in se	type: ecurity principal		 Dbject Types
, From this location	c		
GX72			Locations
Common Querie	es		
Name	Ctarta milla		Columns
ngine.	Starts with		
Description:	Starts with 💌		Find Now
Disabled a	ecounts.		Stop
	na naesword		
, non o <u>u</u> pin			
			~7
Days since las	at logon:	v	
Days since las	st logon:	Y	
Days since las	st lögon:		
Days since las	it logon:	Y	 🍪
Days since las	st logon:	T	 OK Cancel
Days since las	t logon:	Y	OK Cancel
Days since las	In Folder		OK Cancel
Days since las Name (RDN)	In Folder		OK Cancel
Days since las	In Folder		 OK Cancel
Days since las	In Folder GX72 GX72 GX72 GX72		DK Cancel
Deys since las Name (RDN) Convolte_us; Administrator 2 Administrator 2 Administrator 2 Administrator 2 Administrator 2 Administrator	In Folder GX72 GX72 GX72 GX72 GX72 GX72		 OK Cancel
Days since las	In Folder 		OK Cancel
Days since las	In Folder GX72 GX72 GX72 GX72 GX72 GX72 GX72 GX72		 DK Cancel
Days since las Name (RDN) Converte_Us; Administrator Converte_Us; Converte	In Folder 		 OK Cancel
Days since las Name (RDN) Administrator Administrator Administrator Gruest HelpAssistant HelpAssistant UISB_GX22 UVAM_GX22 LOCAL SERV.	In Folder GX72 GX72 GX72 GX72 GX72 GX72 GX72 GX72		OK Cancel
Days since las Name (RDN) Administrator Administrator Guest Guest HelpAssistant UISR_GX72 UNAM_GX72 ZIVAM_GX72 ZIVAM_GX72 ZIVAM_GX72 ZIVAM_GX72 ZIVAM_GX72 ZIVAM_GX72 ZIVAM_GX72 ZIVAM_GX72 ZIVAM_GX72 ZIVAM_GX72 ZIVAM_GX72 ZIVAT	In Folder UN72 GX72 G		DK Cancel

Fig. 51: Selection of the Object Name

Click the "OK" button.



Fig. 52: Administrator Selection

Enter the new password twice.

Click the "OK" button.

ccmd Properties (Lo	cal Computer)	? ×
General Log On Re	ecovery Dependencies	
Log on as:		
C Local System acc	count to interact with desktop	
	. Administrator	<u>B</u> rowse
Password:		>
<u>C</u> onfirm password		>
You can enable or di	sable this service for the hardware p	rofiles listed below:
Hardware Profile		Service
Undocked Profile		Enabled
Docked Profile		Enabled
	Enable	<u>D</u> isable
	OK Canc	el <u>A</u> pply

Fig. 53: Administrator Password Confirmation

A new window opens. Confirm the account with the "**OK**" button.



Fig. 54: Service Right Info Window

3.8 Testing of the Shutdown.Bat Files

We recommend to test the edited shutdown.bat file. The shutdown program **EXITWIN.EXE** is predefined. Just enter **RCCMD** -? in the **RCCMD directory** for syntax help for this shutdown tool. You may use also your own shutdown tool or any other which we provide with this software.

Attention: If your configuration works fine in the DEBUG mode, does not necessaryly mean that it works also with the RCCMD as NT service. Please ensure that the RCCMD as service has been started in a user account with administrative rights, otherwise it may happen that only non-restrictive programs may be executed (like notepad.exe) but no Shutdown. (This will result in the NT error message "Adjust Token Privileges failed".) If a program has in fact started or not can be seen in Taskmanager window (ALT+CTRL+DEL), because a service does not a started program in the current user session due to non-interactive transaction with the desktop.

The full command syntax for the NT consol for RCCMD in <Listen mode>:

rccmd [-debug] -I [-a IP adress] [-h hostname] [-p port] "command"

The command can be either a program or a path for another batchfile on this workstation. The command file should be given with full path. The -p port option can be included if you want to start RCCMD more than once at a single workstation to proceed different commands for different events. The default port number is 6003, use any other availabe port number for different RCCMD commands.

RCCMD in the send mode:

rccmd [-debug] -s [-a IP adress] [-h hostname] [-p port]

This command is regularly used in the batchfile of the sender (shutdown.bat) and sends a "ping" to the computers IP adress or hostname. If this "ping" has been answered, the next command RCCMD –s may be executed, etc.

When you have finished the edition of the bat files, click the "**Restart RCCMD**" button into the "System Status" menu.



Fig. 55: System Status – Restart RCCMD

RCCMD is now running as Service with automatic startup. To configure the automatic start of RCCMD use administrative rights and control panel, service to change the settings.

IMPORTANT: RCCMD as service with local desktop interactions is permitted to execute local shutdowns – for this action no user rights – except administrative rights – are required. But for any user specific actions, e. g. starting a net send message or any other command – the RCCMD may need extra rights! These rights have to configured in the Control panel, services.

Sending of a message to all RCCMD clients

To send a message to all RCCMD clients, please use the following syntax:

rccmd -se "MSG_TEXT ups_says_hello_world" -a 192.9.200.255

The RCCMD client, which should receive this message, need to get the entry of the ip-address of the RCCMD sender or rather the list should be empty. The CS121/CS141 is not able to send UDP broadcasts, so you have to enter the above mentioned syntax into the RCCMD client. The client will operate as relay station and will forward the message. It is no problem to send the message from a Windows-, UNIX- or MAC OS RCCMD sender.

3.9 Testing the RCCMD connection

Finally test your configuration if all RCCMDs are present and working. For this you may use the RCCMD in the Debug mode Syntax (RCCMD –debug –s/I –a), so that you have screen output. "PING" every remote computer with the command "ping [hostname] [IP address]". If the PING works fine, you can now start to test the RCCMD connection with the debug mode. If everything works fine, you will see that a connection is established and closed again. This means that the remote RCCMD received your signal and will execute the shutdown script on the remote side.

Attention! This test will execute the shutdown script! If you want to avoid the shutdown, please remove the shutdowncommand from the RCCMD client Shutdown.Bat/SH file!

K C:\WINNT\System32\cmd.exe	- 🗆 ×
Microsoft(R) Windows NT(TM) (C) Copyright 1985-1996 Microsoft Corp.	
D:\UPSMAN>rccmd -s -a 192.168.202.52 started in sending mode	
RCCMD U3.0 - Windows NT Remote Command Program copyright (c) QUAZAR/GENEREX GmbH 1996, All rights reserved	
+ 08.01.99, 15:09:53 - Send Mode wird gestartet + 08.01.99, 15:09:53 - Es wird probiert eine Verbindung zu 192.168.202.52 bauen	aufzu
+ 08.01.99, 15:09:55 - Send Mode wird beendet. + 08.01.99, 15:09:55 - Verbindung zu 192.168.202.52 hergestellt.	
D:\UPSMAN>	

Fig. 56: RCCMD Console Test

3.9.1 Testing the RCCMD 2 connection

In order to see under RCCMD 2 if the UPSMAN processes on the remote client are still active, the following syntax can be entered via command line:

rccmd -sc -ac <IP address>

If the UPSMAN is active, the message "**UPSMAN <IP** address> alive". There is no message if the UPSMAN is inactive.

Use this command to get help:

C:\Program Files\RCCMD>rccmd -?

C:\RCCMD>rccmd -sc -ac 192.168.2	22.201
RCCMD V4.0.0.7 - Windows NT Remo Copyright (c) 1996-2007 Generex	te Command Program GmbH
RCCMD Upsman at 192.168.222.201	alive.
C:\RCCMD>	

Fig. 57: RCCMD Alive Check via Command Line

📾 C:\WINDOWS\system32\cmd.exe	-	8	>
Microsoft Windows XP [Version 5.1.2600]			-
(C) Copyright 1985-2001 Microsoft Corp.			
C:\RCCMD>rccmd -?			
rc init install service and set default narameters			
param: -i install service			
-u uninstall service			
–v display version info			
-name <name> use <name> instead of default RCCMD</name></name>			
-debug start as a console app for debugging (listenMode)			
-bs filepath set filepath for shutdown-event (listenMode)			
-ba filepath set filepath for upsmanNotAlive-event (listenMode)			
–li IP-Address bind listen socket on IP-Address (listenMode)			
(ATTENTION: this will override registry-settings)			
-s start as a console app for sending mode			
-sc check upsman			
-ssl use SSL connection			
-ut use traps to check upsman in server-mode			
or retrieve additional status-info if in client-mode			
-cr connect retries_for every check (default 5)			
-se "command [parameter]"			
valid commands: SHUIDOWN, EXECUTE, MSG_ID, MSG_IEXI			_
MAIL_ID, MAIL_TEXT, LOG_ID, LOG_TEXT, WAKEUP			
a 192.10.200.99 [-a 192.10.200.98] (max. 15)			
-ac L-ac J upsman adress (max 15)			
-ptrj portaddr rccmd (default 6003)			
-pc portador check-upsman (default 5/69)			
-tlrj timeout recma (default 10 sec)			
-tc timeintervall check-upsman (default 30 min)			
-FC MAX PETFIES FOF CHECK-upsman (default 0 (infinite))			
C:\RCCMD>_			

Fig. 58: RCCMD Console -?

3.10 RCCMD on Windows 95/98

RCCMD for Windows 95/98 functions similar to RCCMD on Windows NT. The only difference is the program name, which changes to **RCCMD95.EXE**. Please also refer to the RCCMD Windows section of this manual. Note that both OS are NOT supported anymore.

Attention: For Windows 95/98 users we do recommend the installation of the TCP/IP protocol first and then run the configuration program making use of the RCCMD WIZARD.

Attention: In case Winpop.exe is used on Windows 95/98, RCCMD can not be started on port 6003 otherwise the computer will hang-up. Please change the sender and receiver call up accordingly.

Experienced users may use the registry editor and enter all changes manually. Unexperiecend users should use the RCCMD wizard.

Registry settings: Please check the following: In order to start the RCCMD process in "Listen" mode, the RCCMD parameter have to be entered in the registration database. Please enter:

regedit.exe rccmd95.reg or simply start rc_init.bat

The parameters are now located under the registration-key:

HKEY_LOCAL_MACHINE\CurrentControlSet\Services\RCCMD95\Parameters

Start regedit.exe again if you want to reconfigure RCCMD.

Parameters:

Port: Special TCP-Port that receives the RCCMD signal.

Addr1... 10: TCP/IP address of the computer that accepts the RCCMD-signal.

ExecutePrg: Command that is to be executed when receiv-ing the RCCMD-signal.

To start RCCMD execute the command:

rccmd95

Or start the program using the Windows 95/98-launch bar.

To start RCCMD in sending-mode (send) enter the following line in your shut-down-job:

RCCMD95 -s -a <address> [-p 6003]

For <address> enter the TCP-address of the machine to which you want to send the RCCMD-signal.

Optional parameters:

-*p* <*port*> = TCP-Port on which the RCCMD-signal will be send

The option –a can be used several times, if a shutdown on more remote computers in the network should be executed.

Do not use the CD License key more than once. (Copyright regulations page 1). If more RCCMD modules need to be installed for the shutdown, additional CD license key must be purchased. Additional license keys are available from your UPS dealer, whereas the CD can be used again for the actual installation.

3.11 RCCMD for Windows NT/2000/XP/2003/2008

The RCCMD (remote console command) is a program that allows the execution of programs on remote computers. This tool is part of all UPSMAN supported operating systems with the exception of Windows 3.x.. With this tool it is possible to connect different operating systems. Is the UPS-Management Software installed on a Windows NT/2000/XP computer and should a remote shutdown be executed on a computer with a different operating system in a heterogeneous network, the RCCMD tool is necessary.

Attention: For first time users we do recommend the use of the RCCMD Wizard, which makes the configuration easier. Please start the RCCMD Wizard from your program group.

Attention: Please do not use the wizard and manual settings at the same time.

Now the RCCMD has been installed and configured to execute C:\ups\shutdown.bat.

3.12 RCCMD for Windows 2008 Server Core x64

The configuration of the RCCMD Software on Windows 2008 Server Core x64 got one specific. It is required to start the RCCMD configuration out of the default folder C:\RCCMD with the following command:

C:\RCCMD>RCCNF NT.EXE

Please take a look into the chapter for the installation procedure and into the chapter for the configuration of RCCMD.



Fig. 59: RCCMD Configuration

3.13 Older RCCMD Configuration

Attention: In the following we are describing the RCCMD configuration of the Windows tool "Rccnf_nt.exe", which was delivered until 04/2012. All functions are equal to the newer RCCMD WebInterface version, which is delivered since 05/2012. The detailed functions of RCCMD are user interface independent and will be described for the older RCCMD version.

<u>RCCMD Configuration "Introduction":</u> Make sure that "Install RCCMD client" is marked.

Click the "Next" button.



Fig. 60: Client Installation

% Client installation		
	IP address list of all RCCMD servers that are shutdown command to this client (no entry m	e allowed to send a leans:every server). Add Address
UPS UPS	ress Enter an IP address (for example 192.33.44.55) IP address or name: 192.168.222.243 OK Cancel	Address dress tings dvanced tings like IP bind, port use the res. Configure
RCCMD ver. 4.0.1.7	<back next=""></back>	Cancel

Fig. 61: Add IP-Address Window

Attention: If you do not enter an address, then every server has the permission to send a shutdown command. If more than one CS121/CS141 or rather UPSMAN is existent, thus a redundancy situation, you need to enter more than one address as authorized sender.

RCCMD Configuration "IP address":

To enter an authorized IP-Adress of a sender click on "Add Address".

Add the IP address of the RCCMD server, which is allowed to send a shutdown to this client.

Click the "**OK**" button.

<u>RCCMD Configuration</u> "Advanced network settings":

If you want to use the secure connection (**SSL**), click the "**Configure...**" button and check the "SSL" box and you can change the **port** for the messages..

Click on the "OK" button and then next.



Fig. 62: Advanced Network Settings

<u>RCCMD Configuration</u> "UPSMAN alive checking":

If you want to use the UPSMAN alive checking (recommended), check the "Enable connection check" box. Alive check is a signal, send out to the UPSMAN or CS121/CS141 on port 5769 to check if the UPSMAN has still UPS data - or not. If this fails, the scriptfile alive.bat will be executed which causes a messagbox coming up. The polling rate (default 30 min.) defines the polling of the UPSMAN service, connect retries (default 5) means after 5 unsuccessful connection tries an alarm will be triggered.



Fig. 63: UPSMAN Alive Checking / Redundancy Window

RCCMD Configuration "Use RCCMD Traps":

The function "**Use RCCMD Traps**" enables UPSMAN/RCCMD/UNMS traps, which show the UPS status as a trap message. If activated it will display a local message when the UPS status of the UPSMAN/RCCMD server changes.

RCCMD Configuration

"Test connections...":

If you click the "**Test connection(s)**..." button, the UPSMAN alive checking of the entered IP addresses will start (port 5769 will be tested).



Fig. 64: Check UPSMAN Connection Windows

RCCMD Configuration "Browser...":

If you click the "**Browse...**" button, you will get a selection of the default batch files.

Organisieren 🔻 Neuer	Ordner			8== 🗸	
A faunchen	Name	Änderungsdatum	Тур	Größe	
Öffentlich	inst efa	02.08.2011.10-57	Dataiordpar		
	inst_crg	01.08.2011 15:06	Dateiordner		
Downloads	manual	01.08.2011 15:06	Dateiordner		
Zuletzt geändert	Uninstall RCCMD-Client	01.08.2011 15:06	Dateiordner		
a Bibliotheken	alive.bat	11.04.2003 09:19	Windows-Batchda	1 KB	
Dokumente	aux off test.bat	22.06.2011 15:44	Windows-Batchda	1 KB	
📃 Zuletzt besucht	aux_on_test.bat	22.06.2011 15:38	Windows-Batchda	1 KB	
	Checkmsg.bat	11.04.2003 09:18	Windows-Batchda	1 KB	
🗃 Bibliotheken	a execute.bat	30.01.2006 13:07	Windows-Batchda	1 KB	
🖴 Bilder	🚳 mail.bat	22.04.2002 11:44	Windows-Batchda	1 KB	
Dokumente	🚳 message.bat	03.08.2011 10:58	Windows-Batchda	1 KB	
🎝 Musik	🚳 restart.bat	10.12.2001 17:16	Windows-Batchda	1 KB	
😸 Videos	SDSRV.BAT	24.01.2000 10:44	Windows-Batchda	1 KB	
	SHUTDOWN.BAT	03.08.2011 10:58	Windows-Batchda	1 KB	
Computer -	ShutdownSuppressed.bat	04.12.2008 11:59	Windows-Batchda	1 KB	

Fig. 65: Client Check Connection Batch File Window

RCCMD Configuration "Default setting":

If you click the "Default setting" button, you will get back to the default batchfile (alive.bat).

At the failure of the UPSMAN alive checking, you can define an executing file or edit the default file "alive.bat": (file contents as follows):

@echo off

rem *** "messagetext" %1 == ip-address, %2 == date, %3 == time *** "title" -c counter for beeps

start /b msg.exe "Check Upsman %1 failed (%2, %3)" "ATTENTION RCCMD:" -c:1

RCCMD Configuration "Audible Settings":

You can define the "Audible Settings" as follows:

- Beep off
- Beep endless
- Beep amount (1 to 9)
RCCMD Configuration "Edit file": Logfile configuration



Fig. 66: Configure / Edit Bat Files

When you click the button "View log", you can configure the log file size and edit the executing bat files in this installation window.

rccmd.log - Editor	
Datei Bearbeiten Format Ansicht ?	
09/10/2008,03:10:17, RCCMD:	: UPSMAN/RCCMD Evaluation version - testing purpose only, this software will stop working in 30 days.
09/10/2008,03:10:17, RCCMD:	RcvThreadUdp started
09/10/2008,03:10:17, RCCMD:	: RCCMD Listen Mode started.
09/10/2008,08:46:37, RCCMD:	: Broadcast-Message from 192.168.202.21 received
09/10/2008,08:52:33, RCCMD:	Broadcast-Message from 192.168.202.92 received
09/10/2008,09:08:15, RCCMD:	: Broadcast-Message from 192.168.202.21 received
09/10/2008,10:15:24, RCCMD:	Broadcast-Message from 192.168.202.21 received
09/10/2008,13:26:54, RCCMD:	RcvThreadUdp stopped
09/10/2008,13:26:54, RCCMD:	: RCCMD Listen Mode stopped
09/10/2008,13:27:01, RCCMD:	. RcvThreadUdp started
09/10/2008,13:27:01, RCCMD:	. SendThreadCheckUpsman started
09/10/2008,13:27:01, RCCMD:	: RCCMD Listen Mode started.
09/10/2008,13:27:01, RCCMD:	: Broadcast-Message from 192.108.202.29 received
U9/10/2008,13:27:01, RCCMD:	; Broadcast-Message from 192,108,202,29 received
09/10/2008,13:27:01, RCCMD:	; Broadcast-Message from 192.108.202.29 received
09/10/2008,13:27:28, RCCMU:	RCVInreadudp Stopped
09/10/2008,13:27:28, RCCMU:	: KCUMU LISTEN MODE STOPPED
00/10/2000,13:27:20, RCCMD:	Sendin read/headses stopped
00/10/2000,13:27:32, RCCMD:	Ber The adulta chanted
09/10/2000,13:27:32, RCCMD:	. RCVINIPEADUD Started
00/10/2000,13.27.32, RCCMD.	- Record Listen Mode Started.
09/10/2000,13:27:32, RCCMD	Broadcast_Message from 102.168.707.70 received
09/10/2008 13:27:32, RCCMD	Broadcast Message from 192 168 202 9 received
09/10/2008 16:05:05 RCCMD	Broadcast-Message from 192.168.202.21 received
09/10/2008.16:38:32, RCCMD	RvThreadulda stooned
09/10/2008.16:38:33, RCCMD:	RCCMD Listen Node stopped
09/10/2008.16:38:33, RCCMD:	SendThreadCheckUpsman stopped
09/10/2008,16:38:38, RCCMD:	: SendThreadCheckUpsman started
09/10/2008,16:38:38, RCCMD:	: RcvThreadUdp started
09/10/2008,16:38:38, RCCMD:	: RCCMD Listen Mode started.

Fig. 67: RCCMD Log File

<u>RCCMD Configuration "Email settings":</u> If you want to send **emails** via RCCMD, click the "**Configure...**" button.

Enter the accordant parameter.

Click the "**OK**" button.



Fig. 68: RCCMD Email Settings

Use the following RCCMD command: mail "receiver address" text



Fig. 69: CS121/CS141 Email Command

If you want to change the shutdown sequence, click the "**Configure...**" button..

