Rabus Call Button Server Handbook

applies to *Rabus Administration Server* Release 2.12 and up

Contents

1 Functionality

Rabus Call Button Administration Server is the central instance for administering the Call Button devices (configuration and firmware updates). It monitors the Call Button operation and is able to raise an alarm when something is going wrong.

Rabus Server can be used as the central communication server for proprietary applications. It buffers the states between the application and the Call Buttons and distributes the information to the Call Buttons.

2 Application communication

The Call Buttons can be configured to communicate with the application in two different ways:

1.) using *Rabus Server* and the proprietary Rabus protocol. The application connects to Rabus Server via TCP/IP and is notified of any Call Button event by Rabus, then sends the response back and Rabus buffers and distributes the information to the Call Button.

2.) using a standard Web Server and the HTTP protocol. The application is integrated in the Web Server (Java Servlets, Perl / PHP, Coldfusion, ASP.NET, …).

2.1 Call Button Communication with *Rabus Server*

The Call Button device is always powered off at idle time (except display and timer). It wakes up and connects to the *Rabus Server* via TCP/IP over WLAN on any of these events:

- Button pushed (“T”)
- Barcode scanned (“S”)
- Auto Call (External input; “A”)
- Wakeup timer (“W”; every 5 seconds to 255 minutes)
- Firmware update over TCP/IP finished (“U”)
- Configuration change over TCP/IP finished (“C”)

After sending a telegram with the event information it waits for a response from *Rabus* with the new display content and lamp state and then powers down again. While off, the Call Button is not able to communicate with the Server. Thus, a TCP/IP communication is always initiated by the Call Button and never by the server.

Rabus buffers any Call Button events and is accessible from the application at any time, as well as it is able to send new display content on behalf of the application to a Call Button as soon as it connects.

The application talks to *Rabus Server* over TCP/IP with a special proprietary protocol with a set of commands:

- GET – request information of a specific Call Button

- ALL – request information of all known Call Buttons
- ENE – enable the notification of Call Button events by the server on occurrence
- DIS – disable ENE
- SET – set display content and lamp state of a Call Button

Details are described in the *Rabus Interface Documentation*.

2.2 Call Button HTTP Communication with Web Server

The Call Button can be configured to establish a direct HTTP connection to a standard Web Server for the application events:

- Button pushed
- Barcode scanned
- Auto Call (external input)
- HTTP-Wakeup timer

Rabus Server is still needed as the administration server and handles all events other than the above. See *“HTTP System Description”*.

3 Rabus Administration Tasks

3.1 Alert Server

Rabus Server keeps the system under surveillance for correct operation and records operation abnormalities as there are:

- Communication to a Call Button non-continuous. Since any properly installed device connects at a continuous rate, it can be considered as an error condition if it times out
- Call Button battery low
- Call Button client licenses exceed
- Hardware key removed
- Server startup / shutdown
- A new, so far unknown Call Button has been registered

The alert events are stored in a list, can be appended to a log file and can trigger an automatic e-mail to an administrator.

3.2 Event Logging

The Call Button communication events are recorded in order to review the Rabus communication history. The detail level can be configured in the Rabus INI file (see below)

3.3 Firmware Deployment

The *Rabus Server* can be set up to automatically deploy firmware updates to the Call Buttons. It monitors the current firmware version of the devices on each transaction and initiates a firmware update if a newer release is available. This mechanism can be configured differently for each Call Button group.

Normally all Call Buttons of a group connecting to *Rabus Server* are included in this update mechanism. However, when a file named

```
AutoUpdateInclude.txt
```

is present in the program directory (e.g. c:\Program Files\Rabus Communication Server), only the Call Buttons with the names listed in this file are updated. When the file

```
AutoUpdateExclude.txt
```

is present, the Call Buttons listed are excluded.

3.4 Global Call Button Configuration

Global configuration changes can be distributed to the Call Buttons. *Rabus Server* monitors the configuration version on each transaction and sets the selected parameters if a newer version is available. This mechanism and the parameters can be configured differently for each Call Button group.

However, much attention is to be paid in order to keep the network and *Rabus Server* in access of all devices. If the network parameters are to be changed (e.g. server IP address, WLAN ESS Id, WEP keys, etc.) a double infrastructure is necessary if continuous availability is demanded as during the deployment some devices still operate with the old values while others already have the new values. After all Call Buttons have changed to the new configuration version (check by the means of the *Rabus Monitor*) the old infrastructure can be switched off.

If a double infrastructure is not available and no continuous access is needed during the rearrangement the old infrastructure must be retained until all devices have changed.

If the Call Buttons loose LAN access due to false settings, the devices must be re-configured with FBConfig over a serial cable. This can be very annoying!

The directions how to configure the configuration update are described below.

Normally all Call Buttons of a group connecting to *Rabus Server* are included in this configuration update mechanism. However, when a file named

```
AutoConfigInclude.txt
```

is present in the program directory (e.g. c:\Program Files\Rabus Communication Server), only the Call Buttons with the names listed in this file are updated. When the file

```
AutoConfigExclude.txt
```

is present, the Call Buttons listed are excluded.

3.5 Call Button Error History

Call Buttons with a version of 071119 or higher record a communication error history. It can be fetched by *Rabus Server* and displayed in the Call Button view with *RabusAdmin*. The GetLog parameter in the INI file must be set to 1 (default value).

The Call Buttons store the last 8 HTTP communication error events and the last Rabus communication error event. The error history is fetched by the Rabus communication and will then be deleted on the device.

If the parameter WriteLog is set to 1 (default), a log file per Call Button will be created in the subdirectory .\Error History\ (e.g.: c:\Program Files\Rabus Communication Server\Error History\voco001.log). Contents: Timestamp; error number; (HTTP) or (Rabus).

3.6 Call Button Groups

The Call Buttons can be associated to different groups with different auto configuration sets. By default, a new Call Button is listed under the DEFAULT group but can be moved to a different group with the *Rabus Administration Tool.*

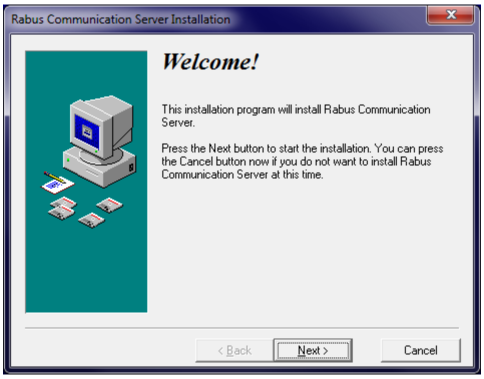
4 Installation

4.1 Service

Rabus Server runs as a service on a PC with:

- Windows 2000 Professional or Server
- Windows XP Professional
- Windows Server 2003
- Windows Vista
- Windows Server 2008
- Windows 7

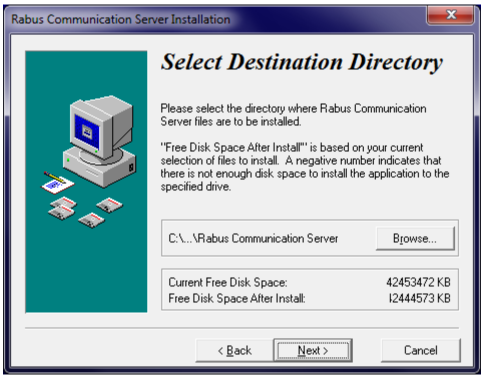
Installation is only possible under administrator account and will copy the necessary files and setup the service. To start the installation simply start the Setup program and follow the instructions.