	Configure shutdown sequent	.c		
	File: C:\Program Files\RCCMD	\shutdown.bat		
	Available Commands	Current Sequence		
Star Clic	Log off user Power off Windows Restart Windows Hibernate Windows Suspend Windows Quit Lotus Notes Quit Siemens SIMATIC Quit Applications	Shut down Windows >> <	•	×
	Description of	Add custom application		
	'Log off user'			
UP	Ends your session, leaving the	computer running on full power. Cancel OK		
		Ec	dit hile	
	Exe	cute at shutdown signal from RCCMD server:		
		² rogram Files\RCCMD\shutdown.bat Browse Ec	dit file	
RCCM	1D ver. 4.0.2.3	< Back Install	Ca	ncel

Fig. 70: RCCMD Shutdown Sequenz Configuration

3.13.1 RCCMD Client as Relay Station

In order to reach a bigger number of RCCMD receivers, one RCCMD client needs to be operated as relay station. The receiver will be configured so that it will receive a RCCMD signal and this signal will be used to start a batch file, which then starts even more RCCMD sender signals. This workstation is then sender and receiver at the same time and is therefore an important link in the UPS monitoring chain. Generally the usage of a RCCMD client as a relay station makes the management of several 100 RCCMD clients far easier than configuring this via the Web-interface of the CS121/CS141. Additionally, all Web-browser event configurations have a certain limitation so that it is required to use the relay function, if the number of jobs exceed 50 per event at the CS121 HW 13.

See the following script, which lets the RCCMDclient act as relay station:



Fig. 71: Example: Batch File RCCMD act as Relay Station

"**start**" is a Windows batch command to start the program call in several instances. This allows to execute programs simoultanously and speeds up the shutdown process. Please note that "start" is not supported in all Windows versions and it should be tested before using.

The RCCMD Version 4.0.1.0 or higher provides a grafical configuration of the RCCMD relay function.

Click the "Configure..." button..



Fig. 72: RCCMD Client Shutdown Configuration

Tag the "**RCCMD shutdown relay**" into the "**Available Commands**" window and click the ">" button, to add this function into the "Current Sequence".

77 CI Configure Shutdown Sequence File: C:\Program Files\RCCMD\shutdown.bat Available Commands Current Sequence Hibernate Windows Shut down Windows Suspend Windows > Quit Lotus Notes Quit Siemens SIMATIC Add command * Quit Applications < UP << ш Description of Add custom application 'RCCMD shutdown relay' Relays RCCMD shutdown command to another computer. Enter IP address or hostname of the remote computer you want to shutdown. RCCM Cancel ΟK

Fig. 73: RCCMD Shutdown Relay

Click the "**OK**" button.

The following panel will appear, in which you can enter the desired **IP address** range.

Additionally you can enable the SSL function.

Click the "OK" button.



Fig. 74: RCCMD Configuration IP Address Range



Fig. 75: RCCMD Shutdown Relay Removal

@ECHO off
REM Created by RCCMD configuration
SET path=%path%;C:\Program Files\RCCMD
rccmd.exe -s -a 192.168.200.10
rccmd.exe -s -a 192.168.200.11
rccmd.exe -s -a 192.168.200.12
rccmd.exe -s -a 192.168.200.13
rccmd.exe -s -a 192.168.200.14
rccmd.exe -s -a 192.168.200.15
rccmd.exe -s -a 192.168.200.16
rccmd.exe -s -a 192.168.200.17
rccmd.exe -s -a 192.168.200.18
rccmd.exe -s -a 192.168.200.19
rccmd.exe -s -a 192.168.200.20
ExitWin.exe shutdown force
0CLS

Fig. 76: RCCMD Shutdown Relay in the "Shutdwown.bat"

In difference to the above mentioned manual entries of an rccmd shutdown sequence, the graphical tool does not use the command "start" as parameter and therefore the shutdown is taken serially – which means one-after-the-other. Every IP address which does not respond to such an RCCMD call may take up to 10seconds (default) until the timeout is reached and the next command is executed.

If you want to **remove** single **IP addresses**, mark the line with its desired **IP address** and click the "<" button.

Click the "OK" button

The result of this graphical configuration of an RCCMD relay is found in the shutdown scriptfile "**shutdown.bat**".

4 RCCMD on UNIX (with graphical interface)

The RCCMD (remote console command) is a program that allows the execution of programs on remote computers. This tool is part of all UPSMAN supported operating systems as well as all GENEREX CS121/CS141 SNMP Manager, BACS Webmanager or RCCMD licensed SNMP Manager of other manufacturers (Rittal CMC, General Electric SNMP, Chloride Masterguard). With this tool it is possible to connect different operating systems. E.g. is the UPS-Management Software installed on a Unix computer and should a remote shutdown be executed on a computer with a different operating system in heterogene network, the RCCMD tool is necessary.

The RCCMD tool is based on the TCP/IP protocol. During the installation, the TCP/IP protocol should be installed in the first place.

The RCCMD tool works in two different modes. In the so called "Listen" mode, the program (as UNIX daemon in a background process) waits for a command from the "Send" mode of the RCCMD modul.

Note: The RCCMD Installer is using our delivered Java Runtime Environment version, which is used for the installation or rather uninstallation only. In addition the RCCMD Web Configurator is using a Java web-server (jetty). You can delete the RCCMD Web Configurator out of the autostart (etc/init.t/rccmdConfig) or rename the symlink /usr/rccmd/runRccmdConfig. Then RCCMD is running without Java!

<u>Attention</u>: If you got an OS without grafical interface, please take a look into the FAQs, how to mount a USB stick.

4.1 RCCMD installation on UNIX OS

Menu "Introduction":

It is required to install RCCMD as user root out of a rootshell or a graphical terminal. Extract the file **rccmd.tar**, copy it to a temporary folder and start the program "**installRCCMD.bin**". The following graphical installation will start.



Fig. 77: Installation – Introduction

Enter your license key.

Click the "Next" button.







Fig. 79: Installation – Choose Install Set

Menu "Choose Install Folder": Choose your desired installation path.

Click the "Next" button.





Menu "Choose Install Set": Choose the desired features.

Choose the additinal output options.

Click the "Next" button.



Fig. 81: Installation – RCCMD Messages

Menu "Pre-Installation Summary":

In the next menu you see an **overview** of your installation and you may now press "Install" to begin.

Click on "**Install**" button to start the installation.



Fig. 82: Installation – Pre-Installation Summary

Menü "Installing":

Select these **default values** for the RCCMD Weblf port and protocol or select new ones.



Fig. 83: Installation - Set Weblf Port

Please note the required **firewall** exceptions.

Click the "Next" button.



Fig. 84: Installation - Firewall Exceptions



Fig. 85: Installation - Enter password

Here you can set a password hint.

Click the "**Next**" button.

Introduction Introduction	Estade biot for the Decouver	
Choose Install Set	Enter a nint for the Password.	
Choose Install Folder Choose Shortcut Folder		
Pre-Installation Summary		_
Installing		
	Password Hint	

Fig. 86: Installation - Passworthinweis-Eingabe

Here you can change the default password.

A reminder appears that you have to configure RCCMD afterwards.

Click the "Next" button.



Fig. 87: Installation – Configuration Advice



Fig. 88: Installation - Start RCCMD now?

So, RCCMD has been installed successful. Click "**Done**"to finish the installation.



Fig. 89: Installation – Install Complete

Choose RCCMD start.

4.2 Silent Installation of RCCMD Installation of UNIX OS

A "Silent Installation" is an automated installation procedure, where the user inputs are received from a response file. This allows the user to install a software product without user input or graphical interface.

The RCCMD Software provides a silent installation, but it is required to enter some settings into the "installer.properties" file. This file is located into the CD folder \Rccmd\Linux\12.

This file provides Values to alter the behaviour of the installer.

You can preset Values for some internal Variables.

For the installer to find and use this file it is necessary to either rename

this file or pass a parameter to the installer when calling it.

If this file is called 'installer.properties' or has the same name as the

installer, e.g. 'install_RCCMD.properties' then the installer should

automatically use this file.

To call the installer with a parameter providing a properties file, the

installer need the parameter '-f' in this case the command line call looks

somewhat like this: "install_RCCMD.exe -f silent-installer.properties".

To set the installer User Interface without providing the variable in the

properties file, the parameter '-i' can be used.

E.g. "install_RCCMD.exe -i silent"

The interface options are "silent,gui,console" the gui option is default.

Choose Feature List

If you want to install a subset of features from this installer,

make a list of all the features you want to be installed.

The List must be entered in the CHOSEN_INSTALL_FEATURE_LIST variable.

Options for the list are: RCCMD, Weblf, XMessage

CHOSEN_INSTALL_FEATURE_LIST=RCCMD,Weblf,XMessage

This will set the User Interface of the installer

For installation in console modus, pass the parameter: "-i console" to

the installer.

#INSTALLER_UI=silent

This presets the Licensekey. This value is necessary for a silent

installation, because there is no other way to pass this information to

the installer.

#GXLICENSEKEY=

The Dialogbutton variable contains the answer to the pop-up question whether

the RCCMD should be started at system boot.

The value '0' (default) resembles the answer 'Yes' the value '1' corresponds ## to 'no'.

CONSOLE_START_RCCMD_NOW=0

This variable decides whether RCCMD is started after installer ends. Use with care! ## RCCMD should be configured before it is started! ## '0' resembles the answer 'Yes' the value '1' (default) corresponds ## to 'no'. #CONSOLE_START_RCCMD_NOW=1 ## Select the language for the installed version of RCCMD by setting the ## INST LANG variable to the desired country-code ## (e.g.: el,en,es,de,fr,he,it,ja,ko,pt,ru,tr,zh_cn). #INST LANG=en ## Select the destination where the program should be installed #USER_INSTALL_DIR=/usr/rccmd ## If the target System is a vSphere Management Assistant (vMA) ## please provide the name or IP for the ESXi host. #ESXI HOST=127.0.0.1 ## Weblf Settings ## -----## Here you can override default settings for access to the RCCMD Weblf. ## These settings are ignored, if the variable CHOSEN INSTALL FEATURE LIST ## is set and does not contain the Weblf feature. ## In interactive install modes (gui, console) the installer will check, whether ## the chosen port is free to be used. ## Valid values are: 1-65535 ## WEBIF PORT=8080 ## Valid protocols are: http, https

WEBIF_PROTOCOL=http

Fig. 90: Content of the "installer.properties"

It is required to remove the hash mark prior of the variable INSTALLER_UI=silent. In addition the setting of the license key is required behind the variable GXLICENSEKEY=. Execute the "installRCCMD.bin" file as root.

Further installation options are: INSTALLER_UI=console for a non-grafical user input console or: INSTALLER_UI=gui to use the graphical installation (default).

4.3 Console Installation of RCCMD Installation of UNIX OS

A console installation is required, if your target operating system does not have a grafical interface for the execution of the "installRCCMD.bin". This console installation works interactive and will ask for user input, defined in the installation script file "installer.properties".



This concerns the installation only. The configuration will be performed via editor into the "rccmd.cfg" file.

For the activation of the console installation, it is required to remove the hash mark prior of the variable INSTALLER_UI= and to enter console. This is the interactive RCCMD installation onto the console. Execute as root the "installRCCMD.bin" file.

By the configuration you can change the language, to receive the right Tooltips! Please use the variable INST_LANG=de .

4.3.1 Example of a Console Installation

Adjust the file "installer.properties" accordingly like described above or execute the following command:

./installRCCMD.bin -i console

Select the desired language and note the introduction.

Confirm with "ENTER".



It continues with the OS and platform detection, the RCCMD license key and the license contract.

Confirm with "ENTER".

SysOS & Platform OS & CPU architecture: unknown unknown GNU/Linux PRESS <ENTER> TO CONTINUE: Enter your license key Enter your license key Usually the license key is located on the installation booklet, or on a label on the reverse sid Enter license key 12SHARX3-1234567 License Agreement Installation and Use of RCCMD-Client Requires Acceptance of the Following License Agreement: Copyright The information contained in the manual of this product is nonconditional and may be changed without due notice. GENEREX nor the reseller of this product undertakes no obligations with this information. The software described in this brochure is given on the basis of a license contract and an obligation to secrecy (i.e. an obligation not to further publicise

Fig. 92: Console Installation - OS Detection, License Agreement



Fig. 93: Console Installation - Features Selection

It continues with the selection of the RCCMD **automatic start**, Weblf protocol and port.

Confirm with "ENTER".



Fig. 94: Console Installation - Autostart

Choose the protocol for Set WebIf Protocol the web interface. This is the default protocol to access the RCCMD WebIf. Select your preferred protocol here: Confirm with "ENTER". ->1- http 2- https ENTER A COMMA-SEPARATED LIST OF NUMBERS REPRESENTING THE DESIRED CHOICES, OR PRESS <ENTER> TO ACCEPT THE DEFAULT: _____ Set WebIf Port This is the default network port to acces the RCCMD WebIf. Select your preferred port here: (DEFAILET 8080) Fig. 95: Console Installation – Weblf Selection Please note, that it is RCCMD configuration necessary required to configure the RCCMD Software and It is necessary to configure RCCMD. Please use the web interface at the required firewall "http://<address of this computer>:8080". exceptions. Should you decide to run RCCMD with this default configuration RCCMD will accept messages from any ip-address! Please set one or more valid ip-addresses that are allowed to send (shutdown-) messages to this RCCMD. PRESS <ENTER> TO CONTINUE: Confirm with "ENTER". Required Firewall Exceptions Required Firewall Exceptions. Make sure following Ports are not blocked by any firewall: Ports 8080 tcp (WebIf Server), if installed Ports 6003 & 5769 tcp,udp (RCCMD) PRESS <ENTER> TO CONTINUE: Fig. 96: Console Installation - RCCMD Configuration required, Firewall Exceptions _____ Do you want to run RCCMD jetzt starten? RCCMD now ? Es wird empfohlen RCCMD im WebIf zu konfigurieren und von dort zu starten. Zum manuellen Starten verwenden Sie: "/usr/rccmd/rccmdctl start" oder das By pressing "Enter"you Webinterface. exit the installation. Soll RCCMD jetzt gestartet werden? ->1- 0K 2- Abbrechen GEBEN SIE DIE NUMMER DER GEWÜNSCHTEN KOMPONENTE AN, ODER DRÜCKEN SIE DIE EINGABETASTE, UM DIE STANDARDEINSTELLUNGEN ZU ÜBERNEHMEN: Installation abgeschlossen Herzlichen Glückwunsch. RCCMD-Client wurde erfolgreich im folgenden Verzeichnis installiert: /usr/rccmd DRÜCKEN SIE DIE EINGABETASTE, UM DEN INSTALLER ZU BEENDEN

Fig. 97: Console Installation - RCCMD Start, Installation Complete

4.4 RCCMD WebInterface (from Version 4.2.0.0)

RCCMD provides its own web-interface from version 4.2.0.0 or higher. Therefore it is possible to configure and control RCCMD remotely. After the successful installation, your default web-browser of your OS starts automatically.

Enter your password and click on Login.

RCCMD	IP: 0:0:0:0:0:0:0:1
System Login: Username: admin Password: Login	System Status Current status of RCCMD is : not running

Fig. 98: RCCMD WebInterface

Menu "Connections":

You can enter the **IP addresses** of the allowed RCCMD senders (CS121/CS141/UPSMAN) into the "Connections" menu. Click the "**Insert**" button to enter the IP address of the 1st ender. Click the "**Remove**" button, if you want to remove the already entered IP address. Click the "**Edit**" button, if you want to edit the entered IP address.

1

Attention: If you do not enter an address, then every server has the permission to send a shutdown command.

You can define under "**Protocol**", if RCCMD should use **SSL certificates**. Enable the "**Reject expired SSL certificates**", if you want to reject connections with expired certificates. Please take a look into chapter 6.6.1 for further information about RCCMD with SSL.



Fig. 99: RCCMD WebInterface - Connections

Click "**Save Changes**" before leaving this site to save your changes!

Menu "Heartbeats":

You can enable the "UPSMAN Alive Check" feature into the menu "Heartbeats". This check is a signal, that will be send to the CS121/CS141/UPSMAN via port 5769, if the UPSMAN service still got UPS data. If not, the script file "alive.bat" will be executed, which will trigger an accordant pop-up message.

The feature "by the use of CS121/UPSMAN Traps" provides UPSMAN/RCCMD/UNMS messages, which will display the UPS status as message. If enabled, this feature will trigger a message, if the UPS status of the UPSMAN/RCCMD servers has changed.

The feature "**by polling CS121/UPSMAN every x seconds**" provides the pure signal polling without receiving UPS data or rather messages.

RCCMD	IP: 0:0:0:0:0:0:0:1
Status • View Event Log • System Status • Logout Options • Heartbeats • Shutdown Settings • E-mail Settings • Notification Settings • Notification Settings • Notification Settings • Web Configuration • User Settings	Heartbeats The UPS alive check can be used to monitor the availability of each sender.
• Manual • Info	Test UPS connections: Run alive check now

Fig. 100: RCCMD WebInterface - Heartbeats

The polling rate (default 1800 seconds) defines the polling of the UPSMAN service, connection retries (default 100) means after 100 unsuccessful connection tries an alarm will be triggered.

You can test the UPS connection, if you click the "Run alive check now..." button (the port 5769 will be tested).

Click the "Save Changes" button prior of the leaving of this site to save your changes.

Menu "Redundancy":

You can enable the **redundancy management feature** into the menu "Redundancy". The **redundancy level** defines the number of redundant senders in the redundancy group. This means, that level 1+ senders must have sent a shutdown signal before this RCCMD starts its shutdown sequence.

When redundancy suppresses a shutdown, then RCCMD will trigger the "suppressed.bat". You can edit this file, if you click the "**Edit file...**" button.

RCCMD	IP: 0:0:0:0:0:0:0:1		
Status	Redundancy		
View Event LogSystem StatusLogout	The redundancy level defines the number of redundant senders in the redundancy group. This means that level +1 senders must have sent a shutdown signal before this RCCMD starts it's shutdown sequence.		
Options	Enable RCCMD redundancy function		
Connections	Group Sender Addresses		
Redundancy	☑ 192.168.200.97		
 E-mail Settings Notification Settings Advanced Settings Web Configuration User Settings 	Image: Weight of the second		
Help			
Manual Info	When redundancy supresses a shutdown, then RCCMD will use the following setting:		
	Run this command file : C:\Program Files\RCCMD \ShutdownSuppressed.bat		
	Cance Save Changes		

Fig. 101: RCCMD WebInterface - Redundancy

Please note, that it is required to configure a reset of the redundancy alarm on the sender (CS121/CS141/UPSMAN). You can use the function **"Send RCCMD cancel shutdown**", to discard a previously sent shutdown automatically. If a shutdown was suppressed, because of the existing redundancy at this point of time, but the problem was solved at the UPS intermediate, you can reset the shutdown with the function **"Send RCCMD cancel shutdown**". The client, which received the shutdown, will be encouraged to reset it.

Please take a look into chapter for further information about **RCCMD with redundancy**.

Click the "Save Changes" button prior of the leaving of this site to save your changes.

Menu "Shutdown Settings":

You can change or rather extend the shutdown sequence into the "Shutdown Settings" menu.



Fig. 102: RCCMD WebInterface – Shutdown Settings

Click the "Save Changes" button prior of the leaving of this site to save your changes.

Menu "Notification Settings":

You can change or rather extend the **default bat files** for E-Mail, Message and Execute, if you click the "Edit File..." button.

Click the "**Save Changes**" button prior of the leaving of this site to save your changes.



Fig. 103: RCCMD WebInterface - Notification Settings

Menu "Advanced Settings":

You can define the **maximum size of** the event logfile into the menu "Advanced Settings", where the overwriting of older entries will start, the **RCCMD bindings for the IP address**, the RCCMD listener **TCP port** and the RCCMD **Tray Message Port**, which will be used for the RCCMD messages.

Click the "**Save Changes**" button prior of the leaving of this site to save your changes.

Menu "Web Configuration":

You can change the default password for the user "admin" into the menu "Web Configuration". In addition you can disable the **HTTPS protocol**, if you just want to use the HTTP protocol. The RCCMD version 4.2.3.0 or higher provides the feature of changing the **default ports** for HTTP and HTTPS..

Click the "Save Changes" button prior of the leaving of this site to save your changes.

Afterwards you have to restart the RCCMD service!



Fig. 104: RCCMD WebInterface - Advanced Setting

RCCMD	IP: 0:0:0:	0:0:0:0:1		
Status	Web Access			
View Event Log System Status	Configure the web server settings her	re.		
 Logout 	Select the access protocol for this use	er interface		
0-4-	Note: Changes in protocol will become active upon the next start-up.			
Options	Protocol:	HTTPS - With Security		
Connections Heartbeats Redundancy Shutdown Settings E-mail Settings	Port for http:	8443		
Notification Settings Advanced Settings Web Configuration	Port for https:	8443		
Oser octange	Restart RCCMD Weblf			

Fig. 105: RCCMD WebInterface - Web Access

"User Settings" menu:

Here you can change the default password for "admin".

Afterwards you have to restart the RCCMD service!

Click the "Save Changes" button prior of the leaving of this site to save your changes.

RCCMD	IP: 0:0:0:	0:0:0:0:1
Status View Event Log System Status Logout 	User Settings Set login data. Administrator User Name:	admin
Options	Current Administrator	Current Password
Connections Heartbeats Redundancy Shutdown Settings E-mail Settings	Password: New Administrator Password:	New Password
 Notification Settings Advanced Settings Mode Configuration 	Password Hint:	"mamacita"
User Settings	Restart RCCMD Webif to apply saved	I changes to the password.

Fig. 106: RCCMD WebInterface - User Settings

A https://192.168.200.131:8443/Status/viewEventLog.htm				
RCCMD	IP:	192	2.168.200.131	
Status	Event Log These are the events that have occured on this computer.			
Logout	Date	Time	Event	
Options	2014-09-10	15:51:48	rccmd[20033]: Copyright (c) GENEREX GmbH 1996-2010. All rights reserved	
Connections Heartbeats	2014-09-10	15:51:48	rccmd[20033]: Masterlizenz - Nur for Testzwecke - nicht for Installationen beim Kunden verwenden.	
 Redundancy Shutdown Settings Notification Settings 	2014-09-10	15:51:48	rccmd[20033]: V4.3.0.1 - Unix Remote Command Program	
 Advanced Settings Web Configuration 	2014-09-10	15:51:50	rccmd[20041]: Listen Mode started.	
 User Settings 	2014-09-10	15:51:50	rccmd[20041]: RcvThreadUdp gestartet	
Help	2014-09-10	15:51:50	rccmd[20041]: SendThreadCheckUpsman gestartet	
. New 1	2014-09-10	15:51:55	rccmd[20041]: Upsman at 192.168.200.97 alive.	
• Info			Reload Log File	

Fig. 107: RCCMD WebInterface - Event Log

Menu "Status, System Status":

You can check the current **status** of RCCMD into the menu "Status, System Status", **update** the status and restart or rather stop/start the RCCMD service.

<u>" Logout":</u>

Here you can logout when you have finished the configuration.



Fig. 108: RCCMD WebInterface - System Status

Menu "Status, View Event Log": You can see the logging of the events into the menu "View Event Log".

Menu "Help":

You can open the RCCMD user manual into the menu "Help" ad you can follow the link to <u>www.generex.de</u>.

Click on Info to view the installer version.



Fig. 109: RCCMD WebInterface – Help

4.5 RCCMD WebInterface Remote Access

RCCMD provides its own web-interface from version 4.2.0.0 or higher. Therefore it is possible to configure and control RCCMD remotely. Please note, that the firewall port 8443 TCP is enabled. Enter the following into a web-browser, to connect to a workstation, where RCCMD is running:

https://IP address of the RCCMD client: 8443

Now you can configure RCCMD remotely.

♦	⊽ ℃
RCCMD	IP: 192.168.200.130
System Login: Username: admin Password: Login	System Status Current status of RCCMD is : running



4.6 Automatic Reset of the Redundancy Alarm

You can use the function "Send RCCMD cancel shutdown", to discard a previously sent shutdown automatically. If a shutdown was suppressed, because of the existing redundancy at this point of time, but the problem was solved at the UPS intermediate, you can reset the shutdown with the function "Send RCCMD cancel shutdown". The client, which received the shutdown, will be encouraged to reset it.

This command can be set individually into your CS121/CS141, UPSMAN or BACS WEBMANAGER Events/Alarms configuration, but makes sense only, if the event, which will send the command, is true, if the UPS is back in normal condition. For this the events "**POWER RESTORED**", "**BATTERY LOW OFF**", "**UPSMAN STARTED**" and "**GENERAL ALARM OFF**" are suitable, if they are provided from your UPS into the CS121/CS141. The job "**Send RCCMD cancel shutdown**" would be set into these all-clear events, so that e. g. at restart of the UPS, the event "**UPSMAN STARTED**" would reset the accordant RCCMD client automatically.

Alternative: Should the job **"Send RCCMD cancel shutdown"** not be present into your CS121/CS141, UPSMAN or BACS WEBMANAGER, you can use the job **"Send RCCMD shutdown to remote client"** or rather **"Send RCCMD execute to remote client"** alternatively.

The parameter "WAKEUP" got the same function like the "Send RCCMD cancel shutdown" and resets the redundancy alarm of a RCCMD Client into initial state. For this the events "POWER RESTORED", "BATTERY LOW OFF", "UPSMAN STARTED" and "GENERAL ALARM OFF" are suitable too, to configure the function "Send RCCMD command to remote client" with the "WAKEUP" command.

'Power restored' Job 3	
Function:	Send RCCMD Command to remote client 👻
Client IP:	192.168.200.17
Client Port (Default: 6003):	6003
Command:	WAKEUP
	SS4 Command

Fig. 111: CS121/CS141 Configuration "WAKEUP" Command

Menu "CS121/CS141":

Click into the CS121/CS141 menu "Events/Alarms" onto "Power restored" and add a new job. Select the function "Send RCCMD command to remote client", set the accordant IP address of the RCCMD client and enter the command "WAKEUP".

Insert Function	×
Function: Send RC	CMD EXECUTE to remote client
Function Parameters:	
Parameter	Value
ADDRESS	192.168.200.17
PORT	6003
	Enable SSL
PARAMET	WAREUP
Additional Parameters	can be entered here
 Do immediately, or 	nce O Doafter 🕕 Seconds
C Do Always	O Do after 0 Seconds, repeat.
O DoEvery 0	Seconds O Do at 0 Minutes remaining
	Cancel OK

Fig. 112: UPSMAN Configuration "WAKEUP" Command

Configuration "UPSMAN":

Click into the UPSMAN configuration the buttons "Advanced Users", "Events", "Power restored" and "Insert". Add the function "Send RCCMD execute to remote client", set the accordant IP address of the RCCMD client and enter the command "WAKEUP".

01/05/2010,14:59:54, RC	CCMD: Rc	ThreadUdp started
01/05/2010,14:59:54, RC	CCMD: RC	CMD Listen Mode started.
01/05/2010,14:59:54, RC	CCMD: Ser	ndThreadCheckUpsman started
01/05/2010,14:59:54, RC	CCMD: RCO	CMD Trap client logged on to 192.168.222.177
01/05/2010,14:59:54, RC	CCMD: RC	CMD Trap client logged on to 192.168.222.246
01/05/2010,15:01:01, RC	CCMD: RC	CMD Trying to start program/job: ".\message.bat" "UPSMAN Notification
01/05/2010,15:01:01, RC	CCMD: RC	CMD program/job: ".\message.bat" "UPSMAN Notification [192.168.222.177
01/05/2010,15:01:03, RC	CCMD: RC	CMD message received from 192.168.222.177
01/05/2010,15:01:04, RC	CCMD: Shu	<pre>itdown suppressed, redundancy-level = 1, failure count = 1.</pre>
01/05/2010,15:01:04, RC	CCMD: RC	CMD Trying to start program/job: C:\RCCMD\ShutdownSuppressed.bat
01/05/2010,15:01:04, RC	CCMD: RC	CMD program/job: C:\RCCMD\ShutdownSuppressed.bat executed. OK
01/05/2010,15:02:06, RC	CCMD: RC	CMD Trying to start program/job: ".\message.bat" "UPSMAN Notification
01/05/2010,15:02:06, RC	CCMD: RC	CMD program/job: ".\message.bat" "UPSMAN Notification [192.168.222.177
01/05/2010,15:02:09, RC	CCMD: RC	CMD message received from 192.168.222.177
01/05/2010,15:02:09, RC	CCMD: WAI	KEUP command received from 192.168.222.177.
01/05/2010,15:02:09, RC	CCMD: WAI	KEUP IP 192.168.222.177



4.7 RCCMD with SSL for UNIX

The Secure Sockets Layer (SSL) protocol is a cryptographic protocol that provides security and data integrity for communications over TCP/IP networks..

Configuration menu "SNMP Adapter":

Use your Web-browser to navigate to the address of your UPS Web-Manager. Click the "Network & Security" configuration button and enable the SSL network feature "Use RCCMD SSL".

Network & Security Settings				
MAC Address:	00-03-05-0E-09-E1		Enable Telnet Server:	V
Network Card Speed:	AUTO 👻		Enable HTTP Server:	V
Local Address:	192.168.202.98		HTTP Port:	80
Gateway Address:	192.168.202.1		HTTP Refresh Time:	10
Subnet Mask:	255.255.255.0		HTTP Default Page:	UPS Status
DNS Server:	192.168.202.8		Enable HTTP Tooltips:	V
			Enable UpsMon Server:	V
Change Administrator Password:			Use RCCMD2 Traps:	
Confirm Password:			Enable RCCMD Listener:	
			RCCMD Listener Port:	6002
Change UpsMon & SS4 Password:		Clear	RCCMD Timeout:	180
Confirm Password:				
Use UpsMon Password for Web Pages:			Use noomb sst.	

Fig. 114: RCCMD SSL Settings

Menu "Timeserver":

The SSL network feature requires correct time settings, so it is required to configure a timeserver. Click the "Timeserver" configuration button and enter the **IP address** of at least one timeserver.

Click the "Apply" button.

Time Settings							?
RFC868 TCP compatible time To disable the timeserver feat	eserver listening on p ture set timeserver a	oort 37 requ ddress 1 to	lired. 0.0.0.0.				
Some public timeservers (cou 129.6.15.29 : National Institut 192.53.103.103 : Physikalisch	uld be used for both j te of Standards and " h- Technische Bund	orotocols): Fechnology esanstalt					
Current system time:	Thu Dec 4 23:49:26	2008					
Timeserver Address 1:	192.53.103.103	SNTP	•				
Timeserver Address 2:	0.0.0.0	SNTP	•				
Timeserver Address 3:	0.0.0.0	SNTP	•				
Timezone:	(GMT+01:00) Amst	erdam, Ber	rlin, Bern, Rome, Stockh	olm, Vienna 🔻			
Automatically adjust clock for daylight saving changes:	📝 (implemented f	or europea	n timezones only)				
Connection Retries:	2						
Synchronize Time on incoming RAS connection:							
Synchronize Time on outgoing RAS connection:							
							Apply
ſ	Test Timeserver 1		est Timeserver 2	Test Timeserver 3	Synchronize C	S121 clock now	



Menu

<u>"Save Configuration":</u> Click the "Save Configuration" button and the "Save, Exit & Reboot" button to confirm your settings.

CS121 Configuration Manager **Reset to Factory Settings** \square Load the CS121 factory settings into the configuration editor. Cancel Recent Changes Ê Reset all changes and reload the saved settings. Save Configuration Write all changes to flash memory. Changes will be used after the next reboot. Backup Configuration Store a backup of the configuration on your local harddisk. (Use right mousebutton and "save target as") NOTE: For UPLOAD older config files to new firmware versions please contact support. Reboot Reboot the CS121 without saving configuration changes. Save, Exit & Reboot Write all changes to flash memory and reboot the CS121. (Please be patient after clicking here)

Fig. 116: Settings Confirmation

Menu "RCCMD Web Configurator":

Start the RCCMD Web Configurator again and enable the **SSL network** feature.

If you want to accept expired certificates, please enable the accordant function "Reject expired SSL certificates".

Restart RCCMD with the "Restart RCCMD" Button in the System Status.

Connections - Windows Internet Explorer	S
C C C Attp://localhost:8080/Option	ns/connections.htm
Datei Bearbeiten Ansicht Favoriten E	dras ?
😭 Favoriten 🝰 🙋 Web Slice-Katalog 👻	
Connections	
	0:0:0:0:0:0:1
Status Options Connections Heartbeats Redundancy Shutdown Settings Notification Settings Advanced Settings Web Configuration	Connections The list below identifies all senders that are allowed to connect to this listener. Note: An empty list means that every sender can connect to this listener. Sender IP Address 192.168.222.113 Insert Sender Pernove Sender Edit Sender Edit Sender Edit Sender Protocol The setting below increases the security of connections to this RCCMD Paccept only SSL connections (requires restarting RCCMD) Reject expired SSL certificates
→ Help	Cancel Save Changes

Fig. 117: SSL Configuration

4.7.1 RCCMD with own SSL certificates

In this chapter we will describe, how to use an own SSL certificate with RCCMD, e. g. OpenSSL (http://www.openssl.org):

Be your own certificate authority (CA)

Using OpenSSL it is quite simple to become your own CA. Just run:

CA.pl -newca

Done! Just ensure, that you select a useful CN (common name)!

Create your RCCMD certificate

You need to create your certificate for RCCMD now. As it will use it for verification, it should contain the same useful common name (CN), that you selected for the CA. The private key must not be encrypted to let the RCCMD Client (service) start without trouble. Therefore we use the "-nodes" option and the "-newreq" command:

CA.pl -newreq -nodes

Sign with your CA:

CA.pl -sign

Now create an empty filed named "rccmd.pem" and copy the cert information of "newcert.pem" (rccmd certificate), "newkey.pem" (private key) and "cacert.pem" (CA) into it. Please note, that the exact copying is required to use it without trouble!

Use your own RCCMD certificate

Do the following steps at the RCCMD Client and every sender (e. g. UPS Web Manager):

- Backup the existing "rccmd.pem"
- Replace the existing "rccmd.pem" with your own
- Restart the RCCMD Client
- Restart the RCCMD Sender

4.8 Alternative RCCMD Configuration with Editor

It is required to perform the configuration via editor, if you do not have a graphical interface. The configuration file is the "rccmd.cfg" and is located into the "/usr/rccmd" folder (default). The file contains the description of the single configuration parameters. Please take a look into the following example of the "rccmd.cfg" file and change the settings to your installation:

RCCMD Configuration # Bind on Interface # Defines on which interface we listen for incoming commands # Default: 0.0.0.0 (All possible interfaces on this host) ListenAddress=0.0.0.0 # Listen on Port # Defines on which interface port we listen for incoming commands. # Default: 6003 ListenPort=6003 # Enable UDP # Defines if we should listen for rccmd (UDP) broadcasts # Default: true ListenUDP=true # Access Control List # A list of valid sender addresses, only its members can connect to us. # Seperate IP addresses with a space, e.g.: "192.168.0.1 192.168.0.2". # Default: <empty> (Everyone is allowed to connect to us) AllowedAddresses= # Alive Check # Enable Alive Check # Defines if we should perform UPSMan alive checking. # Default: false AliveEnabled=false # Alive Check Rate # Defines the interval of UPSMan alive checking, in seconds. # Default: 1800 AliveInterval=1800 # Alive Retry Rate # Defines the number of UPSMan alive checking retries, in case of problems. # Default: 0 AliveRetries=5 # Alive Check Group Members List # A list of UPS device addresses that should be checked periodically. # Seperate IP addresses with a space, e.g.: "192.168.0.1 192.168.0.2". # Default: <empty> (No alive checking) AliveAddresses= # Alive Program

Full path to script that is executed when an alive check fails.

Default: rccmd_notalive.sh

AliveProg=

Redundancy Mode

Enable Redundancy

Defines if we should operate in redundancy mode.

Requires an enabled <Alive Check> configuration.

Default: false

RedundancyEnabled=false

Redundancy Group Members List

A list of redundancy group member addresses, must be also in <AliveAddresses>.

Seperate IP addresses with a space, e.g.: "192.168.0.1 192.168.0.2".

Default: <empty> (No redundancy available)

RedundancyAddresses=

Redundancy Level

Defines how many of the <RedundancyAddresses> are redundant.

Shutdown is executed when the number of shutdown requests exceeds this number.

Default: 0 (No redundancy available)

RedundancyLevel=0

Enable Redundancy Script

Defines if we should NOT execute a script when redundancy suppresses a shutdown.

Default: false.

RedundancyBatchSuppress=false

Redundancy Script

Full path to script that is executed when redundancy suppresses a shutdown.

Default: ShutdownSuppressed.sh

RedundancyBatchFile=

If no entries are changed in this default rccmd.cfg file, all incoming RCCMD commands will be executed from any sender and use the default shutdown scriptfile "rccmd_shutdown.sh".

4.9 Older RCCMD Configuration on UNIX OS

Menu "Addresses":

Add the **IP address** of the RCCMD server, which is allowed to send a shutdown to this client.

Attention: If you do not enter an address, then every server has the permission to send a shutdown command. If more than one CS121/CS141 or UPSMAN is existent, thus a redundancy situation, you need to enter more than one address as authorized sender.

RCCMD Configuration	_ ×
Addresses Inctions Logfile Execute Control IP address list of all RCCMD servers that are allowed to send a shutdown command to this client (no entry means:every server). Add Address Delete Address RCCMD IP Address I IP address (for example 192.33.44.55): IP address or name: OK Cancel IF address or name: OK Cancel	
RCCMDCFG V4.0.0.11	ncel

Fig. 118: Configuration - RCCMD Sender IP Address

Click the "OK" button".

Menu "Functions":

If you want to use the "UPSMAN alive checking" (recommended), check the "Enable connection check" box. Alive check is a signal, send out to the UPSMAN or CS121/CS141 on port 5769 to check if the UPSMAN has still UPS data – or not. If this fails, the scriptfile rccmd_execute.sh will be executed which causes a messagbox coming up. The polling rate (default 30 min.) defines the polling of the UPSMAN service, connect retries (default 5) means after 5 unsuccessful connection tries an alarm will be triggered.

The function "**Use RCCMD Traps**" enables UPSMAN/RCCMD/UNMS traps, which show the UPS status as a trap message. If activated it will display a local message when the UPS status of the UPSMAN/RCCMD server changes.

RCCMD Configuration 🥥		_ ×
UPS UPSMAR	Addresses Functions Logfile Execute Control IIPSMAN alive checking Inable connection check Polling rate: 30 min Connection retries: 5 Execute at failure: //usr/rccmd/rccmd_execute.sh Browse Default Setti Edit Eile RCCMD Redundancy Use RCCMD group/redundancy	
IRCCMDCFG V4.0.0.11	<u>Save</u>	ncel

Fig. 119: Configuration – Functions

If you click the "**Test connection(s)...**" button, the UPSMAN alive checking of the entered IP addresses will start (port 5769 will be tested).

If you click the "Browse..." button, you will get a selection of the default sh-files.

By clicking "Default Setting" you will attain the "rccmd_execute.sh".

By encounting an error with UPSMAN Alive Check you can configure an executable file or edit the default file.

At UPS installation RCCMD offers **redundancy management functionality** as follows:

Every UPS must be equipped with a CS121/CS141 or UPSMAN software computer. When ticking the box "**Use RCCMD group/redundancy**" – you are guided to a menue where you can choose which CS121/CS141/UPSMAN are supplying this RCCMD client. E.g. if 4 CS121/CS141/UPSMAN are installed into 4 UPS – than each may send a shutdown signal to this RCCMD client.

Click the "Save" button".

RCCMD Configuration	3
UPS UPS UPS UPSMAN	Addresses Functions Logfile Execute Control UPSMAN alive checking Enable connection check Test connection(s) Polling rate: 30 min Connection retries: 5 Execute at failure: //usr/rccmd/rccmd_execute.sh Browse Default Setti Edit Elle RCCMD Redundancy Use RCCMD group/redundancy
IRCCMDCFG V4.0.0.11	<u>Save</u> <u>C</u> ancel

Fig. 120: Configuration – RCCMD Redundancy

The redundancy level defines how many shutdown signals are required to execute the shutdown.bat file. As long as this number is not exceeded, the RCCMD client will react on such a shutdown signal only with a messagebox "Execute command when redundancy suppresses a shutdown" box. This will show a message to inform the user that there has been a shutdown signal from one of the UPS in the group, but since all other UPS are still reading OK – or did not yet send any shutdown, the shutdown is suppressed. 3 shutdown signals would create messages in the above example (redundancy level 3) only, just the 4th signal would initiate the shutdown.

Menu "Logfile":

You can configure the **log file** size and edit the executing sh-files.

Click the "Save" button".

RCCMD Configuration	Addresses Functions Logfile Execute Control Max. logfile-size 1024 b	
UPS UPSMAN		
IRCCMDCFG V4.0.0.11	Save	ancel

Fig. 121: Configuration – RCCMD Log File



Fig. 122: Configuration - RCCMD Execute

Menu "Execute":

If you click the "**Configure...**" button, you will be able to enter the **mail settings** and to use the mail function of RCCMD.



Fig. 123: Konfiguration – RCCMD Configure Email

The RCCMD version 4.0.2.0 provides a grafical configuration of the **shutdown sequence**.

Click the "Save" button.

Click the "**Configure**" button to enter the shutdown sequence settings.

-	Execute at mail signal from RCCMD server:
	/usr/rccmd/rccmd_mail.sh
	Configure Edit File Execute at message signal from RCCMD server:
	/usr/rccmd/rccmd_message.sh
	Edit File
UPS	Execute at execute signal from RCCMD server:
UPSMAN	/usr/rccmd/rccmd_execute.sh
	Edit File
	Execute at shutdown signal from RCCMD server:
\mathbf{v}	/usr/rccmd/rccmd_shutdown.sh
	Browse Configure Edit File
RCCMDCFG V4.0.2.0	<u>S</u> ave <u>C</u> ancel

Addresses Functions Logfile Execute Control



The following commands are available:

RCCMD shutdown relay: Relays RCCMD shutdown command to another workstation. Enter the IP address or the hostname of the remote station you want to shutdown.

Wait seconds...: Waits a duration in seconds until the next command will be executed.

Restart System: Ends your session, shuts down the system and restarts it.

Shutdown System: Ends your session and shuts down the system, so that you can safely turn off the power.

Available Commands:	Current Sequence:	
RCCMD shut down relay Wait seconds Restart System	RCCMD shut down rela RCCMD shut down rela Shut down System	ay to gx56 (ssl) ay to 111.111.11 ay to 111.111.11 ay to 111.111.11 by to 111.111.11 costage.sh [Parameter: b d custom application
Description of: Shut down System		
lends your session and shuts down	ystem so that you can safely turn off	computer.
		Save Cancel

Fig. 125: Konfiguration – RCCMD Shutdown Sequenz

Click the "Save" button".