Rabus Communication Server Installation

Welcome!

This installation program will install Rabus Communication Server.

Press the Next button to start the installation. You can press the Cancel button now if you do not want to install Rabus Communication Server at this time.


Rabus Communication Server Installation

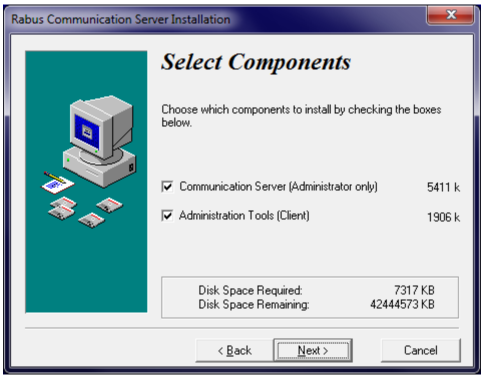
Select Destination Directory

Please select the directory where Rabus Communication Server files are to be installed.

"Free Disk Space After Install" is based on your current selection of files to install. A negative number indicates that there is not enough disk space to install the application to the specified drive.

C:\...\Rabus Communication Server

Current Free Disk Space: 42453472 KB
Free Disk Space After Install: 12444573 KB


Rabus Communication Server Installation

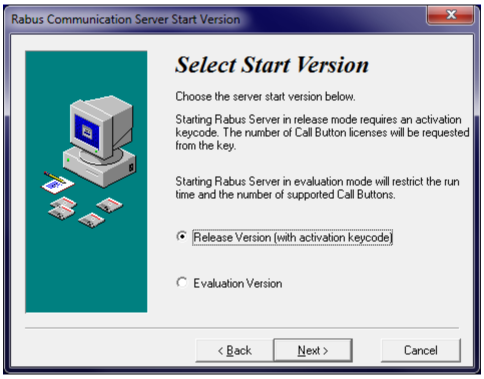
Select Components

Choose which components to install by checking the boxes below.

☑ Communication Server (Administrator only) 5411 k
☑ Administration Tools (Client) 1906 k

Disk Space Required: 7317 KB
Disk Space Remaining: 42444573 KB

By selecting “Communication Server” the *Rabus Server* will be installed (you must be logged in with administrator rights!). By selecting “Administration Tools” the *Rabus Administration Tool* and *Rabus Monitor Tool* will be installed. On client PCs you may want to install only the administration tools.


Rabus Communication Server Start Version

Select Start Version

Choose the server start version below.

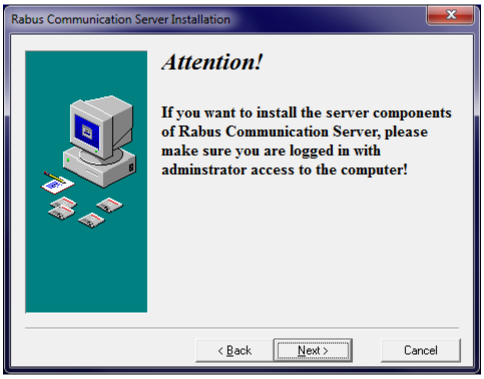
Starting Rabus Server in release mode requires an activation keycode. The number of Call Button licenses will be requested from the key.

Starting Rabus Server in evaluation mode will restrict the run time and the number of supported Call Buttons.

● Release Version (with activation keycode)

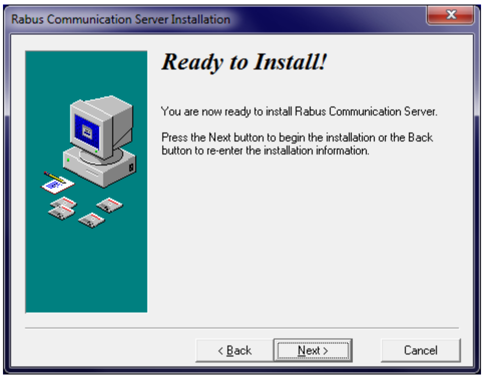
○ Evaluation Version

The Evaluation Version is for test purposes only and requires no license key or hardware dongle but is restricted to 5 Call Buttons maximum, 5 hours of continuous operation and a specific expiration date.


Rabus Communication Server Installation

Attention!

If you want to install the server components of Rabus Communication Server, please make sure you are logged in with adminstrator access to the computer!

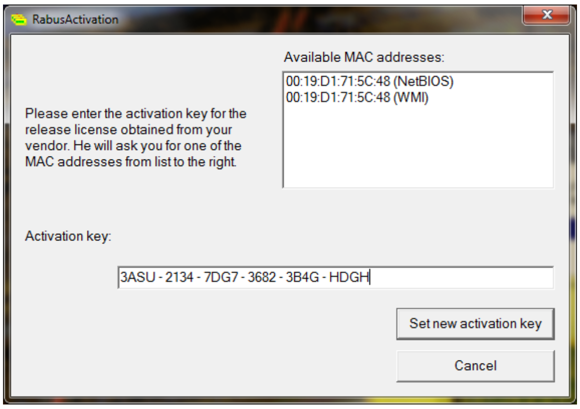

Rabus Communication Server Installation

Ready to Install!

You are now ready to install Rabus Communication Server.

Press the Next button to begin the installation or the Back button to re-enter the installation information.

When the Release Version with activation keycode was installed, the license key is requested.

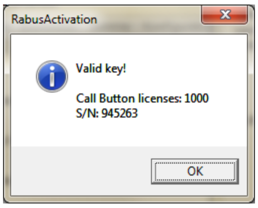


RabusActivation

Please enter the activation key for the release license obtained from your vendor. He will ask you for one of the MAC addresses from list to the right.

Available MAC addresses:
00:19:D1:71:5C:48 (NetBIOS)
00:19:D1:71:5C:48 (WMI)

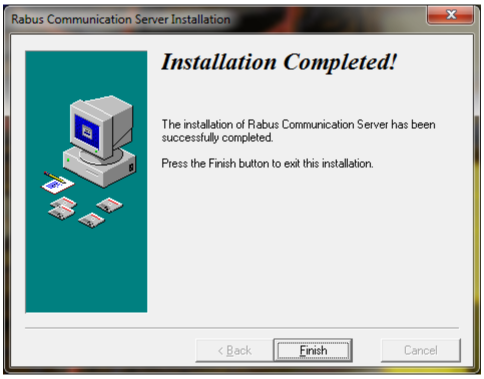
Activation key: 3ASU - 2134 - 7DG7 - 3682 - 3B4G - HDGH



RabusActivation

Valid key!