<u>Menu</u> **"Control**": Click **"Control**" to get to the following functions::

RCCMD Configuration	9	×
RCCMD Configuration	Addresses Functions Logfile Execute Control Control the Rccmd Rccmd status Stop Rccmd Start Rccmd	×
RCCMDCFG V4.0.0.11	<u>S</u> ave <u>C</u> ancel	

Fig. 126: Configuration – RCCMD Control

4.9.1 RCCMD Client as Relay Station

If you need to reach a bigger amount of receivers, it is required to define the CS121/CS141 as relay station. The receiver must be defined, if receiving a RCCMD signal, that it will start a script, which will send further RCCMD signals. The workstation is receiver and sender at the same time and thus an important connection in the UPS monitoring. The usage of a RCCMD client as relay station makes the monitoring of more than hundred RCCMD clients as easier as the configuration of the CS121/CS141 via web-browser. Furthermore the web-browser event configuration got a limit, so that it is required to use the relay function, if the amount of jobs is more than 50 per event at the CS121/CS141.

The following steps are required for the configuration of the relay function:

- Open the file "rccmd_shutdown.sh" with an editor.
- Add prior of the shutdown of the workstation ("shutdown –h now") the relay calls, e. g. the call of the included "send_shutdown.sh".
- Add the desired IP addresses or rather the DNS names:

./send_shutdown.sh -a 10.10.10.10 -a 10.10.10.11 -a 10.10.10.12

• Save the settings of the "rccmd_shutdown.sh".

The RCCMD version 4.0.2.0 provides a grafical configuration of the shutdown sequence.

Click on "**Configure**"to open the Shutdown sequency.

	Addresses Functions Logfile Execute Control
Q	Execute at mail signal from RCCMD server:
	/usr/rccmd/rccmd_mail.sh
	Configure Edit File
	Execute at message signal from RCCMD server:
	/usr/rccmd/rccmd_message.sh
UPS	Edit File
	Execute at execute signal from RCCMD server:
UPSMAN	/usr/rccmd/rccmd_execute.sh
9	Edit File
	Execute at shutdown signal from RCCMD server:
	/usr/rccmd/rccmd_shutdown.sh
	Browse Configure Edit File
JRCCMDCFG V4.0.2.0	<u>S</u> ave <u>C</u> ancel

Fig. 127: Configuration - RCCMD Shutdown.sh

Tag the "**RCCMD shutdown relay**" into the "Available Commands" window and click the ">" button, to **add** this function into the "Current Sequence"..

If you want to **remove** single IP addresses, mark the line with its desired IP address and click the "<" button.

File:/usr/rccmd/rccmd_shutdown.sh Available Commands Current Sequence: RCCMD shut down relay RCCMD shut down relay to gx56 (ssl) Wait seconds... RCCMD shut down relay to 111.111.111.1 Restart System RCCMD shut down relay to 111.111.111.1 < RCCMD shut down relay to 111.111.111.1 RCCMD shut down relay to 111.111.111.1 << RCCMD shut down relay to 111.111.111.1 RCCMD shut down relay to 111.111.111.11 Wait 5 seconds /usr/rccmd/rccmd message.sh [Parameter Shut down System Add custom application Description of: Shut down System Ends your session and shuts down System so that you can safely turn off computer Save Cancel

Fig. 128: Configuration – RCCMD Shutdown Sequenz

00	Configure Shutdown Sequence
	comigure shutdown sequence
File:/usr/rccmd/rcc	:md_shutdown.sh
Available Command	s: Current Sequence:
RCCMD O	Configure RCCMD shutdown relay
Restart 5 Enter IP you war Enter ar From:1	address or hostname of the remote computer gx77 it to shutdown with the RCCMD -AND/OR- n IP range of remote computers you want to shutdown with RCCMD: 92],168],222],200 To: 192.168.222. secure connection (SSL)
Descriptio	ОК
Relays RCCMD sh	utdown command to another computer.Enter IP address or hostname of

Fig. 129: Konfiguration – RCCMD Relay Konfiguration IP-Adressen-Bereich

4.10 UNIX RCCMD Configuration with CURSES Library

The contents of 'rccmd.cfg' are vital to system security. It should be writeable only for the System User 'root'.

Rccmd V2 running in 'Listen' mode may be configured using a configuration file. By default rccmd will look for a file named 'rccmd.cfg' in its startup directory (usually '/usr/ups'). This file may be generated using rccmd_conf. Rccmd_conf is a small curses-based utility which runs on the console or a terminal or a terminal-emulation under the X Window System (e.g. xterm).

1 <u>Note</u>:

Note:

This section does not apply to rccmd V1 for Unix, in addition it only applies to rccmd running in 'Listen' mode. This tool "rccmd_conf" is not supported by newer operating systems. If you try to start on not supported OS, you will receive an error message about missing "curses" library.

The following panel will appear, in which you can enter the desired **IP address** range or **hostname**.

Additionally you can enable the **SSL** function.

Run rccmd_conf:

\$ su -Password:

cd /usr/ups

./rccmd_conf

Bedienungshinweis:

To switch between menu entries press [Tabulator] or use Arrow keys [↑] [↓]

To confirm an entry, press [Enter]

To go back to default settings choose [Default]

To save entries choose [Ok] / [Save]

To leave a menu entry, choose [Exit] / [Cancel]

If 'rccmd.cfg' does not exist (e.g. if you run rccmd_conf for the first time) the following notice will be displayed:

Select the "Create" button.

Press "Enter".





If you created 'rccmd.cfg'	erex@host: /usr/ups
or if the file existed already rccmd_conf will switch to its main configuration menu.	

generex@ho	ost: /usr/ups				×
			Rccmd Configuration		
		(Record Network Options Access Cantol List Scan for Upsman/Upstcp Check Upsmar/Upstcp Logfile Options Shutdown Options		
		[Save]		[Exit]	

Fig. 131: RCCMD Configuration Menu UNIX

It is not necessary to work from top to the bottom, you may configure the menu items in any order. In fact it is not necessary to configure anything at all, if you just select [save] 'rccmd.cfg' will be written with default values sufficient to run rccmd. To use all features of rccmd and/or improve security it is however strongly suggested to customize 'rccmd.cfg'.

Configuration"RCCMD <u>Network Options"</u> In this screen you may configure network related options of the rccmd listener.

×

Fig. 132: RCCMD UNIX Network Options

Bind on Interface:	This option tells rccmd on which network interface it binds its main tcp listen socket. You may enter any valid IP address your host can be reached.
	The default value for this option is 0.0.0.0, this is a working value, it means 'listen on all possible interfaces of this host'. If your host has a dial up connection to the internet you may want to change the default, to ensure rccmd will not be connected from the internet. In this case you will enter the primary IP address of the host rccmd listener is running on.
	Example: Your company runs a private network in the 192.168.1.0/24 address range. The host rccmd listener is running on is assigned the IP 192.168.1.9. You may enter 192.168.1.9 for "Bind on Interface", to ensure only host from the private network can connect to rccmd.
Listen on Port:	This is the port rccmd will listen to. Allowed values range from 1 to 65535 (inclusive). The default is 6003. If you change the port of the rccmd listener you will also have to switch the port of the rccmd sender in order to enable a connection. It is normally not necessary to change this setting.
Enable UDP:	If this opion is enabled rccmd will open an UDP Listen Socket in addition to the TCP Socket. This allows the rccmd listener to receive rccmd broadcasts. Possible values are 'true' and 'false'. The default is "true".
Timeout:	Timeout for TCP connections. The default is 10 seconds. It is normally not necessary to change this setting.

Configuration "Access Control List"

"Access Control List" contains a list of valid sender addresses. A valid sender address is the IP address of an rccmd sender that is allowed to connect to the rccmd listener. Initially the list is empty.



Fig. 133: Selection Access Control List

1 Note:

An empty Access Control List means everyone is allowed to connect.

To add an IP address hit the [Tab] key until the [Add] button is highlighted, then press [Enter].





Enter **the IP address** of the host you want to be able to connect, then press **[Enter]**.

generex@host: /usr/up	ps				×
		<u>Valid Sender I</u>	<u>Iddresses</u>		
		<u>Add Addr</u>			
	New Address	192,168,1,1 <mark>.</mark>			
	[0	k]	[Cancel]		
[Add] [Edit] [Delete]	[0k]	[Cancel]	



To edit an entry in the list select it by hitting the $[\uparrow]$ and $[\downarrow]$ keys until the entry is highlighted, then hit the [Tab] key until the [Edit] button is highlighted, then press [Enter].

generex@ho	ost: /usr/ups					a survey and a survey of the	×
		Val	id Sender Add	resses]	
	[Add]	[Edit]	[Delete]	[0k]	[Cancel]		



Edit the Address in the "Edit Address" Window. To keep your changes select the [Ok] button with the [Tab] key and press [Enter] otherwise select [Cancel].

To **delete** an entry in the list select it by hitting the $[\uparrow]$ and $[\downarrow]$ keys until the entry is highlighted, then hit the [Tab] key until the **[Delete]** button is highlighted, then press **[Enter].**

generex@ho	st: /us	r/ups					×
				Valid Sender Ad	<u>Idresses</u>		
			192,168	.1.1			
				<u>Edit Addre</u>	229		
		Selected	Address	192.168.1.1[
			[Ok]		[Cancel]		
	[A	dd]	[Edit]	[Delete]	[0k]	[Cancel]	



Confirm to **delete the** entry by selecting [Ok] with the [Tab] key and pressing [Enter], otherwise select [Cancel].

To **leave the screen** select either [Ok] or [Cancel] with the [Tab] key and press [Enter]. [Ok] means accept the list as displayed on the screen, [Cancel] means discard all changes made to the list.

🗖 generex@h	ost: /usr/ups	×
	<u>Valid Sender Addresses</u>	
	192.168.1.1 192.168.1.2	
	Delete Address	
	Selected Address: 192.168.1.2.	
	[Ok]	
	[Add] [Edit] [Delete] [Ok] [Cancel]	

Fig. 138: RCCMD UNIX Delete Sender

Scan for UPSMAN/UPSTCP:

This screen allows you to scan your network for Upsman/Upstcp servers. You may want to add the detected IP addresses to the "Access Control List".

generex@host: /usr/u	ıps		×
	<u>Rccnd Co</u>	nfiguration	
	Recmd Ne Apress Scan for Check V Logfi Shutdo	twork Options Control List Upsman/Upstcp Je Options wn Options	
	[Save]	[Exit]	

Fig. 139: Configuration – Scan for UPSMAN/Upstcp



The options on this screen do not directly affect rccmd. However, the results of a network scan may be transferred to the "Access Control List".

Menu "Scan Options": lowest/highest IP: On startup rccmd_conf tries to determine the hosts primary IP address. From this address a corresponding Class C network range is derived. These are the default boundaries for the network scan. If you want to scan another network or adjust the range, move to the desired entry (lowest and/or highest IP) using the [Tab] key and change the address as appropriate.

generex@ho	st: /usr/ups			×	ł
		<u>Scan Options</u>			
	lowest IP: 10.64.64.1				
	highest IP: 10.64.64.254				
	Port to scan: 5769				
	[Scan]		[Cancel]		



Port to scan:

The port the scanner will try to connect to. The default is 5769, which is the default port of the Upsman/Upstcp server. If you have Upsman/Upstcp running on a different port you may want to switch this option accordingly.

To start the scan select [Scan] using the [Tab] key and press [Enter], otherwise select [Cancel].

<u>Configuration</u> <u>"Check</u> <u>Upsman/Upstcp":</u> The Rccmd listener has the ability to check periodically if the Upsman/Upstcp servers configured in "Access Control List" are alive.



Fig. 141: Configuration Check Upsman/Upstcp

Note: The "Check Upsman/Upstcp" feature is only available if there are any addresses configured in the "Access Control List".

If there are one or more entries in "Access Control List" the screen "Check Upsman Options" pops up.



Fig. 142: RCCMD UNIX Check Upsman

Enable check Upsman/Upstcp feature: Possible values are "true" and "false", "false" is the default. To change the value use the $[\uparrow]$ and $[\downarrow]$ keys.

Enter the interval for upstcp connects in minutes: Interval to connect Upsman/Upstcp servers in minutes. Default is 30 minutes. To change overwrite the value in the options field.

File to execute: This file will be executed if rccmd is not able to connect one (or more) of the configured Upsman/Upstcp servers, asuming that either the host is down or the Upsman/Upstcp process is not running. Default is '/usr/ups/rccmd_notalive.sh'. You may change this value by overwriting the string in the options-field or by selecting a file in the file-browser. To invoke the file-browser hit the [Tab] key until the [Browse] button is highlighted, then press [Enter].


Fig. 143: Configuration Logfile Options

The rccmd listener is able to write and maintain a **logfile**. It will log events such as startup and shutdown of the program, accepted and denied network connections and executed commands. Some **parameters** may be configured on this screen.:

Configuration "Logfile Options":

generex@he	ost: /usr/ups				×
					_
		Logfile	<u>Options</u>		
	Enable logging t	o file? true			
	Select maximum s				
	Logfile name: /u	usr/ups/rccmd.log		• • • • • •	
	[0k]	[Cancel]	[Browse]	[Default]	



Enable logging to file:	Possible values are "true" and "false", "true" is the default. To change the value use the $[\uparrow]$ and $[\downarrow]$ keys.
Select maximum size of log fi	le: The log file will not gain larger than this size. If the size of the log file would exceed this limit rccmd will automatically shrink it by 10% before it continues write to the log. The file will be shrinked from the start, so older entries will be removed first. The default size is 1024 Kb. To change the value use the $[\uparrow]$ and $[\downarrow]$ keys. The special value '0' means the file will not be shrinked.
Log file name:	This option specifies the name and location of the logfile. The default is "/usr/ups/rccmd.log". You may change this value by overwriting the string in the options-field or by selecting a file in the file-browser. To invoke the file-browser hit the [Tab] key until the [Browse] button is highlighted, then press [Enter].



Fig. 145: Configuration Shutdown Options

This file will be executed if rccmd receives the "SHUTDOWN" command from the network.

Configuration

"Shutdown Options":

Default ist "/usr/ups/rccmd_shutdow n.sh"

🗖 generex@h	ost: /usr	/ups					×
							_
				<u>Shutdow</u>	<u>n Options</u>		
	File	e to	execut	e: /usr/ups/rccmd_	shutdown.sh ∏	* * * * * * * * * *	
	L I	0k]	[Cancel]	[Browse]	[Default]	



Exit rccmd_conf:

In the main configuration menu "Rccmd Configuration" select either [Save] or [Exit] by hitting the [Tab] key until the desired button is highlighted and press [Enter]. [Save] means 'rccmd.cfg' will be written according to the actual values of the configuration screens, [Exit] will just exit the program, leaving 'rccmd.cfg' untouched.



Fig. 147: Exit rccmd_conf

The File Browser:

Some of the screens above use a small buildin file browser like this:

The $[\uparrow]$ and $[\downarrow]$ keys may be used to move the list up and down. Pressing the [Enter] key will select the highlighted entry. If the selected entry is a directory the browser wil move into this directory and list its contents.

🗖 generex@host: /usr/ups		×
select file to execute File: /usr/ups		
./ / rccmd* rccmd_conf* rccmd_execute.sh* rccmd_mail.sh* rccmd_motalive.sh* rccmd_shutdown.sh* rccmd_shutdown.sh* rccmdcl* send_log.sh* send_log.sh* send_mail.sh* send_mail.sh*	sh.	
[Ok]send_shutdown.sh*	Default]	

Fig. 148: RCCMD UNIX File Browsing

As usual the double dot '..' means the parent directory. File types are indicated similar to the output of 'Is -F'. This means a '*' is appended for executables, '/' for directories, '@' for symbolic links and '=' for sockets.

UNIX RCCMD multiple sender configuration :

In case the user wants to utilise more than one sender address the rccmd.sh has to be modified like this:

#! /bin/sh

You may specify a sender IP to accept signals from,# default is everyone.SENDER="-a 10.55.52.82 -a 10.55.52.83 -a 10.55.52.84"

You may change the port to listen on, # default is 6003. PORT=

You must define a command to be executed upon # receiving signal. SCRIPT=/usr/ups/doshutdown.sh

test -z \$SENDER || SENDER="-a \$SENDER"
test -z \$PORT || PORT="-p \$PORT"
to start:
./rccmd -I \$SENDER \$PORT \$SCRIPT

UNIX RCCMD multiple sender configuration (V3 and higher):

How to start several RCCMD sessions via different ports on UNIX?

Every RCCMD session needs an own TCP port, e. g ..:

./rccmd -l -p 6003 ./rccmd -l -p 6004 ./rccmd -l -p 6005

Import into RC files:

Set an accordant amount of starting scripts and invoke them trough the old ones.:

1) Create new starting scripts:

copy 3 times the old script and rename them:

```
cp rccmdctl.sh rccmdctl-1.sh
cp rccmdctl.sh rccmdctl-2.sh
cp rccmdctl.sh rccmdctl-3.sh
```

2) Adjust the new scripts:

through the variable "RCCMDPORT":

```
RCCMDPORT=6003
```

• • •

3) Adjust the old script, because it starts the new one, replace the start- and stop sector in the folder "rccmdctl":

```
start)
    /usr/ups/rccmdctl-1.sh start
    /usr/ups/rccmdctl-2.sh start
    /usr/ups/rccmdctl-3.sh start
;;
stop)
    /usr/ups/rccmdctl-1.sh stop
    /usr/ups/rccmdctl-2.sh stop
    /usr/ups/rccmdctl-3.sh stop
;;
```

Attention: Do not edit the scripts with a Windows editor, because the different word wrap of Windows/Unix would destroy them!

5 RCCMD on VMware

5.1 Requirements

a) The ESXi host:

You need an ESXi host, version 4 or higher (version 6 is recommended). You have to install this software on your machine to run virtual machines. This manual does not describe ESXi itself, you can download the latest version and documentation about ESXi on vmware.com. Note that you need a valid license to access the downloads at vmware.com; otherwise you can download only trial versions. You will need the login credentials of the ESXi host (username and password for "root" user.

b) V-Sphere Management Assistant (vMA)

You can download the latest versions (version 5.5 or higher recommended) from vmware.com after you logged in and provided a valid license on the vmware.com webpage. The vMA is required to install RCCMD on your ESXi. It provides a terminal interface for IP address configuration and controlling your ESXi. Without the vMA, it is not possible to install RCCMD.

Please note: If you use ESXi 6.5, you don't use the vSphere client anymore and use a browser plugin instead. Open the IP of your ESXi, followed by */ui/#/login*. This is the only change between the versions, other configuration is similar to vSphere client.

c) V-Sphere Client

The client is required to connect to your ESXi host. Available on vmware.com after logging in and providing a valid license. When connected to your ESXi you can configure and manage the ESXi host and also add, remove shut down, (re)start and manage virtual machines. The V-Sphere Client is required to install the vMA and to configure the shutdown of the virtual machines running on this ESXi host.

d) RCCMD for ESXi

The RCCMD client is the shutdown software developed by Generex. Once installed, it listens to the other Generex products to receive and handle commands and messages. Download the latest version from the Generex website. Note that you have to enter a valid serial number to download the files.

e) sFTP client

You need a sFTP client (eg. Filezilla) for transferring the RCCMD files to your vMA virtual hard disk.

f) Terminal client

You need a terminal client (eg. Putty) to connect to the vMA and start the script installation of RCCMD. (RCCMD has a graphical interface, but through Terminal Client the RCCMD configuration file rccmd.cfg may edited manually).

5.2 Setup and Configuration of vMA

Install the V-Sphere client. You have to set a folder for the installation of the V-Sphere client and proceed.

Now, login on vmware.com and download the latest vMA archive.

Note that you need a valid license to gain access to the required download section. After downloading, unzip the archive.

Start the V-Sphere client and enter the IP address of your ESXi host. Enter the correct credentials and login onto your ESXi. (Username and Password for root user)

Menu "File"

Now, click on File -> Deploy OVF template and browse to the extracted vMA archive. Choose the .ovf-file. You will see a list of preconfigured parameters and the amount of disk storage used for the installation. If you proceed, you have to accept the license agreement.

New Deploy OVF Template		
Dipon		
Report		
Print Maps	- E	
Exit	5	
	 Restrictions: You agree that you will not (1) use the Software to create, design or develop anything other than Developer Software; (2) make any more copies of the Software than are reasonably necessary for the authorized use and backup and archival purposes; (3) modify, create the software than the software that are the software that are the software than are the software that are the software the software the software the	e

Set a **name for the vMA** where RCCMD will be running – the default name is *vSphere Management Assistant (vMA).* We recommend to take a shorter description, eg. **vMA_RCCMD**.

Source Select the source location.		
Source OVF Template Details Name and Location Storage Disk Format Ready to Complete	Deploy from a file or URL Enter a URL to download and install the OVF package from the Internet, or specify a location accessible from your computer, such as a local hard drive, a network share, or a CD/DVD drive.	

After you choose a **hard disk format**, the progress will start. Note that it depends on the datastore you choose if you can change the given format.

Source OVF Template Details	Datastore:	NFS-Datastore
End User License Agreement Name and Location Storage	Available space (GB):	818,7
Disk Format Ready to Complete	€ Thick Provision Lazy Ze	roed
	C Thick Provision Eager 2	teroed
	C This Desired	

This will take a few minutes.

2 1% Deploying vMATest	
Deploying vMATest	
Deploying disk 1 of 1 from	0.0.0.0500700
em.vmdk	0.0.0-2503728-syst
Close this dialog when completed	Cancel
Deployment Completed Successfully	X
Deploying vMATest	
Completed Successfully	
	Close

After the progress is finished, you will notice a new virtual machine. Open the **settings**. The preconfigured RAM is only for small installations, we recommend at least **2 GB**.