Call Button licenses: 1000
S/N: 945263



Rabus Communication Server Installation

Installation Completed!

The installation of Rabus Communication Server has been successfully completed.

Press the Finish button to exit this installation.

If necessary, customization of the internal operation can be made modifying the file RabusCommSrv.ini using a text editor. Changes will have effect after restarting the service (or the PC).

The administration and configuration of *Rabus* can be performed with the *Rabus Administration Tool*.

4.2 The *Rabus* INI File

In the *Rabus* INI file (RabusCommSrv.ini in the installation directory) basic settings can be made. Changes to this file will only take effect after restarting the *Rabus Server*.

Each section is introduced by a line with an identifier in square brackets followed by lines with assignments to parameters. Lines starting with a semicolon are ignored.

These are the available parameters with their default values (unless otherwise stated). If not present in the file, the default values will be assumed

- Section [CallButtons]
    - TCPPort = 8000
      - this is the server TCP port for the Call Buttons to connect to
    - DefaultStayAwakeTime = 0
      - (seconds) the CB will stay awake for this time after an event to wait for a response from the application (timeout)

- DisableCBConfig = 0
  - set to 1 to disable Call Button configuration retrieval. Must be 0 (or not present) if automatic Call Button configuration is desired

- NoApplicationMessage = “===RABUS SOFTWARE=== Application is not running!”
  - this message is displayed on the CB when no application is connected to Rabus. The CB display has 20x8 lines of text – pad the lines with spaces to align the text

- NoApplicationWakeupTime = 255
  - (minutes) CB wakeup time when no application was connected on the last event

- CBNotInUseMessage = “===RABUS SOFTWARE=== Call Button is not in use!”
  - this message is displayed on the CB there is no new nor buffered display info available from the application

- CBNotInUseWakeupTime = 255
  - (minutes) CB wakeup time when the device is not in use by the application

- LicenseTimeExceedMessage = “===RABUS SOFTWARE=== License time expired!”
  - this message is displayed when the *Rabus Server* license time expired. This applies when running in evaluation mode

- LicenseCBExceedMessage = “===RABUS SOFTWARE=== Number of Call Button licenses exceeded!”
  - this message is displayed on a Call Button when the maximum number of CB exceeded. This applies to both release and evaluation modes

- HardwareKeyMessage = “===RABUS SOFTWARE=== Hardware key not present!”
  - this message is displayed when the hardware key was removed. This applies when running *Rabus Server* in release mode

- NoHardwareKeyWakeupTime = 255
  - (minutes) CB wakeup time when the hardware key was removed

- SoftwareKeyMessage = “===RABUS SOFTWARE=== Activation key invalidated!”
  - this message is displayed when the license key is invalid, e.g. because the network adapter with the original MAC address has been removed. This applies when running *Rabus Server* in release mode

- UpdateMessage = “===RABUS SOFTWARE=== !Waiting for update!”
  - this message is displayed while the CB firmware is being updated by *Rabus Server*

- ConfigMessage = “===RABUS SOFTWARE=== !Waiting for config!”
  - this message is displayed while the CB configuration is being updated by *Rabus Server*

- NoDemoFileMessage = “===RABUS SOFTWARE=== Demo file not found!”
  - this message is displayed when in application demo mode no appropriate text file is present. This applies when the application demo mode is enabled and the display is set to “Retrieve from files” (see *Rabus Administration Tool*, Application Demo Mode)

- DemoFileErrorMessage = “===RABUS SOFTWARE=== Demo file access error!”
  - this message is displayed when in application demo mode no appropriate text file could not be read. This applies when the application demo mode is enabled and the

display is set to “Retrieve from files” (see *Rabus Administration Too,* Application Demo Mode)

- GetLog = 1
  - the error log and display content will be fetched from the Call Button (firmware 071119 or higher only)

- WriteLog = 1
  - fetched Call Button errors will be written in a log file in the “\Error History” subdirectory

- Section [Application]
  - TCPPort = 18305
    - this is the server TCP port for the application to connect to
  - ProtocolTimeout = 10
    - any command telegram to *Rabus Server* must be completely sent within this time of seconds
  - ResponseTimeout = 20
    - any response from the application after a pushed Call Button state must be returned within this time of seconds. This time should correspond to the **Default On Time** of the Call Button configuration

- Section [Admin]
  - TCPPort = 18301
    - this is the server TCP port for *Rabus Administration Tool* and *Rabus Monitoring Tool* to connect to
  - Password = “0000” - default: none
    - this is the password to enable configuration changes to *Rabus Server* with the *Rabus Administration Tool*. If not present any password will be accepted

- Section [Alert]
  - MaxEntries
    - maximum number of entries in the alert list. Entries exceeding this number will be deleted
  - MaxDays
    - maximum age of the entries in the alert list. Older entries will be deleted

- Section [History]
  - MaxEntries
    - maximum number of entries in the history list. Entries exceeding this number will be deleted
  - MaxDays
    - maximum age of the entries in the alert list. Older entries will be deleted

- Section [System]

  - EvaluationMode = 0
    - set to 1 to run *Rabus Server* in the restricted evaluation mode (no hardware key or license key necessary)

  - CheckDongle = 1
    - set to 0 to run *Rabus Server* in the restricted evaluation mode (no hardware key necessary)

  - CheckSoftwareKey = 1
    - set to 0 to run *Rabus Server* in the restricted evaluation mode (no license key necessary)

  - WorkingDir = “c:\temp” - default: installation directory (e.g. “c:\Program Files\Rabus Communication Server”)
    - directory for log files, configuration files, saved Call Button states, etc.

- Section [Log]

  - Level = % 00010001 01010010 - default: 0
    - (binary) level of details to be written in the log file
    Bit0 (last digit): not used
    Bit1: show Application connect/disconnect
    Bit2: show Monitor connect/disconnect
    Bit3: show CallButton connect/disconnect
    Bit4: show CallButton communication telegrams
    Bit5: show CallButton details
    Bit6: show License errors
    Bit7: show Application communication
    Bit8: show Application communication errors
    Bit9: show Application communication details
    Bit10: show Call Button Auto Config and Auto Update
    Bit11: show Administration details
    Bit12: Show Administration errors
    Bit13: Show Administration communication (Bit7 must also be set)
    Bit14 (first digit): show CallButton protocol

    A value of 0 disables logging.

  - HistoryDays = 30 - default: no log file delete
    - any log files older than these number of days will be deleted automatically in order to avoid to waste hard disk space

- Section [Demo]

  - AppDemoDir = “FBDemo”
    - subdirectory with the text files for the application demo mode which applies when the application demo mode is set to “Retrieve from files” (see *Rabus Administration Tool*)

4.3 E-Mail Installation

If e-mail notification of alerts is desired, an e-mail client with MAPI interface is needed. The e-mail software must be configured to allow sending for external software and to send instantaneously without user interaction.

To enable the server to send e-mails, an account must be set up in the e-mail client software. The Rabus service must be modified to run under the appropriate user account. This can be done by using the Windows Service Control Manager and modifying the properties of the service “RabusCommSrv” and restarting the service.