Hat	buare	Summary	11100	
	Avere Hemory (edited) CPUs Video card VMC2 device SCSS controller 5 CD/DVD drive 1 Hard disk 3 Network adapter 5	Summary 2048 MB L Video cand Depreceded LSE Logic Parallel CO/OVO drive 0 Virtual Disk VM Network	128 GB G4 GB 32 GB 15 GD 0 G9 14 G2 15 G2 0 G9 14 G2 15	
			2 08 1 02 512 MB 256 MB 120 MB	
			64 MB - 32 MB - 36 MB - 8 MB - 4 MB -	

Run the virtual machine and open the **console.**



or alternatively the **terminal**, but **NOT** both.



The virtual machine will start within ~5 seconds the correct OS. Here you have two options for restoring a broken vMA or booting from a floppy.

Afterwards, you will see a menu.

For RCCMD it is necessary to set an **IP** address and a password for the viadmin account. The viadmin has root access in this virtual machine. Type in **6** and press enter. You may choose to set an **IPv6 address** and, after that, an **IPv4 address**.

We recommend to use an IPv4 address. You may also choose to get an IP by DHCP.

Main	Menu
Ø)	Show Current Configuration (scroll with Shift-PoUn/PoDown)
1)	Exit this program
2)	Default Gateway
3)	Hostname
4)	DNS
E 1	
6)	IP Address Allocation for eth0
Enter	a menu number 101.

see the menu again. Press **0** and enter to see your configuration.

Default Gateway Hostname DNS Proxy Server	0)	Show Current Configuration (scroll with Shift-PgUp/PgDown)
Default Gateway Hostname DNS Proxy Server	.,	EXIC CHIS PLOYIAM
Hostname DNS Proxy Server	2)	Default Gateway
DNS Proxy Server	3)	Hostname
Proxy Server	4)	DNS
	5)	Proxv Server
IP Address Allocation for eth0	6)	IP Address Allocation for eth0

After you have made your selection, you will

Write	down	your
configur	ation.	

Network Configur	ation fo
IPv4 Address:	192.168.
Netmask:	255.255.
IPv6 Address∶	
Prefix:	
Global Configura	tion
IPv4 Gateway:	192.168.
IPv6 Gateway:	
Hostname:	localhos
DNS Servers:	192.168.
Brown Somnor'	

Press 1 to exit this menu. You will be prompted to set a password for viadmin. In case you did not enter a password before, the default password for the viadmin is **vmware**.



You now have to enter a **new password**.

Note: The vMA is using an US keyboard and requires certain password conditions. Note that this password must contain:

- at least 8 characters
- 1 small letter
- 1 capital letter
- 1 digit
- 1 special character

Also, passwords containing the same letters to often will be rejected. Working example: **G0Id!G0Id!**

After that, the vMA will progress the configuration until you see the login window, your IP address and the port. If you enter this IP address and port in your browser, you have access to the web GUI of the vMA. Starting password configuration ... The root account is disabled in this vMA virtual machine, which means no one can log in as root. The administrator account for vMA is called "vi-admin". In orde r to log in to vMA, you need to log in as this user. This user has been pre-crea ted in the vMA, and its password needs to be set now. Please enter a secure pass word for the account now.

Please provide a password for the vi-admin user. If you are prompted for an old password for this woon, optom transmoster of a constant of the prompted for an old of the provide the provided of the provided

uSphere Management Assistant (uMA) -	5.5.0.0 Build 1387931
To manage this VM browse to https:///	192.168. :5480/
*Login Set Timezone (Current:UTC)	Use Arrow Keys to navigate and (ENTER) to select your choice.

The configuration of the vMA is now completed. You may close the vMA terminal. (if you have used this option)

For the next step, you need a sFTP client and a terminal program.

Note: You cannot use the v-Sphere client to install or copy the RCCMD files.

5.3 Preparing RCCMD installation

Go to the Generex website and download the latest version of RCCMD for ESXi. You will be asked for a valid license before you can download the archive.

This RCCMD Client License comes with every CS121/CS141 or RCCMD client which you purchase through your UPS vendor. You cannot use a trial version.

After you have finished your download, open your sFTP client to transfer the downloaded RCCMD file rccmdinst64.tar

Connect to the vMA IP address. Use your vi-admin credentials and connect on port 22 (SFTP).

You will see the content of the vi-admin account. Create a folder and **copy** the downloaded RCCMD.tar.gz archive to this folder.

After transferring the data, you may close the sFTP-client and open your terminal program.



5.4 Installation of RCCMD

admin account.

Connect your terminal program via SSH to the vMA "RCCMD".

Login using the same credentials you have used in your sFTP client.

In this case, we created a	login as: vi-admin
folder named RCCMD in	Welcome to vSphere Management Assistant
the vi-admin account. If	vi-admin@192.168s password:
you type in /s, you can	vi-admin@localhost:~> ls
see the content of a	RCCMD bin
folder, in this case the	vi-admin@localhost:~>
home folder of the vi-	

The purple displayed names are folders. Use the cd .. command to navigate to a higher level in the folder hierarchy.To open a folder enter cd xxx, in this case cd RCCMD. Note that all inputs in the terminal are case sensitive.



The red displayed names are archives. Unzip the file with the following parameters:

tar –xf rccmdinst64.tar Now, the archive is unzipped with the correct values.

To start the installation, type in *sudo*

vi-admin@localhost	t:~/RCCMD>	tar -xf	rccm	dinst64	.tar
vi-admin@localhost	t:~/RCCMD>	13			
Readme.txt	installRC	CMD.bin.r	nd5	rccmdin	
installRCCMD.bin	installer	.properti	ies	version	.txt
vi-admin@localhost	t:~/RCCMD>				

./installRCCMD.bin

vi-admin@localhost:~/RCCMD> su	do ./installRCCMD.bin
We trust you have received the Administrator. It usually boil	usual lecture from the local System s down to these three things:
<pre>#1) Respect the privacy of #2) Think before you type. #3) With great power comes</pre>	others. great responsibility.
vi-admin's password: Preparing to install Extracting the JRE from the in Unnacking the JRE	staller archive

You will be asked for the vi-admin's password again.

After that, the progress will start. You will now asked for be your language. Enter the number and press enter. Note that the terminal may not display the correct characters if they are not basic characters. This depends on the terminal software you are using.



Now, the installation begins. Whenever you have the option to make a choice, you may type *quit* to cancel the installation.

You will see the version number of the installer. Press **enter**.

The installer will **check** if you use the correct environment and the correct installer.

SysOS & Platfo	rm
OS & CPU archi	 tecture: x86 64 x86 64 GNU/Linux
Recognized VMw	are ESXi environment.
PRESS <enter></enter>	IO CONTINUE:

Now you will be asked for your license key again. Note that you have to enter a serial which is not active in your network. Otherwise, the service will not start.

Now you see the license agreement. If you agree, confirm with *y* and press enter.

In the next step you have the options to enable or disable the **features** you want to install. We recommend to install <u>all</u> features. If you have made your choice or if you don't want to change any values, press **enter**.



You will be asked if you want to switch the **installation path**. We recommend strongly to keep the default settings. NOTE: If you do not want to use the RCCMD a web interface, it is still possible to set minimal parameters to run RCCMD.

Press **Enter** if you don't want to change the folder.

Where would you like to install? Default Install Folder:/usr/rccmd In the next step you will be asked if you use the **V-Center** for your ESXi.

VCenter Server provides centralized management and operation, resource provisioning and performance evaluation virtual machines of residing on a distributed virtual data center. VMware VCenter Server is designed primarily for VSphere, VMware's platform for building virtualized cloud infrastructures. VMware VCenter Server was previously known as VMware VirtualCenter.



RCCMD for VMWare - vCenter

- vCenter Server : Management tool for several ESXi Hosts . Manages clusters and moves ESXi hosts and their virtual machines in case of failures to secure a high availability within the cluster.
- If a vCENTER manages several ESXi Hosts, than RCCMD has to work different: RCCMD will now manage FIRST the shutdown of the virtual machines, and after this the shutdown of the ESXi. This change is automatically handled by RCCMD if during the installation the user tells the RCCMD that this is a "vCenter" system



Make your **selection** and press enter.

If you have set the option to **yes (1),** you will be asked for the machine where vCenter is running, followed by **username** and **password**.



If you have set the option to **no (2)**, the installer will ask for the **host name or IP of your ESXi**.





Afterwards, you will be asked for a **shutdown duration**. This is the duration the ESXi needs to shutdown <u>ALL</u> actually running virtual machines. Note: You can later change these values in the web GUI of RCCMD. Now, the installer asks for the **vMA name**. You entered this name earlier. Default name: vSphere Management Assistant (vMA), we used in our example RCCMD_vMA.

In the next step, you will be asked how RCCMD will display the received **messages**. Make your choice and press enter. We recommend to use the default settings (all enabled).

RCCMD Messages
By default rccmd will print the messages it receives from the network to
/dev/console.
Here you can choose additional output options.
->1- Display Messages on all terminals
->2- Log Messages
->3- Display Messages with Xmessage

Finally, the summary of your choices appears. If you press enter now, the installation will start.

Note: If you are using the vCenter and entered wrong credentials in this script earlier, you will get a few **warnings**. You can ignore them for now; the configuration can be changed later.

Warning: Connection check to vCenter Server returned a problem
Checking the connection to the vCenter Server from RCCMD came up with the following error message:
at /usr/lib/per15/5.10.0/VMware/VICommon.pm line 551.
This is just a warning. RCCMD will continue normal installation. If applicable, please fix Problem and verify normal operation of RCCMD.
Error getting ESXi Hosts from vCenter
Configure FSVi Hosts manually after installation

During the installation you will be asked if you want to access RCCMD with **http** or **https** (default). Make your **selection** and press **enter**. You can now change the default https port 8443. Remember if you change the port you have to set the same port to open your RCCMD web interface!

You will now be asked for a **password** (default: cs121-snmp) and a password hint. The installer shows your **IP** and **port for configuration**. Choose if you want to **start** the **service** now (1) or later (2).

Note: With the default configuration, every IP could send a shutdown command!



The installation of RCCMD is finished. You can close your terminal software and open your web browser.

5.5 Configuration of RCCMD

Finally,

successful

RCCMD in.

the

and

After installation is finished, open the **IP:Port** in your browser. Example: https://192.168.100.200:8443

You should see the login now. Log in with your configured credentials (Default: admin and cs121-snmp).

RCCMD	IP: 192.168.
System Login: Username: admin Password: Login	System Status Current status of RCCMD is : running

Menu "Event Log": In the Event Log, you can see all notifications and alerts.

Event Log

These are the events that have occured on this computer.

Date	Time	Event
2016- 05-26	12:27:58	rccmd[15334]: Copyright (c) GENEREX GmbH 1996- 2010. All rights reserved

Menu " System Status":

At the system status, you can start, stop and restart the RCCMD service. Also, you can click on status for a refresh.

System Status

Current status of RCCMD is: running



If you click on **Logout** you are immediately logged out from RCCMD.

Menu "Connections":

Connections will allow you to set specific IPs which are allowed to send you notifications and shutdown commands. If you do not enter any addresses, every IP could send a notification or shutdown command. You can insert, edit and delete any IP. You may also set the options for accepting only SSL connections and rejecting expired SSL certificates.

Connections

Status

View Event Log

Logout

Status

The list below identifies all senders that are allowed to connect to this listener. Note: An empty list means that every sender can connect to this listener.

Sender IP Address	Insert
	Remove
	Edit

Protocol

The setting below increases the security of connections to this RCCMD Accept only SSL connections (requires restarting RCCMD)

Reject expired SSL certificates

Cancel Save Changes

Menu "Heartbeats":

The heartbeat menu offers several settings for an alive check. If you use the UPSMAN alive check, a signal is sent to determine if the UPSMAN still provides data values. In case of no returned data, configured script the (Default: /usr/rccmd/rccmd notalive.sh) will be executed which shows а popup message.

the The use entry by CS121/CS141/UPSMAN Traps enables UPSMAN/RCCMD/UNMS to display local messages the status if of UPSMAN/RCCMD changes. If vou choose the other option (Polling every x seconds) you decide to request only signal data without getting UPS data values or messages.

The **polling rate** determines the interval of requesting status. If you have set 100 times, RCCMD will send an alert in case of 100 failed connections.

If you click on *Run alive check now* the UPSMAN alive checking will be started (on port 5769).

Heartbeats

The UPS alive check can be used to monitor the availability of each sender.

 Enable automatic UPS alive check by the use of CS121 / UPSMAN T by polling CS121 / UPSMAN even and retry each failed connection: 	raps y: 1800 seconds 5 times
When the alive check fails, then RCCME Run this command file : /usr/rccmd/rccm) will use the following setting: nd_notalive.sh Edit File
Test UPS connections:	Run alive check now
	Cancel Save Changes

Menu "Redundancy":

The redundancy menu allows **configuring certain levels** before the ESXi will start the shutdown progress. This is only possible if you use two or more UPS devices.

At first, you have to enter at least two connections in the connections menu. Then, you can activate the redundancy function. For each connection entry after the first, you can raise the level by one. If a sender triggers a shutdown command with the ESXi as a target, the level decreases by one. If the level drops below zero, the shutdown progress initiates.

You may also edit the redundancy script manually, which is configured in ShutdownSuppressed.sh.

Menu "Notification":

In the notification menu, you may change the **scripts** and therefore the behavior of RCCMD in case of receiving email notifications, messages and execution commands.

Redundancy

The redundancy level defines the number of redundant senders in the redundancy group. This means that level +1 senders must have sent a shutdown signal before this RCCMD starts it's shutdown sequence.

ſ	— U Enable F		1	runction			
	Group	Sender	Address	es			
	Redunda Level:	ancy		T			
Wher settin	n redundancy ig:	supresses	a shutdov	vn, then	RCCME	D will us	se the follo
Run t	this command	file : /usr/ro	cmd/Shu	tdownSu	ppress	ed.sh	Edit
					Can	cel	Save Cha
					Can	cel	Save Cha
					Can	cel	Save Cha
					Can	cel	Save Cha
E-N When Run ti	/ail Notifi RCCMD receiv his command fil	cation res an e-mail	l signal it v	/ill use the		cel	Save Cha
E-N When Run ti /usi	fail Notifi RCCMD receiv his command fil r/rccmd/rccmd_	cation ves an e-mail le : mail.sh	l signal it v	vill use the	Can	cel	Save Cha g: dit File
E-N When Run ti /usi	Aail Notifie RCCMD receiv his command fil r/rccmd/rccmd_ ssage No	cation res an e-mail le : mail.sh	I signal it w	vill use the	Can	cel	Save Cha g: dit File
E-N When Run ti /usi Mes When Run ti	Aail Notifie RCCMD receiv his command fil r/rccmd/rccmd_ ssage No RCCMD receiv his command fil	cation res an e-mail le : mail.sh otificatio res a messag	l signal it v n ge signal it	vill use the	Can e followin	cel	Save Cha g: dit File
E-N When Run ti /usi Mee Run ti /usi	Aail Notifie RCCMD receiv his command fil r/rccmd/rccmd_ SSAGE NO RCCMD receiv his command fil r/rccmd/rccmd_	cation ves an e-mail le : mail.sh vtificatio ves a message le : message.sh	l signal it v n ge signal it	vill use the	Can e followin	cel	Save Cha g: dit File ing: dit File
E-N Wyhen Run tl /usr Wyhen Run tl /usr /usr /usr /usr /usr	Aail Notifie RCCMD receiv his command fil r/rccmd/rccmd_ ssage No RCCMD receiv his command fil r/rccmd/rccmd_ ecute Not	cation /es an e-mail le : mail.sh vtification /es a message le : message.sh ification	I signal it v n ge signal it	vill use the	e followir	rel	Save Cha g: dit File ing: dit File
E-N When Run tl /usi When Run tl /usi EXEE	Aail Notifie RCCMD receiv his command fil r/rccmd/rccmd_ Ssage No RCCMD receiv his command fil r/rccmd/rccmd_ ecute Not	cation res an e-mail le : mail.sh otification res a message le : message.sh ification res an execu	I signal it v n ge signal it	vill use the will use t	Can e followin he follow	cel	Save Cha g: dit File ing: dit File g setting:

The advanced options handle the **size of the logfile** (Default is 1 Mbyte, which should be changed to a higher value). Also, you can set a single RCCMD listener when entering an IP address and port. Default is here the setting for each local address gaining access.

Event Logfile

When the event log file reaches the size below then older entries will be deleted.

Maximum file size (KB):

1024

RCCMD Bindings

The information below defines IP address and TCP-port of the RCCMD Listener.

IP address:	0.0.0.0			
	IP address 0.0.0.0 means every local address			
Port:	6003			
	default TCP Port is 6003			
	Cancel Save Changes			

Menu "Web Access":

In the web configuration menu, you just set the settings for this web **GUI.** We recommend to use https and the default port (8443). You can also restart the Web interface here.

Web Access

Configure the web server settings here.

Select the access protocol for this user interface

Note: Changes in protocol will become active upon the next start-up.

ere.	Protocol:	HTTPS - With Security
	Port for http:	8443
	Port for https:	8443
	Restart RCCMD Weblf	

Menu "User Settings":

The user settings menu is for changing the default password and the password hint. Just enter the new values and save the changes.

User Settings	
Set login data.	
Administrator User Name:	admin
Current Administrator Password:	Current Password
New Administrator Password:	New Password
Password Hint:	cs121-snmp

If you click on "**manual**", you will find a link to the RCCMD manual and also a link to the Generex website.

Help

Download RCCMD Manually locally:

RCCMD Manual

Find more documentation online here.

The "**Info**" button shows the installer version.

This one is required in case of support cases.

Info

Installer Version: 4.10.12 150506

5.6 Configuration of VMWare and RCCMD

RCCMD distinguishes between two possible configurations.

To ensure the correct behavior in the event of an emergency, you need to clarify which hardware and software components are in use.

1) ESXi with V-Center

RCCMD will shutdown all VMs at once. For a safe shutdown, install VMWare Tools on each virtual machine. If you want a solution where you can set a different time for each machine, you have to purchase a license for each virtual machine and install RCCMD directly on this machine.

RCCMD will shutdown the Virtual machines without considering any kind of order. Additionally, you have to create a job for each single virtual machine in the configuration of your sender. The ESXi ignores the settings you made with vSphere when using a vCenter.

Menu "VMware Settings":

You may choose here at the machine management if the shutdown should be initiated by RCCMD or ESXi. If you use V-Center, you have to choose RCCMD. Otherwise, all changes you made in your ESXi configuration will be ignored and nothing happens. The V-Center handles the shutdown and migration of your virtual machines. The "maintenance mode" is also usable if you want to delay certain hosts to shutdown. Put Host(s) into Maintenance Mode" can attempt to send a host into maintenance mode, thereby triggering vMotion for the virtual machines. Select this option only, if DRS (Distributed Resources Scheduler) is configured to be in fully automated mode and vMotion has been successfully tested for every virtual machine! If maintenance mode fails, then the

remaing hosts will proceed with the "Shutdown Virtual Machines Behaviour". To calculate how much backup time remain, when initiating this RCCMD command, the values for the longest "Shutdown Duration" of the hosts and maintenance mode timeout must be added.

Enter the period of time after which to abort trying to reach Maintenance Mode. If Maintenance Mode is not reached after this time, then the remaining hosts will proceed with the "Shutdown Virtual Machines" behaviour. This is the last resort to shutdown the hosts and virtual machines gracefully.

VMware Settings			
Virtual Machine Management:	by RCCMD	•	Info
Virtual Machine behaviour:	Put Host(s) into Maintena	•	Info
Maintenance Mode timeout in Seconds:	30		Info

The "**behavior**" signalizes your ESXi what to do in case of a shutdown. If you use more than one ESXi and you use VMotion, you may put the machines into maintenance mode. All machines are transferred and the original ESXi will be shut down. If you choose Shutdown virtual machines, all machines are handled equally and will shut down.

The "**maintenance mode timeout**" is simply the duration how long RCCMD should try to get the machines into maintenance. If the timeout expires, the machines will shut down instead.

lf you	use	the	V-Center	you	can	edit	and
check	the	cred	lentials h	ere.			

Host name or IP:	192.168.1.1
User name:	root
Password:	•••
Check Values	

RCCMD will communicate directly with the ESXi. Only if you have a V-Center with V-Motion RCCMD will communicate with the V-Center.

2) ESXi without V-Center

An ESXi without a V-Center will handle the shutdown order itself.

If you get this message, it is necessary to configure the shutdows in your V-Sphere client.

ESXi Configuration required

If you configure RCCMD to let the ESXi Host manage the handling of the virtual machines, then it is necessary to configure the virtual machine shutdown for the ESXi Host within vSphere Client.



×

As you can see, it is possible for a single ESXi to set a **specific order in which the machines are shut down**.

In the last menu, you may configure additional ESXi to shutdown.

Hardware	Wrtual Machine Startup and t	hutdown				
Health Status Processare	Start and Stop Virtual Machine Default Startup Delay Default Shutdown Delay	s with the system	Enables 2 minut 2 minut	d es es		
Menory	Startup Order					
Retworking	Order Virtual Machine	Startup Star	tup Delay Sh	toown Shutdown Delay		
Storage Adapters Network Adapters	Automatic Startup 1 3 vMATest	Enabled 120	seconds Sh	it do 120 seconds		
Advanced Settings Power Management	2 D vCentes ManualStartup	Enabled 120	seconds Sh	it do 120 seconds		
	CD WMA \$501	Disabled 120	seconds Sh	it do120 seconds		
Software	Virtual Machine Startup an	d Shutdown	-	and the second second		-
This are Contract as an DNS are Rouning Authentication Services • What Machine Startup (Shutdown Virbal Machine Skapfile Location Security Prefile Heat Confer Canfiguration System Resource Reservation Apart VM Cettheol	Default Star tup Defay Por each initial machine, de 120 seconds Continue remediately of Startup Order Power on the specified virtual	ley startup for: the Weare Tools o machines when the	lart system starts. Our	Default Shutdown Delay For each virtual nachra, (120 aecords Shutdown Actors:	Alay shutdown for: Guest Shutdown ped in the opposite orde	
Advanced Settings	Order Virtual Machine	Statup	Startup Delay	Stutdown Shutdown Dela	hy A	
	Automatic Startup 1 Si vf6ATmt 2 Venten Any Order Manual Startup 3 vf6A 5501 3 vf6A 5501 3 vf6A 5501 4 vf6A	Enabled Enabled Disabled Disabled Disabled	120 seconds 120 seconds 120 seconds 120 seconds 120 seconds	Shut da 120 seconds Shut da 120 seconds Shut da 120 seconds Shut da 120 seconds Shut da 120 seconds		Mana Que

If you click on where you hav	" Add ", a popup appears ve to enter the required	The virtual machine th cannot shutdown the machine's name on w	nat runs F the other /hich RCC	RCCMD mus virtual mach CMD runs.	t not be sh ines and h	iutdown. C iosts. Ente	or else RCCMD er the virtual
handled equally.	VM running RCCMD	machine running RCCMD					
			Add	Remove	Edit	Verify	
			ES)	Xi Hosts to	shutdo	wn	
		ESXi Address	s	hutdown du	iration		Verified
		Total estimated Shutd	own time	for the Syste	em with cu	irrent confi	iguration: 00:00:30
						Cancel	Save Change
Add ESXi Host cre	edentials	×					
Enter the information name must be identica	for this ESXi Host below. (If vMotion shall b al to the name in the vCenter.)	be used, the Host					
Host name or IP:	192.168.200.30						
User name:	root						
Password:	*******						
Time granted for virtua 94	al machines to shutdown before Host gets	shutdown in seconds:					
Check Values St	iccess.						
	Abort	Save Changes					

Remember:

RCCMD will not work if no shutdown signal or execution command is sent. An additional device (such as CS121 or CS141) and/ or software (Like UPSMAN or UNMS) is required and must be configured correctly.

For more information, use the documentation from our website (www.generex.de)

5.7 Alternative RCCMD Configuration via Editor

You can edit the "rccmd.cfg" file (default /usr/rccmd) as follows:

RCCMD Configuration (v3-default) # # Bind on Interface # Defines on which interface we listen for incoming commands # Default: 0.0.0.0 (All possible interfaces on this host) ListenAddress=0.0.0.0 # # Listen on Port # Defines on which interface port we listen for incoming commands. # Default: 6003 ListenPort=6003 # # Enable UDP # Defines if we should listen for rccmd (UDP) broadcasts # Default: true ListenUDP=true # # Access Control List # A list of valid sender addresses, only its members can connect to us. # Seperate IP addresses with a space, e.g.: "192.168.0.1 192.168.0.2". # Default: <empty> (Everyone is allowed to connect to us) AllowedAddresses= # Alive Check # # Enable Alive Check # Defines if we should perform UPSMan alive checking. # Default: false AliveEnabled=false # # Alive Check Rate # Defines the interval of UPSMan alive checking, in seconds. # Default: 1800 AliveInterval=1800 Ħ # Alive Retry Rate # Defines the number of UPSMan alive checking retries, in case of problems. # Default: 0 AliveRetries=5 # # Alive Check Group Members List # A list of UPS device addresses that should be checked periodically. # Seperate IP addresses with a space, e.g.: "192.168.0.1 192.168.0.2". # Default: <empty> (No alive checking) AliveAddresses= # # Alive Program # Full path to script that is executed when an alive check fails. # Default: rccmd notalive.sh AliveProg=/usr/rccmd/rccmd notalive.sh # Redundancy Mode ± # Enable Redundancy # Defines if we should operate in redundancy mode. # Requires an enabled < Alive Check> configuration. # Default: false RedundancyEnabled=false # Redundancy Group Members List

A list of redundancy group member addresses, must be also in <AliveAddresses>. # Seperate IP addresses with a space, e.g.: "192.168.0.1 192.168.0.2". # Default: <empty> (No redundancy available) RedundancyAddresses= ± # Redundancy Level # Defines how many of the <RedundancyAddresses> are redundant. # Shutdown is executed when the number of shutdown requests exceeds this number. # Default: 0 (No redundancy available) RedundancyLevel=0 # Enable Redundancy Script # Defines if we should NOT execute a script when redundancy suppresses a shutdown. # Default: false. RedundancyBatchSuppress=false # Redundancy Script # Full path to script that is executed when redundancy suppresses a shutdown. # Default: ShutdownSuppressed.sh RedundancyBatchFile=/usr/rccmd/ShutdownSuppressed.sh # SSL encryption # enables SSL encrypted messages RCCMD SSL=false # Rejection/Acceptance of expired Certificates # disables SSL communication that try to use expired certificates SSLRejectExpiredCert=false ExecProg=/usr/rccmd/rccmd_execute.sh vCenter=true shutdownHosts=192.168.200.34|91 hostshutdownactive=true ups vm name=vMA5.1 Kev=secret Language=english vMotion=true vCenterAddress=192.168.200.65 vMotionTimeout=92

6 RCCMD on Citrix XEN Server

The RCCMD Software for Citrix XEN Server is a Linux based TCP client for receiving shutdown calls from UPSMAN software (any vendor), CS121/CS141 (any vendor) or other RCCMD licensed applications like SNMP adapters etc. from other vendors.

RCCMD for XEN Server runs on GNU Linux 2.6.18 or higher, which is the basis of the 2008 XEN Serverplatform.

For installing RCCMD please refer to the user manual of RCCMD for UNIX, following we describe some special aspects which are only applicable to XEN Server.

Installation:

Since the XEN Server does not offer any graphical interface, the download of RCCMD client for XEN Server from the GENEREX Website or other sites is not easy – unless you have extra tools installed like commandline browsers like Wget.

Additionally, by default, there is no FTP server active on XEN Server, so a transfer of a downloaded RCCMD package is also blocked. For this reason we recommend to use a local interface on your XEN Server like CD ROM Driver or, USB stick.

- Download RCCMD for XEN Server from the GENEREX Website using your original RCCMD licensekey (not older than 2 years !) and extract the TAR file. Copy the files on a CD-R and insert this CD now into your XEN Server CD drive. Alternativly use UPSMAN CD ROM Version 5.48 or higher.
- Enter: "mount /dev/cdrom /media" Since it's a CD ROM in your driver, the system will respond "mount: block device /dev/cdrom is write protected, mounting read-only"
- Change to the CD ROM by : "cd /media" by "Is" you can see the files on the CD, change now to the folder UNIX (UPSMAN CD ROM) or "generex" until you find the installationprogramm "install".
- Start now the installation by entering : "./install" and follow the instructions on the screen from here the installation is identical to any other RCCMD installation for UNIX.
- After the installation is finished, a new process will be running on your XEN Server : ":/rccmd -1" which means the system is ready now.
- ATTENTION: XEN Server has per default a firewall active, which does not allow to send from remote RCCMD signals. To open this firewall you have to edit the file "iptables" (/etc/sysconfig #).

	- A DW-Firemell-1-INDUT web dwart 6002 -i ACCEDT
Firewall Configuration:	A NH Firewall 1 INDIT a tan duprt 6002 - ACCEPT
Add all ports on the basis	A REFILEWALL INDUCT OF PUPPL DODS - ACCEPT
	commut
of the following lines	
/etc/sysconiig/ipt	~
ables	~
	~
	~
before the last REJECT	~
rule. The ports are 6003	~
	~
5769 and 8443.	~
	~
	"/etc/sysconfig/intables" [readonly] 25L, 1215C

Fig. 149: Firewall Configuration

Restart the iptables using:

/etc/init.d/iptables restart

RCCMD is now listening and will start the file "shutdown.sh" on your XEN Server when any CS121/CS141 or UPSMAN transmit a RCCMD shutdown call. This file shutdown.sh makes an "init 0" shutdown on your XEN Server, edit this file, if you want to use a different shutdown procedure.



e: We recommend to install RCCMD on the virtual guest systems too and to shut them down PRIOR of the shutdown of the physical host. Therefore the secure shutdown of the guest systems is assured and avoids the lost of their data.

7 RCCMD on MAC OS 10.X

1 Note:

The RCCMD Installer is using our delivered Java Runtime Environment version, which is used for the installation or rather uninstallation only. In addition the RCCMD Web Configurator is using a Java web-server (jetty). If you want to use RCCMD without Java, delete the entry /System/Library/StartupItems/RccmdWebIf (till MAC OS 10.5) or (since MAC OS 10.5) /Library/LaunchDaemons/de.generex.rccmdWebif.plist

Menu "Introduction":

In the next menue you can see the progress column where the next steps are visible.

Click the "Next" button to continue.



Fig. 150: RCCMD Installation

You need a special **license key** for your RCCMD software. You can identify the key with the "RX3" in the first part of the license key. Most of the times you need to order the key separately.

Click the "Next" button to continue.



Fig. 151: RCCMD Lizenz Key Enter

000	RCCMD-Client
	Choose Install Set
 Introduction License key verification Choose Shortcut Folder Pre-Installation Summary Installing Install Complete 	Install Set Typical CMRCCMD CMWebIf
	Description
	This installs a webserver and a webinterface which is needed to configure RCCMD.
InstallAnywhere	
Cancel	Previous

Fig. 152: RCCMD Chosse Install Set

Choose an alias folder.

Click the "Next" button to continue.

Choose your preferred option.

Click the "Next" button to continue.



Fig. 153: RCCMD Choose Alias Folder

Select the additional output options.

Click the "Next" button to continue.



Fig. 154: RCCMD Nachrichten

It continues the **pre-installation** summary.

Click "Install" to complete the installation.



Fig. 155: Pre-Installation Summary

Select these **default values** for the port and protocol of the web-interface or select new ones.

Click the "Next" button to continue.





It is possible to create an own password for the RCCMD Web interface. Otherwise, the system uses the standard password "cs121-snmp".

Click the "Next" button to continue.



Fig. 157: Kennworteingabe

In the next menu it is possible to create an own password hint.

Click the "Next" button to continue.

 Introduction License Agreement 	Enter a hint for the Password.	
Choose Install Set		
Choose Install Folder Choose Shortcut Folder		
Pre-Installation Summary		
Jinstalling		
	Password Hint	

Fig. 158: Passworthinweis-Eingabe

Please read the text below.

Menu "Install Complete":

installation.

Click the "Next" button to continue.



Fig. 159: RCCMD Configuration required



Fig. 160: RCCMD Install Complete

7.1 RCCMD WebInterface (from Version 4.2.0.0)

RCCMD provides its own web-interface from version 4.2.0.0 or higher. Therefore it is possible to configure and control RCCMD remotely. After the successful installation, your default web-browser of your OS starts automatically.

● ● ● ■ ▶ [22] + ● https @ localhost:8443/lo … IIII Senkrechter Wikipedia Apple Yahoo	login htm:jsessionid=8dim8ruslym2ssvcoeof5ttt Google Maps YouTube Wikipedia News T Beliebt T	. 161: RCCMD WebInterface
RCCMD	IP: 127.0.0.1	
System Login: Username: admin Password:	System Status Current status of RCCMD is : running	-
Login		

Menu "Connections":

You can enter the **IP addresses** of the allowed RCCMD senders (CS121/CS141/UPSMAN) into the "Connections" menu. Click the "**Insert**" button to enter the IP address of the 1st ender. Click the "**Remove**" button, if you want to remove the already entered IP address. Click the "**Edit**" button, if you want to edit the entered IP address.

You can define under "**Protocol**", if RCCMD should use **SSL certificates**. Enable the "**Reject expired SSL certificates**", if you want to reject connections with expired certificates.

Click the "**Save Changes**" button prior of the leaving of this site to save your changes.





Fig. 162: RCCMD WebInterface - Connections

"Heartbeats". This check is a signal, that will be send to the CS121/CS141/UPSMAN via port 5769, if the UPSMAN service still got UPS data. If not, the script file "alive.bat" will be executed, which will trigger an accordant pop-up message.

The feature "**by the use of CS121/UPSMAN Traps**" provides UPSMAN/RCCMD/UNMS messages, which will display the UPS status as message. If enabled, this feature will trigger a message, if the UPS status of the UPSMAN/RCCMD servers has changed.

Menu "Heartbeats": You can enable the "UPSMAN Alive Check" feature into the menu

RCCMD	IP: 127.0.0.1	
Status	Heartbeats	
View Event LogSystem StatusLogout	The UPS alive check can be used to monitor the availability of each sender.	
Options Connectors Hearbeats Shutdown Settings Notification Settings	✓ Enable automatic UPS alive check ○ by the use of CS121 / UPSMAN Traps by polling CS121 / UPSMAN 1800 seconds every: and retry each failed 5 times	
Advanced Settings Web Configuration User Settings	When the alive check fails, then RCCMD will use the following setting: Run this command file : Edit File	
Manual Info	Test UPS connections: Run alive check now	

The feature "**by polling CS121/UPSMAN every x seconds**" provides the pure signal polling without receiving UPS data or rather messages.

The polling rate (default 1800 seconds) defines the polling of the UPSMAN service, connection retries (default 100) means after 100 unsuccessful connection tries an alarm will be triggered.

You can test the UPS connection, if you click the "Run alive check now..." button (the port 5769 will be tested).

Click the "Save Changes" button prior of the leaving of this site to save your changes.

Menu "Redundancy":

You can enable the **redundancy management feature** into the menu "Redundancy". The **redundancy level** defines the number of redundant senders in the redundancy group. This means, that level 1+ senders must have sent a shutdown signal before this RCCMD starts its shutdown sequence.

When redundancy suppresses a shutdown, then RCCMD will trigger the "suppressed.bat". You can edit this file, if you click the "**Edit file...**" button.

Please note, that it is required to configure a reset of the redundancy alarm on the sender (CS121/CS141/UPSMAN).



Fig. 164: RCCMD WebInterface – Redundancy

You can use the function "**Send RCCMD cancel shutdown**", to discard a previously sent shutdown automatically. If a shutdown was suppressed, because of the existing redundancy at this point of time, but the problem was solved at the UPS intermediate, you can reset the shutdown with the function "**Send RCCMD cancel shutdown**". The client, which received the shutdown, will be encouraged to reset it.

Click the "Save Changes" button prior of the leaving of this site to save your changes.

Menu "Shutdown Settings":

You can change or rather extend the shutdown sequence.



Fig. 165: RCCMD WebInterface - Shutdown Settings

Menu "Notification Settings":

You can change or rather extend the default **bat files** for E-Mail, Message and Execute, if you click the "Edit File..." button.

Click the "**Save Changes**" button prior of the leaving of this site to save your changes.



Fig. 166: RCCMD WebInterface - Notification Settings

You can define the **maximum size of the event logfile** into the menu "Advanced Settings", where the overwriting of older

Menu "Advanced Settings":

entries will start, the **RCCMD bindings** for the IP address, the RCCMD listener TCP port and the RCCMD Tray Message Port, which will be used for the RCCMD messages.

Click the "**Save Changes**" button prior of the leaving of this site to save your changes.



Fig. 167: RCCMD WebInterface - Advanced Settings

Menu "Web Configuration":

You can change the default password for the user "admin" into the menu "Web Configuration". In addition you can disable the **HTTPS protocol**, if you just want to use the HTTP protocol. The RCCMD version 4.2.3.0 or higher provides the feature of changing the default ports for HTTP and HTTPS.

Click the "**Save Changes**" button prior of the leaving of this site to save your changes.

User Settings menu

Here you can change the default password for admin.

Afterwards you have to restart the RCCMD service!

Click the "Save Changes" button prior of the leaving of this site to save your changes.



Fig. 168: RCCMD WebInterface - Web Access

RCCMD	IP: 1	27.0.0.
Status • View Event Log • System Status • Logout	User Settings Set login data. Administrator User Name:	admin
Options Connections Heartheats	Current Administrator Password:	Current Password
 Redundancy Shutdown Settings Notification Settings Advanced Settings 	New Administrator Password:	
User Settings	Password Hint:	admin
Manual	Restart RCCMD Weblf to apply say	ved changes to the password.

Fig. 169: RCCMD WebInterface - User Settings

Menu "Status, View Event Log": You can see the logging of the events into the menu "Status, Event Log".



Fig. 170: RCCMD WebInterface - Event Log

Menu "Status, System Status":

You can check the current **status of RCCMD** into the menu "Status, System Status", **update** the status and **restart** or rather **stop/start** the RCCMD service.





Menu "Help":

You can open the RCCMD **user manual** into the menu "Help" ad you can follow the link to <u>www.generex.den</u>.



Fig. 172: RCCMD WebInterface - Help

7.2 RCCMD WebInterface Remote Access

RCCMD provides its own web-interface from version 4.2.0.0 or higher. Therefore it is possible to configure and control RCCMD remotely. Please note, that the firewall port 8443 TCP is enabled. Enter the following into a web-browser, to connect to a workstation, where RCCMD is running:

https://IP address of the RCCMD client: 8443

♦ https://192168.200.37.8443/login.htm	
RCCMD	IP: 192.168.200.37
System Login: Username: admin Password: Login	System Status Current status of RCCMD is : running



Now you can access the configuratior by remote.

7.3 Old RCCMD Configuration on MAC OSX

Menu "Addresses":

Add the **IP address** of the RCCMD server, which is allowed to send a shutdown to this client..

Attention: If you do not enter an address, then every server has the permission to send a shutdown command. If more than one CS121/CS141 or UPSMAN is existent, thus a redundancy situation, you need to enter more than one address as authorized sender.

00	RCCMD Configuration
	Addresses Functions Logfile Execute Control
I	IP address list of all RCCMD servers that are allowed to send a shutdown command to this client (no entry means:every server).
\sim	Add Address
	Delete Address
	COMD IP Address
	Enter an IP address (for example 192.33.44.55):
UPSM	IP address or name: tings anced gs like IP id, port and
I	OK Cancel default
	Configure
CCMDCFG V4.0.0.11	

Fig. 174: RCCMD Address Window

Click the "OK" button to continue.

Menu "Functions":

If you want to use the UPSMAN alive checking (recommended), check the "Enable connection check" box. Alive check is a signal, send out to the UPSMAN or CS121/CS141 on port 5769 to check if the UPSMAN has still UPS data - or not. If this fails, the scriptfile alive.bat will be executed which causes a messagbox coming up. The polling rate (default 30 min.) defines the polling of the UPSMAN service. connect retries (default 5) means after 5 unsuccessful connection tries an alarm will be triggered.

0 0	RCCMD Configuration
	Addresses Functions Logfile Execute Control
UPS UPSMAN	UPSMAN alive checking Enable connection check Test connection(s) Polling rate: 30 min Connection retries: 5 Execute at failure: //usr/rccmd/rccmd_execute.sh Browse Default Set Edit File RCCMD Redundancy Use RCCMD group/redundancy
JRCCMDCFG V4.0.0.11	Save Cancel

Fig. 175: RCCMD Configuration Window "Functions"

"Use RCCMD Traps" enables UPSMAN/RCCMD/UNMS notifications which show the UPS status. If activated, these function will show local messages on status changes.

If you click the "**Test connection(s)...**" button, the UPSMAN alive checking of the entered IP addresses will start (port 5769 will be tested).

If you click the "**Browse...**" button, you will get a selection of the default batch files.

If you click the "**Default setting**" button, you will get back to the default batchfile (alive.bat).

At the failure of the UPSMAN alive checking, you can define an executing file or edit the default file "alive.bat".





At UPS installation RCCMD offers a redundancy management functionality as follows:

Every UPS must be equipped with a CS121/CS141 or UPSMAN software computer. When ticking the box "**Use RCCMD group/redundancy**" – you are guided to a menue where you can choose which CS121/CS141/UPSMAN are supplying this RCCMD client. E. g. if 4 CS121/CS141/UPSMAN are installed into 4 UPS – than each may send a shutdown signal to this RCCMD client.



Fig. 177: RCCMD Redundancy

Menu "Logfile":

You can configure the **log file size** and edit the executing bat files in this installation window.



Fig. 178: RCCMD Configuration Window "Logfile"

Menu "Execute":

If you click the "Configure..." button, you will be able to enter the mail settings and to use the mail function of RCCMD.



Fig. 179: RCCMD Configuration Window "Execute"



Fig. 180: RCCMD Email-Configuration



Fig. 181: Configuration – RCCMD Shutdown.sh

The RCCMD version 4.0.2.0 provides a grafical configuration of the shutdown sequence.
Click the "**Configure**" button to enter the shutdown sequence settings.