4.4 Tools

The *Rabus Administration Tool* and *Rabus Monitor Tool* can be installed on the *Rabus Server* PC and/or on different client PCs with network access to the *Rabus Server* PC.

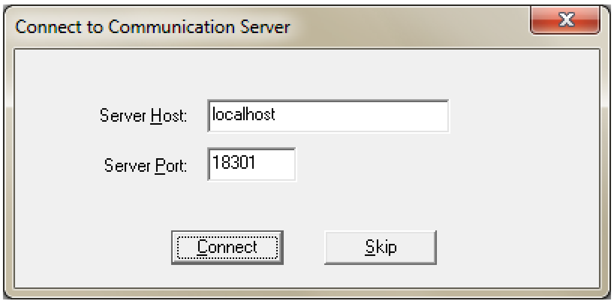
OS requirements for the tools:

- Windows 2000 Professional or Server
- Windows XP Home or Professional
- Windows Server 2003
- Windows Vista
- Windows Server 2008
- Windows 7

5 Administration

5.1 Connecting to the *Rabus Server*

On startup the *Rabus Administration Tool* asks for the server host network parameters (host name or IP address and IP port which is 18301 by default) and then tries to connect to it. The parameters will be saved for subsequent startups.



Connect to Communication Server

Server Host: localhost

Server Port: 18301

5.2 Navigation

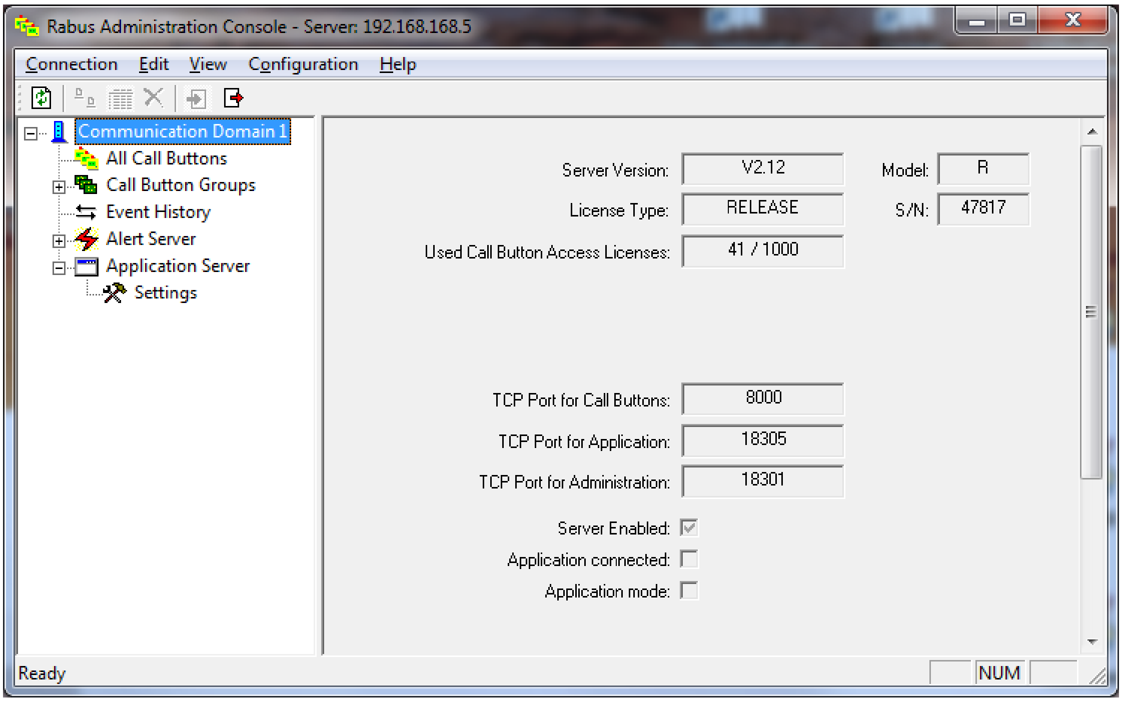
The tree view on the left hand side navigates through the server components and shows the independently operating communication domains on the first level. (Currently, only 1 is available!)

5.3 Login to change settings

In order to change the settings you must login. Choose the menu item **Configuration** / **Login** or click the door icon on the toolbar. The necessary password is defined in the *Rabus Server* INI file.

5.4 Server Information

By selecting the domain item a general overview of the *Rabus Server* settings shows up on the right hand side.



Server Version: V2.12

Model: R

License Type: RELEASE

S/N: 47817

Used Call Button Access Licenses: 41 / 1000

TCP Port for Call Buttons: 8000

TCP Port for Application: 18305

TCP Port for Administration: 18301

Server Enabled: ☑

Application connected: □

Application mode: □

- *Rabus Server* version and model
- License type (RELEASE or EVALUATION), Serial number of hardware key
- Number of used and available Call Button licenses
- TCP Ports for the Call Buttons, the application and the administration tools
- Whether the server communication is active
- Whether an application is connected
- Whether application demo mode or direct HTTP mode is active

In order to update the view, select **Refresh** from the **Server** menu or click the left toolbar icon.

5.5 Call Button Groups

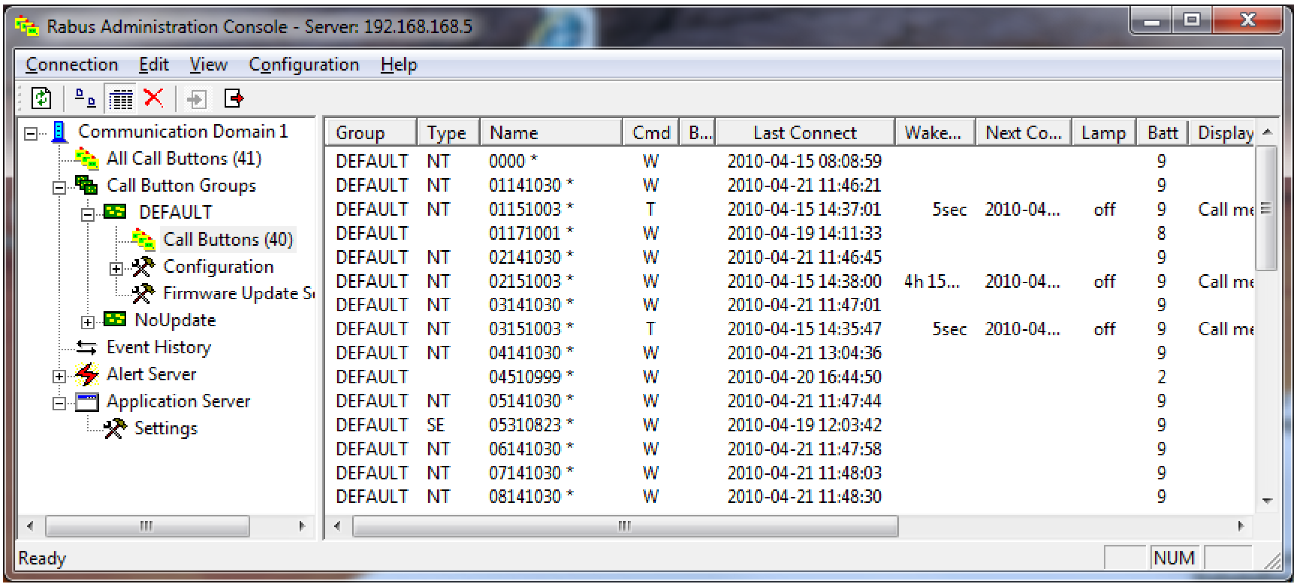
The tree item Call Button Groups contains the configured groups (DEFAULT and any user configured group). Each named group item contains the Call Button list, the auto configuration settings und the firmware update settings. New groups can be added by right-clicking the Call Button Groups item and choosing “Add new group”. Groups can be deleted by right-clicking the group item and choosing “Delete group”. The configuration parameters of a group can be copied from another group by right-clicking the destination group and selecting the source group under “Copy data from”.

A new Call Button is first listed under the DEFAULT group but can be associated to a different group by right-clicking it in the list view on the right hand side and choosing the appropriate group in the list under “Assign to group”.

5.6 Call Button View

By selecting the **Call Buttons** item or a specific Call Button a list of all Call Button statuses is shown on the right view. This view is similar to the *Rabus Monitor Tool* (see below). By clicking the column headers, the sort order can be changed. By dragging the column separators in the head line the column widths can be changed and columns can be hidden.

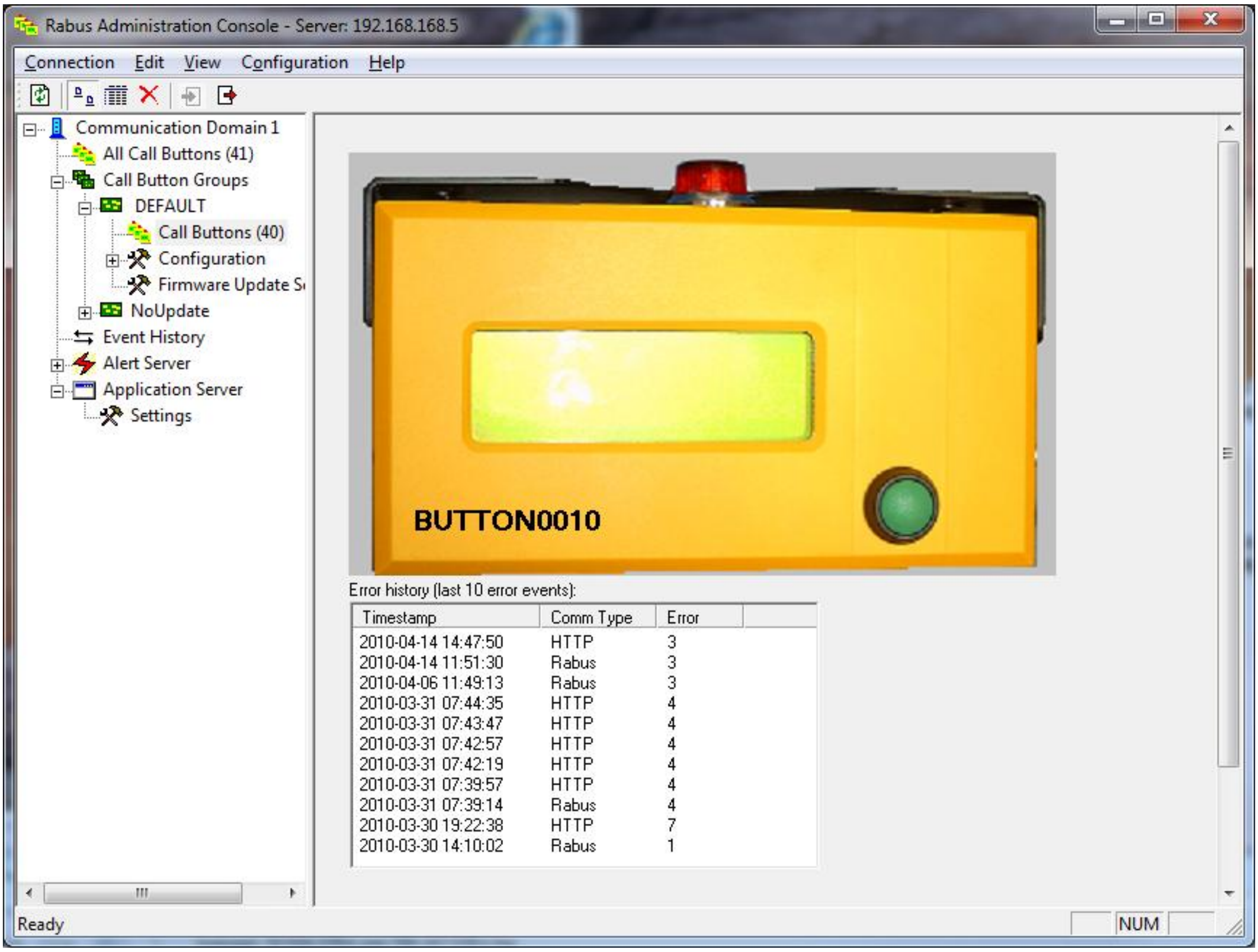
In contrary to the *Rabus Monitor Tool* the lines are not updated automatically. To refresh the view, select **Refresh** from the **Server** menu or click the left tool bar icon.



Group	Type	Name	Cmd	B...	Last Connect	Wake...	Next Co...	Lamp	Batt	Display
DEFAULT	NT	0000 *	W		2010-04-15 08:08:59				9	
DEFAULT	NT	01141030 *	W		2010-04-21 11:46:21				9	
DEFAULT	NT	01151003 *	T		2010-04-15 14:37:01	5sec	2010-04...	off	9	Call me
DEFAULT		01171001 *	W		2010-04-19 14:11:33				8	
DEFAULT	NT	02141030 *	W		2010-04-21 11:46:45				9	
DEFAULT	NT	02151003 *	W		2010-04-15 14:38:00	4h 15...	2010-04...	off	9	Call me
DEFAULT	NT	03141030 *	W		2010-04-21 11:47:01				9	
DEFAULT	NT	03151003 *	T		2010-04-15 14:35:47	5sec	2010-04...	off	9	Call me
DEFAULT	NT	04141030 *	W		2010-04-21 13:04:36				9	
DEFAULT		04510999 *	W		2010-04-20 16:44:50				2	
DEFAULT	NT	05141030 *	W		2010-04-21 11:47:44				9	
DEFAULT	SE	05310823 *	W		2010-04-19 12:03:42				9	
DEFAULT	NT	06141030 *	W		2010-04-21 11:47:58				9	
DEFAULT	NT	07141030 *	W		2010-04-21 11:48:03				9	
DEFAULT	NT	08141030 *	W		2010-04-21 11:48:30				9	

See the description of the *Rabus Monitor Tool* about the details of the list.