File:/usr/rccmd/rccmd_shutdown.sh			
Available Commands: RCCMD shut down relay Wait seconds Restart System	< << >	Current Sequence: RCCMD shut down relay to gx56 (ssi) RCCMD shut down relay to 111.11.11.11 Wait 5 seconds //usr/rccmd/rccmd/message.sh [Parameter] Shut down System Add custom application	
Description of: Shut down System			
Ends your session and shuts down	System so t	hat you can safely turn off computer.	
		Save Cancel	

Fig. 182: Configuration – RCCMD Shutdown Sequenz

The following commands are available:

RCCMD shutdown relay: Relays RCCMD shutdown command to another workstation. Enter the IP address or the hostname of the remote station you want to shutdown.

Wait seconds...: Waits a duration in seconds until the next command will be executed.

Restart System: Ends your session, shuts down the system and restarts it.

Shutdown System: Ends your session and shuts down the system, so that you can safely turn off the power.

	RCCMD Configuration	
	Addresses Functions Logfile	Execute Control
	Control the Rccmd	
		Rccmd status
		Stop Rccmd
		Start Rccmd
UPS		
9		
JRCCMDCFG V4.0.0.11	C	Save Cancel

Fig. 183: RCCMD Control

Click the **"Control**" button to get into the folowing screen:

8 RCCMD on NovellNetWare

Download the RCCMD netwar5.zip file. Extract it to any folder of your Windows or Novell server. Create a directory "UPS" on the Netware SYS Volume (e.g. F:\UPS). Copy the extracted file to this folder. Execute the following:

load rccmd.nlm -l -a load down.ncf

The following text is presented when entering RCCMD with the help parameter "?" inside a NovellNetWare console:

```
Possible parameters:
 -1
     listen. waits for a command from RCCMD sender
 -s
     sends a ping to a listening program
 -se <command> <param>
     sends a command to a listening program
 -p <port>
     Portadress (Defaultadress = 6003)
 -a <ipaddress>
     Address in IP Format. Ex. -a 192.10.20.30 (max. 10)
 -t <timeout>
     Time in Seconds (Defaulttimeout = MAX TIMEOUT)
 -?
     this help
Supported Commands (for use with -se argument):
 SHUTDOWN
          This will call the configured shutdown-batchfile (default:
shutdown.bat)
 EXECUTE
          This will call the execute.bat file
 MSG TEXT
          This will call the message.bat file
                                                                       <text,
unrestricted word count>
MSG_ID <ID>
          This will call the message.bat file
                                                                       <message
parameters, seperated by blanks>
 LOG TEXT
          This will write to configured log-file (default: rccmd.log) <text,
unrestricted word count>
LOG ID <ID>
          This will write to configured log-file (default: rccmd.log) <message
parameters, seperated by blanks>
```

Examples:

```
load rccmd.nlm -s -a 192.10.200.52 -a 192.10.200.53
load rccmd.nlm -s -a 192.10.200.52 -a 192.10.200.53 -t 10
load rccmd.nlm -se "SHUTDOWN" -a 192.10.200.52
load rccmd.nlm -se "MSG_TEXT this is a message" -a 192.10.200.52
load rccmd.nlm -1
load rccmd.nlm -1 -a 192.10.200.52 -a 192.10.200.53
load rccmd.nlm -1 -a 192.10.200.52
If you have added a search path i.e.: "search add sys:rccmd",
otherwise you have to use the absolute path.
```

```
load sys:rccmd\rccmd.nlm -1
```

To start RCCMD in receiving-mode (listen) enter the following line:

```
load <path> RCCMD -I [-a 192.200.100.10] [-p 6003] load <path> shutcmd.nlm -f
```

Optional parameters:

-a <address> TCP/IP address of the master computer(s), which sends the RCCMD-signal.

-p <port> (optional) TCP-Port address, on which the master computer is sending

To start RCCMD in sending-mode (send) enter the following line in your shut-down-job:

load RCCMD -s -a <address> [-p 6003]

For <address> enter the TCP-address of the machine to which you want to send the RCCMD-signal. (Workstations in "listening" mode, with an active RCCMD with parameter -I)

Optional parameters:

-p <port> TCP-Port, which the RCCMD-signal is using.

The option -a can be used multiple times, if a shutdown on remote network servers should be initiated.

Example: (Example path <path> = sys:\ups\upsman\rccmd.nlm)

load <path> RCCMD.NLM -s -a 192.168.210.3 -a 192.168.210.4 -a 192.168.210.10

...etc.until "end of line"

unload RCCMD

load <path> RCCMD.NLM -s -a 192.168.210.8...etc.

unload RCCMD

Do not use the CD License key more than once. If more RCCMD modules need to be installed for the shutdown, additional CD license keys must be purchased. Additional license keys are available from your UPS dealer, whereas the CD can be used again for the actual installation.

rccmd.nlm

Modul for the multiserver shutdown in IP-networks.

The rccmd.nlm contains different command line parameters, which are either for the "send" or "listen" modul of the RCCMD modul.

- rccmd -? Help
- rccmd -s Sending off a "ping" signal to a waiting program

rccmd -IWaiting for a "ping" signal. A command can be executed after the reception of the "ping" signal.

- rccmd –p Setting the port address (default = 6003).
- rccmd –a Address in IP format e.g. 192.168.202.1
- rccmd –t Time in seconds until a connection will be established. (default timeout = 10)

Example:

load sys:ups\rccmd.nlm -s -a 192.168.202.1 [-a 192.168.202.1]

load sys:ups\rccmd.nlm -s -a 192.168.202.1 -t 10

load sys:ups\rccmd.nlm -I -a 192.168.202.1 shutcmd.nlm [/para]

rccmdipx.nlm

This is a modul for just IPX networks. This modul sends a shutdown command (or any other console command) directly to every IPX server name. Please start RCCMDIPX on all Novell consols. The modul needs to be loaded on both servers.

This modul has to loaded on both servers first

(1. Rename RCCMDIPX to RCCMS.NLM 2. Load RCCMD The following syntax is valid:

rccmd <server name> <console command>

Whereas <server name> is a valid server in a network enviroment and <console command> a valid NetWare command is.

Example:

1. load sys:ups\rccmdipx (or load RCCMD if RCCMDIPX.NLM is renamed to RCCMD.NLM)

2. rccmd gnw1 forcedown

or 1. load sys:ups\rccmdipx

2. rccmd gnw1 sys:ups\down.ncf

Instead of the down command for older clib.nlm files, the forcedown command maybe used.

Multiple-start RCCMD on Novell

The multiple start RCCMD on Novell is relatively easy to manage. Several RCCMD clients may be started with the following command line:

load rccmd.nlm -I -a load down.ncf

whereas the syntax goes as follows:

LOADING RCCMD.NLM -L(LISTENER) -A(IP adress of UPSMAN/CS121/CS141/RCCMD SENDER) COMMAND (COMMAND TO BE EXECUTED)

Example:

LOAD RCCMD.NLM -L -A 192.168.10.2 LOAD DOWN.NCF

In this scenario the "down.ncf" file is executed, which leads to an immediate shutdown of the client computer, if the RCCMD call from the RCCMD server (sender) is received. Other . ncf or .nlm (executables) files may be executed too.

A group of 8 .ncf example files can be found in the UPSMAN installation directory. Please note that these example files ma have to be adjusted by user/administrator according to the configuration of the system.

9 RCCMD on DEC VMS

The UPS-Management-Software CD contains the RCCMD software. The VMS RCCMD installation can be done by following the UNIX installation instructions in this manual, all of the steps are the same.



The VMS license is not part of the standard CD; It is to be ordered separately. It is not permitted to use the VMS version and its RCCMD modules without registered license.

Prior of the installation you should verify that port 6003 is not in use. Check this with the command « netstat –an ». Ensure that there is no other process running or start the RCCMD module at another port address with the option –p for sending and receiving. Ensure too, that you will use this port for every command in the network. Please follow the instructions of the next chapter carefully. For further help you may use the user manual and the troubleshooting pages or contact your UPS software dealer.

Important: The Alpha-Version is linked to OpenVMS 7.1. For OpenVMS 6.x use the Version 6.x in the following CD directory (ex. DKA200:[VMS.ALPHA.6X]).

Installation procedure:

- Connect the workstation to the network.
- Login into the VMS System using SYSTEM login.
- Mount the CD-ROM device (if DKA200 is the device name of the CD-ROM):

\$ MOUNT/OVERRIDE=IDENT DKA200: UPS UPS:

This is a system specific command. Use the VMS help pages for your system or ask the system operator, if you do not know, how to mount your input device.

- Start the VMS install procedure by: @SYS\$UPDATE:VMSINSTAL
- or: @SYS\$UPDATE:VMSINSTAL <device>
- e. g.: @SYS\$UPDATE:VMSINSTAL RCCMD DKA200: [VMS.ALPHA]

VMSINSTAL is an interactive script, so just follow the installation instructions on the screen (all instructions are aditionally listed in the following subjects 5-11).

- Answer YES at the prompt: "* Are you satisfied with the backup of your system disk [YES]"
- Answer the prompt: "* Where will the distribution volumes be mounted:" with your correct input device name e. g.:

CDROM: *dka500:* [VMS] (your CDROM device and path [VMS], the device may be different on your system).

- Answer the prompt:"* Enter installation options you wish to use [none]:" by pressing RETURN
- At the prompt: "Please mount the first volume of the set on MKA300:." "* Are you ready?" please insert your tape (or disk or CDROM) and answer "yes"
- Enter the license key of your RCCMD version
- Enter the complete path of the target directory, e. g.: dka100: [ups]
- Answer the question "Would you like to start the RCCMD module automatically on your system".
- Exit the VMSINSTALL procedure by RETURN at the "*Product:" prompt and change to your target UPS directory (e. g.: set default dka100: [ups])
- Now install the RCCMD software in sending mode on your RCCMD server workstation. Your server workstation is the computer, which is connected to the UPS via the RS232 port.

DEC ALPHA CD Problems: If the CD could not be mounted or if you have problems to start the VMSINSTAL script on the DEC ALPHA hardware, please follow the instructions below:

 Copy the archive VMSA.ZIP (ALPHA directory) into a temporary directory on your system. COPY RCCMD.ZIP DKA100:[TEMP]

If you have not installed the ZIP utilities on your workstation already, you have to assign a system value: UNZIP==\$DKA200:[VMS.ALPHA]UNZIP.EXE, where DKA200: is your CDROM device.

• Unpack your VMS UPS archive:

SET DEF DKA100:[TEMP] UNZIP RCCMD.ZIP

• Start the VMS installation routine: @SYS\$UPDATE:VMSINSTAL RCCMD DKA100:[TEMP]

Configuration procedure:

After the installation there are 3 command files:

- RCCMDSTART.COM: RCCMD startup command file should be called in the VMS startup file
- RCCMD.COM: Command file to start RCCMD program itself, this should be configured to your requirements
- RCCMD_SHUTDOWN.COM: sample command file which could be called by RCCMD to shutdown VMS

Configure the RCCMD.COM command file by calling the RCCMD program with the following command: "rccmd -l" optional you can use "rccmd -l -a < lP address of the sender> -p <port (standard 6003)>". After that you can start the RCCMD by caklling the command file RCCMDSTART.COM with "@rccmdstart".

Check the process by calling "show system". There should be a process with the name RCCMD.

The automatic startof the RCCMD should be initiated from the VMS startup file. You may use the enclosed script rccmdstart.com. Add a line to your startup file (prior to the exit command):

\$ @your_disk:[your_path]rccmdstart.com (e. g.: \$ @dka100:[ups]rccmdstart.com)

The UPS software will be started automatically after the next reboot.

10 RCCMD AS400-Client

RCCMD for AS 400 an iSeries is not described in this manual, but has identical functions as any other RCCMD. RCCMD for AS 400 comes with a separate user manual with the product.

Download AS400 RCCMD Manual

11 RCCMD FAQ

In this chapter we will give you some solutions of well known problems.

FAQ - Frequently Asked Questions

Problem : The execution of « sudo sh rccmd_shutdown.sh » on ESXi 4 with vMA 4.1 fails with the following error message or similar :

"Compilation failed in require at /usr/lib/perl5/site_perl/5.8.8/VMware/VIFPLib.pm line 10. BEGIN failed"

"compilation aborted at /usr/lib/perl5/site_perl/5.8.8/VMware/VIFPLib.pm line 10. Compilation failed in require at /usr/rccmd/upsVIShutdown.pl line 12."

"Can't load '/usr/lib/perl5/site_perl/5.8.8/libvmatargetlib_perl.so' for module vmatargetlib_perl: libtypes.so: cannot open shared object file: No such file or directory at /usr/lib64/perl5/5.8.8/x86_64-linux-thread-multi/DynaLoader.pm line 230."

"BEGIN failed--compilation aborted at /usr/rccmd/upsVIShutdown.pl line 12. at /usr/lib/perl5/site_perl/5.8.8/VMware/VmaTargetLib.pm line 10"

Reason: The procedure of the authentication is completely different from vMA 4.0 to vMA 4.1. The integration of RCCMD is not possible unless you use a newer version of RCCMD or to use vMA 4.0 instead.

Solution : Use the vMA 4.0. A new setup for integration of the vMA 4.1 will be released after November 2010.

Problem : You get the following error, after the execution of the upsVIShutdown.pl



Fig. 184: Error after execution of upsVIShutdown.pl

Solution: You do not use the latest RCCMD version. Please download the current RCCMD version from our website <u>www.generex.de</u>.

Problem: Shutdown of NetApp storages

Solution: Typically all low-cost NAS systems export their NFS shares in the "asnyc" mode. This is an extremly fast write process, which secures, that no data is lost if the power suddenly fails. As long as the user has not changed the default NFS protocol write mode from "async" to "sync", than there is no risk to lose data.

Anyhow an UPS should be connected to any NAS to avoid, that network computers will not be shut downed but rather will die down. For this case, we recommend to connect an UPS to the NAS and we think it makes sense to connect an UPS to a NAS system.

Otherwise it is enough, if the computers will be shut downed via RCCMD, if a powerfail occurs. If the computers are down, there are no open data anymore, that can be lost. You could switch off any NAS as soon as the network computers are down.

Specific feature: QNAP/NETAPP systems are using the "sync" mode and are therefore faster and more sensitive accordingly, but these devices possess an own battery, to assure a secure shutdown at any time. This internal battery clears the cache and parks the recording head, if no data have to be stored. So, you will not lose data, if the network computers are down.

We do not think, that an additional cable connection between the UPS and the NAS is required, if it is assured, that the computers are down.

Problem: Error messages at "UPSMAN Alive Check" on Windows Server 2008

Solution: The firewall port 5769 has to be enabled for all profiles (domain, home, public)!

Problem: Mount of USB stick via command line.

Solution: Change into the directory /dev. Execute Is. There you will see the connected devices. Note the devices like sda, sda1... Connect your USB stick. Execute Is again into /dev. Now you should see more entries under sda. My stick got the entry sdc1.

Enter the following : mount /dev/sdc1 /mnt

Use this command on FreeBSD OS : mount_msdosfs /dev/da0s1 /mnt/usb

Execute Is -lisa

Now you should the folders of your stick. Change into the accordant directory : cd /mnt/name of the folder, which contains the installation data.

Extract the the rccmdinst.tar file : tar -xvf rccmdinst.tar

Execute the binary file : ./installRCCMD.bin

Problem: The RCCMD Software does not execute RCCMD shutdowns and you can determine the following error message into the file "rccmd.log" (default folder C\Program Files\RCCMD):

11/23/2011,12:56:55, RCCMD: ERR: WaitForOkay - Read failed with error <0>

Solution: Update your RCCMD Software!

Problem: You got the following error into the CS121/CS141 alarm log: 12/06/2011,16:30:56, RCCMD could not connect. (RccmdConn01) Reason: Host prohibited

Solution: The server denied an incoming TCP connection. Check your firewall configuration.

Problem: Enable firewall ports manually

Solution: You can check, if the required ports were opened, with the following command:

sudo iptables -L

[root@vMA4	1 RCCM	1D]#	iptables -L		
Chain INPU	T (pol	licy	ACCEPT)		
target	prot	opt	source	destination	
ACCEPT	tcp		anywhere	anywhere	tcp dpt:5769
ACCEPT	udp		anywhere	anywhere	udp dpt:6003
ACCEPT	tcp		anywhere	anywhere	tep dpt:6003
Rn-rirewar	1-1-1P	NFU1	all anywhere	anywnere	
Chain FORW	ARD (p	oolid	y ACCEPT)		
target	prot	opt	source	destination	
RH-Firewal	1-1-IN	IPUT	all anywhere	anywhere	
Chain OUTP	UT (po	olicy	/ ACCEPT)		
target	prot	opt	source	destination	
Chain RH-F	irewal	11-1-	INPUT (2 reference	3)	
target	prot	opt	source	destination	
ACCEPT	all		anywhere	anywhere	
ACCEPT	icmp		anywhere	anywhere	icmp any
ACCEPT	esp		anywhere	anywhere	
ACCEPT	ah		anywhere	anywhere	
ACCEPT	udp		anywhere	224.0.0.251	udp dpt:mdns
ACCEPT	udp		anywhere	anywhere	udp dpt:ipp
ACCEPT	tcp		anywhere	anywhere	tep dpt:ipp
ACCEPT	all		anywhere	anywhere	state RELATED,ESTABLISHED
ACCEPT	tcp		anywhere	anywhere	state NEW tcp dpt:ssh
ACCEPT	udp		anywhere	anywhere	state NEW udp dpt:snmp
ACCEPT	udp		anywhere	anywhere	state NEW udp dpt:snmptrap
ACCEPT	tcp		anywhere	anywhere	state NEW top dpt:http
REJECT	all		anywhere	anywhere	reject-with icmp-host-prohibited
[root@vMA4	1 RCCI	1D1 #			

Fig. 185: Listing of the IP tables, see the "ACCEPT" at the TCP and UDP ports 6003, TCP port 5769

Sollte das Installscript die Ports nicht öffnen können, so ist dies auch manuell möglich:

Enable Firewall Port 6003 UDP/TCP manually

You can enable the firewall port 6003 UDP/TCP as follows :

/usr/sbin/esxcfg-firewall

esxcfg-firewall	-0	6003,tcp,in,"RCCMD	rece	eive	6003"
esxcfg-firewall	-0	6003,udp,in,"RCCMD	receive	udp	6003"
esxcfg-firewall	-0	6003,tcp,out,"RCCMD	tran	smit	6003"
esxcfg-firewall	-0	6003,udp,out,"RCCMD	transmit	udp	6003"

oder

/usr/sbin/iptables				oder			/sbin/iptables			
iptables	-I	INPUT	-p	tcp	dport	6003	-j	ACCEPT		
iptables	-I	OUTPUT	-р	tcp	sport	6003	-j	ACCEPT		
iptables	-I	INPUT	-р	udp	dport	6003	-j	ACCEPT		
iptables	-I OUTPUI	'-p udp	sport	6003 -j	ACCEPT					

Save your settings as follows:

service iptable save

Problem: RCCMD error message on VMware ESXi server:

04/25/2012,14:40:24, rccmd[08066]: message received from 192.168.2.67

04/25/2012,14:40:24, rccmd[08066]: Trying to start program/job: /usr/rccmd/rccmd_shutdown.sh

04/25/2012,14:40:24, rccmd[08066]: error: /usr/rccmd/rccmd_shutdown.sh program/job start failed

The error message "job start failed" appears, if the user got no rights for the execution of the rccmd_shutdown.sh.

Solution 1: Arrange the "X" right on the rccmd_shutdown.sh as follows:

CHMOD +x rccmd shutdown.sh

Solution 2: If the accordant rights are at present, the user did enter the wrong login data for the physical ESXi server. You can adjust these data into the file "esxi_creds" in the folder /usr/rccmd.

Problem: You get a message during the installation "Perhaps host is not a vCenter or ESX server"

Solution: Turn off the Lockdown Mode:

https://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=100 8077

🛃 192.10	68.200.94 - PuTTY	_ 0 X
Choose	Locale	
1-	Deutsch	
->2-	English	
3-	Espa?ol	
4-	Fran?ais	
5-	Italiano Deutumi2-	
0-	Portugu?S	
CHOOSE	LOCALE BY NUMBER: 1	
RCCMD	(created with Install	Anywhere)
Prepari	ing CONSOLE Mode Installation	
This in	nstaller was created with an unlicensed version	
of Inst	tallAnvwhere. The evaluation period has expired.	
Please	contact sales@flexerasoftware.com about licensing.	

Fig. 186: Error Message "Unlicensed Version"

Problem: You get the following message after the start of the installation on a vMA on an ESXi server.

Solution: It is required, that the OS contains a TMP folder (/tmp) to execute a successful RCCMD installation.

Appendix

A OpenSSL

"This product includes software developed by the OpenSSL Project for use

in the OpenSSL Toolkit (http://www.openssl.org/).

B Syntax for the switching of the outputs

Set the RCCMD client at port 6002 to "on", define the CS121/CS141 AUX ports as outputs and restart the CS121/CS141. Install the RCCMD Windows Wizard and open a DOS box. The following is a syntax example with the IP address 192.168.202.165:

C:\Program Files\RCCMD\

rccmd -se "EXECUTE |AUX|1|1" -a 192.168.202.165 -p 6002

ATTENTION! The blank after the "Execute" is important!