By doubleclicking a Call Button in the left or right view or clicking the third icon on the toolbar, a view of the Call Button device shows up on the right hand side with the last display content and lamp state.



Error history (last 10 error events):

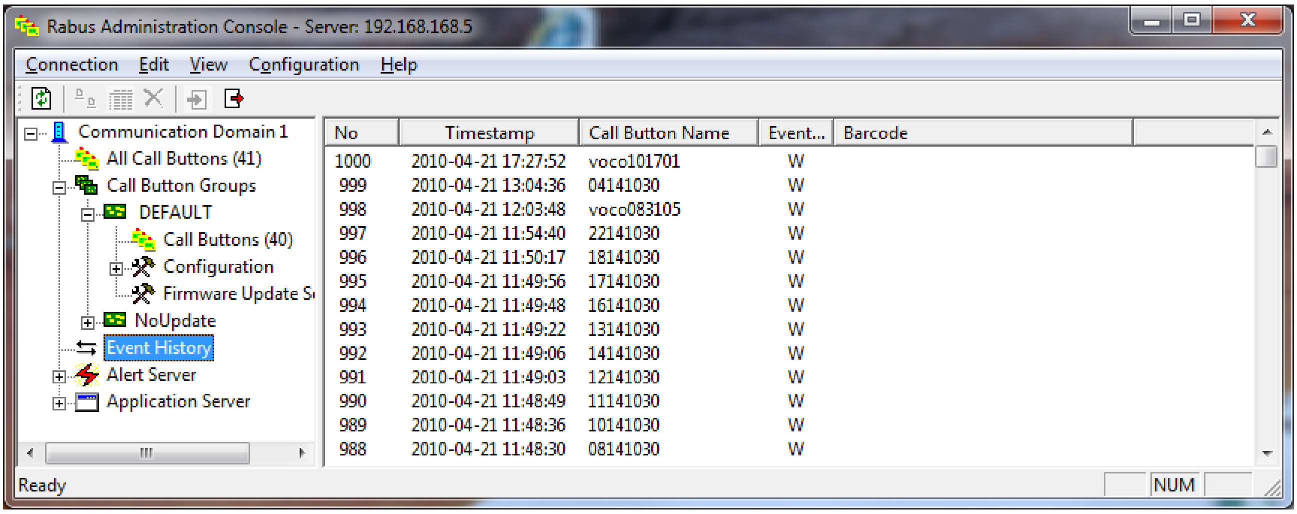
Timestamp	Comm Type	Error
2010-04-14 14:47:50	HTTP	3
2010-04-14 11:51:30	Rabus	3
2010-04-06 11:49:13	Rabus	3
2010-03-31 07:44:35	HTTP	4
2010-03-31 07:43:47	HTTP	4
2010-03-31 07:42:57	HTTP	4
2010-03-31 07:42:19	HTTP	4
2010-03-31 07:39:57	HTTP	4
2010-03-31 07:39:14	Rabus	4
2010-03-30 19:22:38	HTTP	7
2010-03-30 14:10:02	Rabus	1

If HTTP is used for application communication, the shown display state is only valid for CallButtons with a firmware version of 071119 or higher. The GetLog = 1 value must be set in the INI file.

Bei CallButtons mit einer Version ab 071119 wird die Fehlerhistorie angezeigt, wenn Konfigurationsparameter GetLog = 1 aktiviert ist.

5.7 History View

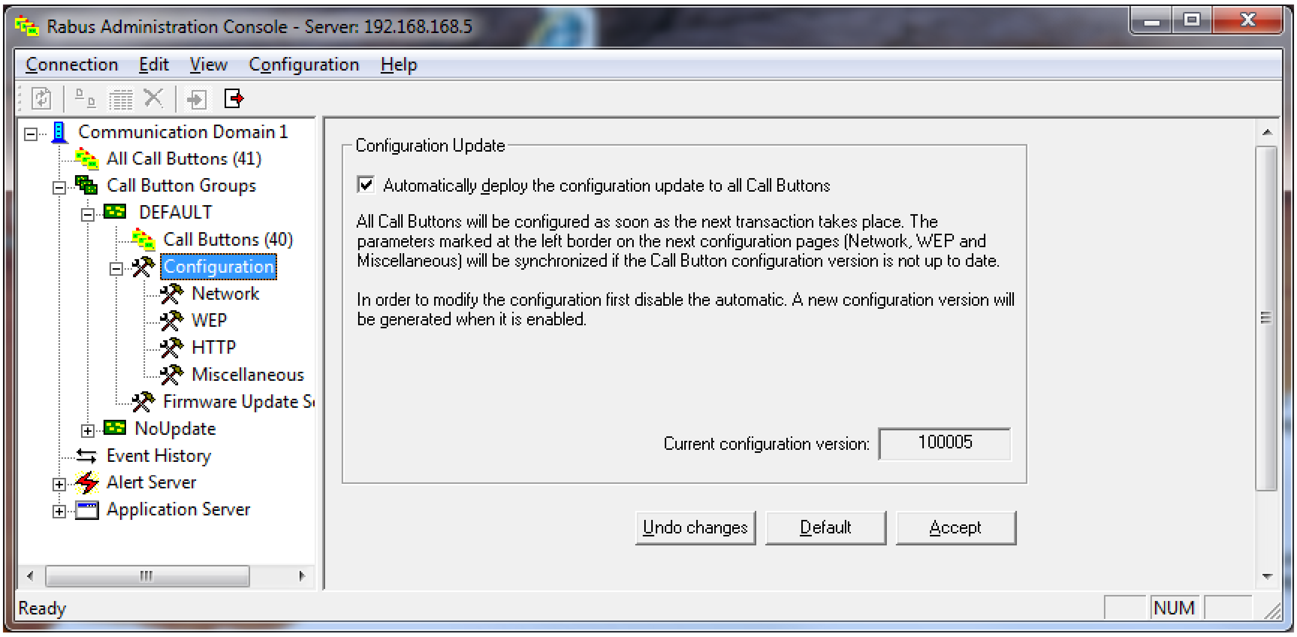
By selecting the **Event History** item, a list of the last recent 200 Call Button communication events shows up on the right hand side.



No	Timestamp	Call Button Name	Event...	Barcode
1000	2010-04-21 17:27:52	voco101701	W	
999	2010-04-21 13:04:36	04141030	W	
998	2010-04-21 12:03:48	voco083105	W	
997	2010-04-21 11:54:40	22141030	W	
996	2010-04-21 11:50:17	18141030	W	
995	2010-04-21 11:49:56	17141030	W	
994	2010-04-21 11:49:48	16141030	W	
993	2010-04-21 11:49:22	13141030	W	
992	2010-04-21 11:49:06	14141030	W	
991	2010-04-21 11:49:03	12141030	W	
990	2010-04-21 11:48:49	11141030	W	
989	2010-04-21 11:48:36	10141030	W	
988	2010-04-21 11:48:30	08141030	W	

5.8 Call Button Configuration

By selecting the **Call Button Config** item and the subitems (Network, WEP, HTTP and Miscellaneous), the parameters to be changed for the selected group can be checked on the left hand side of the views. Please be careful using this feature and notice the chapter **Global Call Button Configuration Changes** above.



Configuration Update

☑ Automatically deploy the configuration update to all Call Buttons

All Call Buttons will be configured as soon as the next transaction takes place. The parameters marked at the left border on the next configuration pages (Network, WEP and Miscellaneous) will be synchronized if the Call Button configuration version is not up to date.

In order to modify the configuration first disable the automatic. A new configuration version will be generated when it is enabled.

Current configuration version: 100005

In order to be able to change the settings in the subitems (Network, WEP, HTTP, Miscellaneous) the automatic must be switched off first (checkbox: Automatic deploy…) and sent to the server by clicking the button **Accept**. The button **Undo Changes** discards changes in the subitems and uploads the current settings from the server. The button **Default** sets default values for all parameters and the button **Accept** sends the settings to the server.

After activating the checkbox *Rabus Server* synchronizes the checked parameters to all Call Buttons, as soon as they connect.

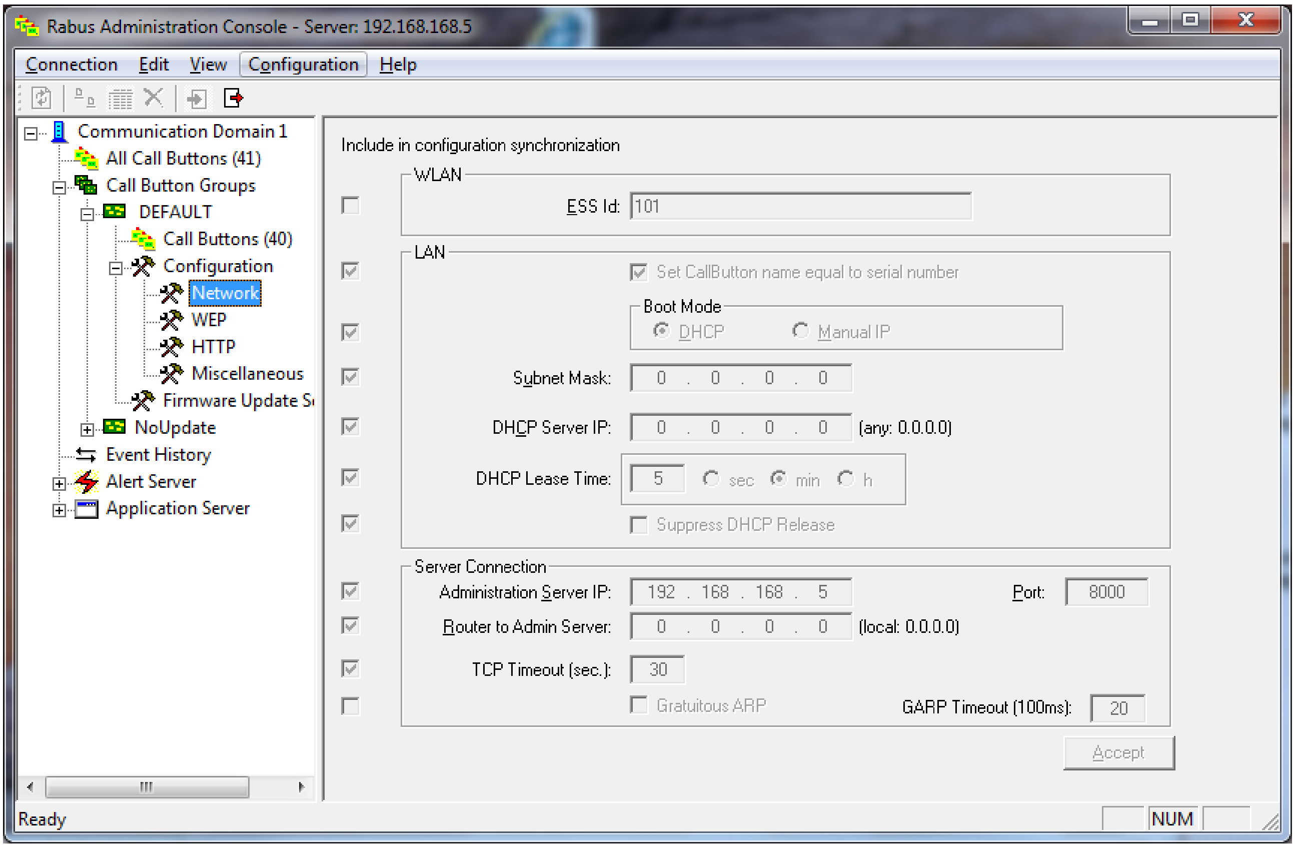
The box **Configuration Version** shows the current configuration ID. It is increased by Rabus on each change of the parameters and is used to determine whether a configuration update is to be done by comparing the ID with the one of the Call Button.

The parameters to be synchronized are defined in the subitems. A checkbox at the left hand side of the parameters specifies whether it is to be included in the configuration update.

For a description to the parameters, please see *FBConfig Handbook.*

5.8.1 Subitem Network

In the item **Network** the most important LAN parameters can be configured.



Include in configuration synchronization

WLAN

□ ESS Id: 101

LAN

☑ ☑ Set CallButton name equal to serial number

☑ Boot Mode ● DHCP ○ Manual IP

☑ Subnet Mask: 0 . 0 . 0 . 0

☑ DHCP Server IP: 0 . 0 . 0 . 0 (any: 0.0.0.0)

☑ DHCP Lease Time: 5 ○ sec ● min ○ h

☑ □ Suppress DHCP Release

Server Connection

☑ Administration Server IP: 192 . 168 . 168 . 5 Port: 8000

☑ Router to Admin Server: 0 . 0 . 0 . 0 (local: 0.0.0.0)