Common syntax for the switching of AUX ports:

|AUX|1|0 Port1, set to low |AUX|1|1 Port1, set to high |AUX|2|0 Port2, set to low |AUX|2|1 Port2, set to high |AUX|3|0 Port3, set to low |AUX|3|1 Port3, set to high |AUX|4|0 Port4, set to low |AUX|4|1 Port4, set to high

Syntax for the switching of the outputs of the SiteManager:

C:\Program Files\RCCMD\rccmd -s -a 192.168.222.238 -p 6002 -se "EXECUTE |UPSCMD|20000|1,1"

ATTENTION! The blank after the "Execute" is important!

```
|UPSCMD|20000|1,0 output 1 to low
|UPSCMD|20000|1,1 output 1 to high
|UPSCMD|20000|2,0 output 2 to low
|UPSCMD|20000|2,1 output 2 to high
|UPSCMD|20000|3,0 output 3 to low
|UPSCMD|20000|3,1 output 3 to high
|UPSCMD|20000|4,0 output 4 to low
|UPSCMD|20000|4,1 output 4 to high
|UPSCMD|20000|5,0 output 5 to low
|UPSCMD|20000|5,1 output 5 to high
|UPSCMD|20000|6,0 output 6 to low
|UPSCMD|20000|6,1 output 6 to high
|UPSCMD|20000|7,0 output 7 to low
|UPSCMD|20000|7,1 output 7 to high
|UPSCMD|20000|8,0 output 8 to low
|UPSCMD|20000|8,1 output 8 to high
```

C Know How Pool

SuSE 8.1 or older Linux versions

If you are using a SuSE 8.1 or an older Linux version, it is required to select the OS "XEN-Server" during the interactive RCCMD installation!

D RARITAN Dominion PDU Configuration

In the following, we will describe, how a RARITAN PDU Type Dominion can be controlled through any RCCMD client or any CS121/CS141 or any other RCCMD compatible device :

1. Install a RCCMD client on a Windows OS and copy/create a file, like the following, into the RCCMD directory (default C:\Program Files\RCCMD) and use a SNMPwalk tool from an open source with the mandatory distribution txt-file « Copying.txt ». This file is included for legal reasons (Open Source).



Fig. 187: "pxout.bat"

The command is called « pxout.bat » and expect 4 parameters :

- IP address or hostname of the Raritan device
- SNMP community string (the one for write access)
- Outlet number (1 to 12)
- 0 = off, 1 = on

2. The batch file "pxout.bat" accepts now several parameters from incoming RCCMD executes and translates these into SNMP set commands for the Raritan.

The "pxout.bat" accepts the following command syntax:

"pxout.bat <IP address> <community> <Outlet> <on/off>"

- **IP address**: This is the IP address of the Raritan
- **Community**: This is the community string for "write access", configured at the Raritan or SNMP set commands, default is "public".
- **Outlet**: This is the number of the Raritan Outlet 1 to 12, which you want to switch.
- **On/Off**: This is the signal you want to transmit, where "0" is off and "1" is on.
- Example: "pxout.bat 192.168.200.11 public 0" This example will switch the Raritan with the IP address 192.168.200.11, the outlet 4 to off!

If this works manually from your Windows RCCMD computer, than you can go ahead with step 3.

3. Now you have to select the desired CS121/CS141 event and add a RCCMD command, which will be send to the Windows computer, where RCCMD is running and the "pxout.bat" file is located.

CS121 SNMP/Web Adapter - Wind	dows Internet Explorer		
G http://192.168.222	41/		🗸 😽 🗙 🚼 snmpset 🖉
👷 Favorites 🛛 🖶 🗸 G CS121 S	NMP/Web Ada 🗴 🚖 GEN	IEREX - Firmware Update	🛐 🔻 🔝 👻 🚍 🖶 👻 Page 🕶 Safety 🕶 Tools 🕶 🌘
- CS121 Status UPS Information & setting UPS Status AUX Status	C S121 Status: 🔵 UPS AUX Status: 🔘 🔘 🌘	S STATUS OK	
- Configuration UPS Model & System T3S Configuration		Job Ed	itor
Network & Security LED Sinder RAS Configuration Scheduled Actions SMMUP EtMail Timeserver CONIZ & AUX CONIZ & AUX Events / Alarms Save Configuration	'UPS Major Alarm Ad Function: Client IP:	Send RCCMD Command to remote client VI 192.168.200.41	en: Immediately, once Scheduled in seconds
	Client Port (Default: 6003): Command:	6003 prout bat 192.168.222.43 public2 1 0 SS4 Command	Every 0 seconds Actions will only be executed if After 0 seconds be executed if After 0 seconds & repeat sitti true after After 0 seconds on battery seconds
- Logfiles UPS Event list CS121 Log			At v seconds remaining time At v Seconds remaining time Apply Cancel

Fig. 188: CS121/CS141 Configuration for such a relay command

The target of the RCCMD command is the Windows computer with RCCMD and the "pxout.bat" with the IP address 192.168.200.41. If the event "UPS Major Alarm Added" will occur, this Job will execute the command "pxout.bat 192.168.222.43 public2 1 0" to switch off the socket number 1 at the Raritan with the IP address 192.168.222.43 immediately.

Tip: You should stop RCCMD running in the background on this Windows computer, so you will better see, whats going on. Stop the RCCMD service, than open a command line into the RCCMD folder and start "rccmd.exe –debug". Now the software will run in the foreground and you can watch the communication.

4. The Raritan with firmware 1.4.1 is unfortunetaley buggy. Here the workaround:

The default community strings for the Raritan are identically set for "read" and "write" to "public", but this configuration is invalid! It must be different!

Solution: Stop the SNMP Agent at the Raritan, change the community for "write" to any other than "public" and restart it!

🗲 🔶 C 🏫 🕸 192.	168.222.43 https://	192.168.	222.43/home.asp					☆,
💐 Raritan.	Home Details	Alerts	User Management	Device Settings	External Sensors	Maintenance	Outlet Groups	Help
Dominion PX	Home > PDU St	atus		PDU Setup Network			outor or oupo	There
Time & Session: 2000-01-23 02:05 User : admin State : 198 sec idle Your IP : 192.168.200.41 Last Login : 2000-01-23 00:49	Line Loads		(Security Certificate Date/Time Authentication SMTP Settings SNMP Settings Event Log				
Device Information: Name: Leiste Model: PX (DPXS12A-16)	Outlets	Stat	e Control	RMS Curr	ent. Active Power	Group Member		
IP Address: 192.168.222.43 Firmware: 01.04.01	Outlet .	l on	On Off C	ycle 0.00 Amps	s 0 Watts	no		
Finiware Status, OK	Outlet :	2 off	On Off C	ycle 0.00 Amps	s 0 Watts	no		
Connected Users: admin (192,168,200,41)	Outlet :	a on	On Off C	ycle 0.00 Amps	s 0 Watts	no		
3 min idle	Outlet	on	On Off C	ycle 0.00 Amps	s 0 Watts	no		
Power Cim State:	Outlet	on	On Off C	ycle 0.00 Amps	s 0 Watts	no		
Power CIM is enabled	Outlet	a on	On Off C	ycle 0.00 Amps	0 Watts	no		
Help - User Guide	Outlet	on	On Off C	ycle 0.00 Amps	a 0 Watts	no		

Fig. 189: Raritan Device Settings

The default Raritan user is "admin", password is "nimda".

Attention! This does not work with MS Internet Explorer! Use any other web-browser, e. g. Mozilla Firefox.

-==-Karnan.	Home Details Alerts User Management Device Settings External
Dominion PX	Home > Device Settings > SNMP Settings
Time & Session: 2000-01-23 02:06	SNMP Settings
State : active Your IP : 192.168.200.41 Last Login : 2000-01-23 00:49	✓ Enable SNMP Agent ✓ Enable SNMP v1 / v2c Protocol * Read Community
Device Information: Name: Leiste Modet: PX (DPXS12A-16) IP Address: 192.168.222.43 Firmware: 01.04.01 Firmware Status: OK	public Write Community public2 Enable SNMP v3 Protocol * Force Encryption *
Connected Users: admin (192.168.200.41) active	System Location Here System Contact
Power Cim State: Power CIM is enabled	Click here to view the PX (DPXS12A-16) SNMP MIB.
Help - User Guide	Apply Reset To Defaults
	* Stored value is equal to the default.

Fig. 190: Raritan SNMP Settings

Click on "Stop", change the configuration on "Write Community", e. g. to "public2" and restart.

E Figures

Fig. 1: Schema RCCMD	4
Fig. 2: RCCMD and UPSMAN in a network environment	5
Fig. 3: Introduction	6
Fig. 4: License Key Entry	6
Fig. 5: License Agreement	/ 7
Fig. 7: Install Folder Selection	/ 7
Fig. 8: Firewall Exceptions	7
Fig. 9: RCCMD Trav	8
Fig. 10: Shortcut Folder Selection	8
Fig. 11: Summary	9
Fig. 12: Set Weblf Access	9
Fig. 13: Password entry	9
Fig. 14: Password hint entry	. 10
Fig. 15: Install Complete	. 10
Fig. 16: Content of the Installer.properties	. 12
Fig. 18: RCCMD Console Installation - Language Selection Introduction	. IZ 13
Fig. 19: RCCMD Console Installation – License Key License Agreement	. 13
Fig. 20: RCCMD Console Installation – Produkt Auswahl, Pfad, Firewall Ausnahmen	. 14
Fig. 21: RCCMD Console Installation – Link Location, Pre-Installation Summary	. 15
Fig. 22: RCCMD Console Installation – Set Weblf Protocol, Port	. 15
Fig. 23: RCCMD Configurator	. 16
Fig. 24: RCCMD Configurator	. 16
Fig. 25: RCCMD WebInterface Configurator – Connections	. 16
Fig. 26: RCCMD WebInterface Configurator – Heartbeats	. 17
Fig. 27: RCCMD WebInterface Configurator – Redundancy	. 17
Fig. 28: RCCMD WebInterface Configurator – Shutdown Setting	. 18
Fig. 29: RCCMD WebInterface Configurator – Shutdown Settings – Edit File	. 18
Fig. 30: RCCMD WebInterface Configurator – E-mail Settings	. 19
Fig. 31: RCCMD WebInterface Configurator – Notification Settings	. 20
Fig. 32: RCCMD WebInterface Configurator – Advanced Settings	. 20
Fig. 34: RCCMD WebInterface Configurator – User Settings	. Z I 21
Fig. 35: RCCMD WebInterface Configurator – View Event Log	. 21
Fig. 36: RCCMD WebInterface Configurator – System Status	22
Fig. 37: RCCMD WebInterface Configurator – Help	. 22
Fig. 38: RCCMD WebInterface Configurator – Remote Access	. 22
Fig. 39: Example: Batch File RCCMD act as Relay Station	. 23
Fig. 40: CS121/CS141 Configuration "WAKEUP" Command	. 24
Fig. 41: CS121/CS141 Configuration "WAKEUP" Command	. 24
Fig. 42: "WAKEUP" Befehl im RCCMD Log	. 24
Fig. 43: RCCMD SSL Settings	. 25
Fig. 44: Timeserver Konfiguration	. 25
Fig. 45: Settings Confirmation	. 25
Fig. 46: RCCMD Web Configurator - SSL Konfiguration	. 20
Fig. 48: RCCMD Properties Log On Window	. 21 27
Fig. 49: RCCMD Properties Password Confirmation	. 27
Fig. 50: Select User Window	28
	20
Fig. 51: Selection of the Object Name	. 20
Fig. 51: Selection of the Object Name Fig. 52: Administrator Selection	. 28
Fig. 51: Selection of the Object Name Fig. 52: Administrator Selection Fig. 53: Administrator Password Confirmation	. 20 . 28 . 29
Fig. 51: Selection of the Object Name Fig. 52: Administrator Selection Fig. 53: Administrator Password Confirmation Fig. 54: Service Right Info Window	. 28 . 28 . 29 . 29
 Fig. 51: Selection of the Object Name Fig. 52: Administrator Selection Fig. 53: Administrator Password Confirmation Fig. 54: Service Right Info Window Fig. 55: System Status – Restart RCCMD 	. 28 . 29 . 29 . 29 . 30
 Fig. 51: Selection of the Object Name Fig. 52: Administrator Selection Fig. 53: Administrator Password Confirmation Fig. 54: Service Right Info Window Fig. 55: System Status – Restart RCCMD Fig. 56: RCCMD Console Test	. 28 . 29 . 29 . 30 . 31
 Fig. 51: Selection of the Object Name Fig. 52: Administrator Selection Fig. 53: Administrator Password Confirmation	. 28 . 29 . 29 . 30 . 31 . 31
 Fig. 51: Selection of the Object Name	. 28 . 29 . 29 . 30 . 31 . 31 . 31
 Fig. 51: Selection of the Object Name	. 28 . 29 . 29 . 30 . 31 . 31 . 31 . 33
 Fig. 51: Selection of the Object Name Fig. 52: Administrator Selection Fig. 53: Administrator Password Confirmation	. 28 . 29 . 29 . 30 . 31 . 31 . 31 . 33 . 34
Fig. 51: Selection of the Object Name Fig. 52: Administrator Selection Fig. 53: Administrator Password Confirmation Fig. 54: Service Right Info Window Fig. 55: System Status – Restart RCCMD Fig. 56: RCCMD Console Test Fig. 57: RCCMD Alive Check via Command Line Fig. 58: RCCMD Console -? Fig. 59: RCCMD Configuration Fig. 60: Client Installation Fig. 61: Add IP-Address Window	. 28 . 29 . 29 . 30 . 31 . 31 . 31 . 31 . 33 . 34 . 34 . 34

Fig. 63: UPSMAN Alive Checking / Redundancy Window	35
Fig. 64: Check UPSMAN Connection Windows	36
Fig. 65: Client Check Connection Batch File Window	36
Fig. 66: Configure / Edit Bat Files	37
Fig. 67: RCCMD Log File	37
Fig. 68: RCCMD Email Settings	37
Fig. 69: CS121/CS141 Email Command	38
Fig. 70: RCCMD Shutdown Sequenz Configuration	38
Fig. 71: Example: Batch File RCCMD act as Relay Station	39
Fig. 72: RCCMD Client Shutdown Configuration	39
Fig. 73: RCCMD Shutdown Relay	39
Fig. 74: RCCMD Configuration IP Address Range	40
Fig. 75: RCCMD Shutdown Relay Removal	40
Fig. 76: RCCMD Shutdown Relay in the "Shutdwown.bat"	40
Fig. 77: Installation – Introduction	41
Fig. 78: Installation – License Key	42
Fig. 79: Installation – Choose Install Set	42
Fig. 80: Installation – Choose Install Folder	42
Fig. 81: Installation – RCCMD Messages	43
Fig. 82: Installation – Pre-Installation Summary	43
Fig. 83: Installation – Set Weblf Port	43
Fig. 84: Installation – Firewall Exceptions	44
Fig. 85: Installation – Enter password	44
Fig. 86: Installation – Passworthinweis-Eingabe	44
Fig. 87: Installation – Configuration Advice	45
Fig. 88: Installation – Start RCCMD now?	45
Fig. 89: Installation – Install Complete	45
Fig. 90: Content of the "installer properties"	47
Fig. 91: Console Installation – Language Selection, Introduction	48
Fig. 92: Console Installation – OS Detection, License Agreement	48
Fig. 93: Console Installation – Features Selection	49
Fig. 94: Console Installation – Autostart	49
Fig. 95: Console Installation – Weblf Selection	50
Fig. 96: Console Installation – RCCMD Configuration required, Firewall Exceptions	50
Fig. 97: Console Installation – RCCMD Start, Installation Complete	50
Fig. 98: RCCMD WebInterface	51
Fig. 99: RCCMD WebInterface – Connections	51
Fig. 100: RCCMD WebInterface – Heartbeats	52
Fig. 101: RCCMD WebInterface – Redundancy	52
Fig. 102: RCCMD WebInterface – Shutdown Settings	53
Fig. 103: RCCMD WebInterface – Notification Settings	54
Fig. 104: RCCMD WebInterface – Advanced Setting	54
Fig. 105: RCCMD WebInterface – Web Access	54
Fig. 106: RCCMD WebInterface – User Settings	55
Fig. 107: RCCMD WebInterface – Event Log.	55
Fig. 108: RCCMD WebInterface – System Status	55
Fig. 109: RCCMD WebInterface – Help	56
Fig. 110: RCCMD WebInterface – RemoteAccess	56
Fig. 111: CS121/CS141 Configuration "WAKEUP" Command	57
Fig. 112: UPSMAN Configuration "WAKEUP" Command	57
Fig. 113: "WAKEUP" Befehl im RCCMD Log	57
Fig. 114: RCCMD SSL Settings	58
Fig. 115: Timeserver Settings	
Fig. 116: Settings Confirmation	58
Fig. 117: SSL Configuration	
Fig. 118: Configuration – RCCMD Sender IP Address	62
Fig. 119: Configuration – Functions	
Fig. 120: Configuration – RCCMD Redundancy	63
Fig. 121: Configuration – RCCMD Log File	63
Fig. 122: Configuration – RCCMD Execute	63
Fig. 123: Konfiguration – RCCMD Configure Email	64
Fig. 124: Configuration – RCCMD Shutdown sh	64
Fig. 125' Konfiguration – RCCMD Shutdown Sequenz	64
Fig. 126: Configuration – RCCMD Control	65

Fig.	127:	Configuration – RCCMD Shutdown.sh	. 65
Fig.	128:	Configuration – RCCMD Shutdown Sequenz	. 66
Fig.	129:	Konfiguration – RCCMD Relay Konfiguration IP-Adressen-Bereich	. 66
Fig.	130:	Making the Configuration File	. 67
Fig.	131:	RCCMD Configuration Menu UNIX	. 67
Fia.	132:	RCCMD UNIX Network Options	. 68
Fia.	133:	Selection Access Control List	. 69
Fig	134	RCCMD UNIX Add Sender	69
Fig.	135	RCCMD UNIX Sender Example	69
Fig.	136	RCCMD UNIX Sender Overview	70
Fig.	137.	RCCMD UNIX Sender Editing	70
Fig.	132	PCCMD UNIX Delete Sender	70
Tig.	120.	Configuration Scon for LIDSMANU/Lipston	. 70
Fig.	139.	Configuration - Scart for OFSMAN/OPSICP	. /
Fig.	140.	Configuration Check Lineman // Instan	. / 1
Fig.	141:		. 72
Fig.	142:	RUCMD UNIX Check Upsman	. 72
⊢ıg.	143:		. 73
⊢ıg.	144:	RCCMD UNIX Log File Optionen	. 73
⊢ıg.	145:	Configuration Shutdown Options	. 74
Fig.	146:	RCCMD UNIX Shutdown Optionen	. 74
Fig.	147:	Exit rccmd_conf	. 74
Fig.	148:	RCCMD UNIX File Browsing	. 75
Fig.	149:	Firewall Configuration	. 96
Fig.	150:	RCCMD Installation	. 97
Fig.	151:	RCCMD Lizenz Key Enter	. 97
Fig.	152:	RCCMD Chosse Install Set	. 97
Fig.	153:	RCCMD Choose Alias Folder	. 98
Fig.	154:	RCCMD Nachrichten	. 98
Fig.	155:	Pre-Installation Summary	. 98
Fig.	156:	Weblf Zugriff einstellen	. 99
Fia.	157:	Kennworteingabe	. 99
Fia.	158:	Passworthinweis-Eingabe	. 99
Fig.	159:	RCCMD Configuration required	100
Fig	160	RCCMD Install Complete	100
Fig.	161	RCCMD WebInterface	101
Fig.	162	RCCMD WebInterface – Connections	101
Fig.	163	RCCMD WebInterface – Heartheats	102
Fig.	164	RCCMD WebInterface - Redundancy	102
Fig.	165	PCCMD WebInterface Shutdown Settings	102
Fig.	166	PCCMD Weblinterface - Onutdown Settings	103
Fig.	167.	RCCMD Weblinterface – Nouncation Settings	103
Fig.	107.	RCCIVID Weblinterface – Auvaliceu Sellings	104
Fig.	168:	RCCMD Webinterface – Web Access	104
Fig.	169:	RCCMD webinterrace – User Settings	104
⊢ıg.	170:	RCCMD WebInterface – Event Log.	105
⊢ıg.	1/1:	RCCMD WebInterface – System Status	105
⊢ig.	172:	RCCMD webinterface – Help	105
Fig.	173:	RCCMD WebInterface – Remote Access	106
Fig.	174:	RCCMD Address Window	106
Fig.	175:	RCCMD Configuration Window "Functions"	107
Fig.	176:	RCCMD Check UPSMAN Connections	107
Fig.	177:	RCCMD Redundancy	107
Fig.	178:	RCCMD Configuration Window "Logfile"	108
Fig.	179:	RCCMD Configuration Window "Execute"	108
Fig.	180:	RCCMD Email-Configuration	108
Fig.	181:	Configuration – RCCMD Shutdown.sh	108
Fig.	182:	Configuration – RCCMD Shutdown Sequenz	109
Fig.	183:	RCCMD Control	109
Fig.	184:	Error after execution of upsVIShutdown.pl	115
Fia.	185:	Listing of the IP tables, see the "ACCEPT" at the TCP and UDP ports 6003. TCP port 5769	116
Fia.	186:	Error Message "Unlicensed Version"	117
Fia	187:	"pxout.bat"	119
Fia	188	CS121/CS141 Configuration for such a relay command	119
Fia	189	Raritan Device Settings	120
Fia	190	Raritan SNMP Settings	120