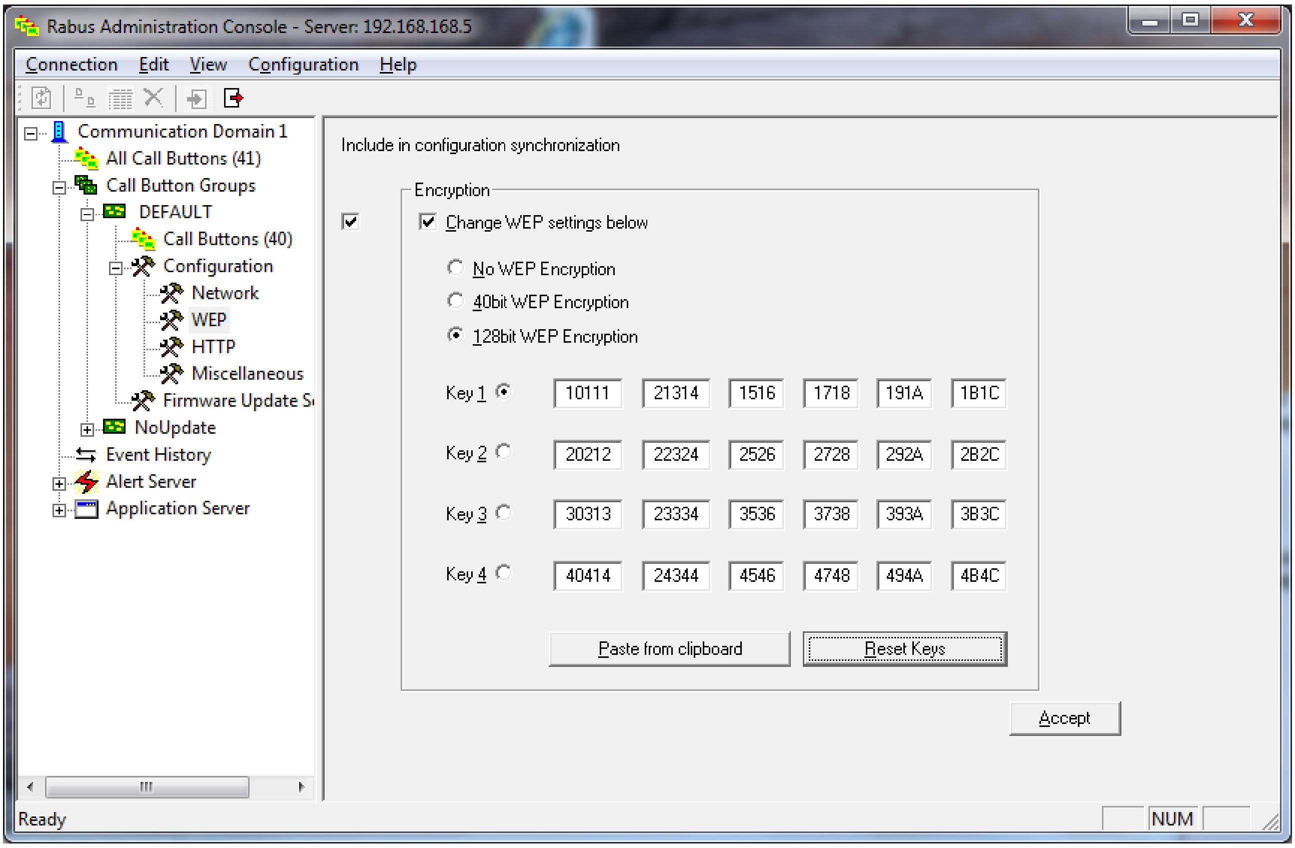
☑ TCP Timeout (sec.): 30

□ □ Gratuitous ARP GARP Timeout (100ms): 20

The marked parameters will be changed globally at all Call Buttons. In the figure above, only the web server setting will be modified.

5.8.2 Subitem WEP

In the item **WEP** the encryption parameters can be configured.



Include in configuration synchronization

Encryption

☑ ☑ Change WEP settings below

○ No WEP Encryption

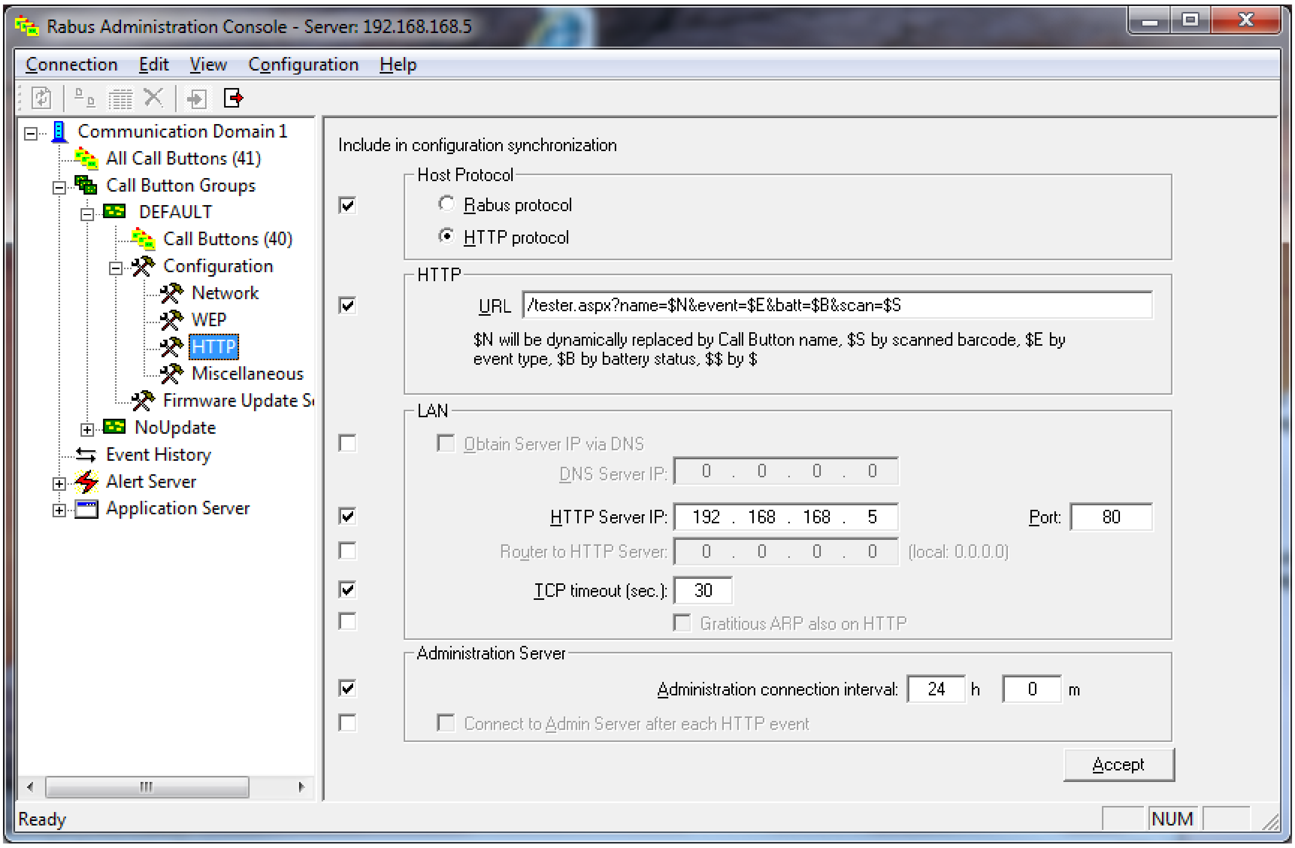
○ 40bit WEP Encryption

● 128bit WEP Encryption

Key 1 ●	10111	21314	1516	1718	191A	1B1C
Key 2 ○	20212	22324	2526	2728	292A	2B2C
Key 3 ○	30313	23334	3536	3738	393A	3B3C
Key 4 ○	40414	24344	4546	4748	494A	4B4C

5.8.3 Subitem HTTP

In the item **HTTP** the HTTP protocol parameters can be configured.



Include in configuration synchronization

Host Protocol

☑ ○ Rabus protocol

● HTTP protocol

HTTP

☑ URL /tester.aspx?name=$N&event=$E&batt=$B&scan=$S

$N will be dynamically replaced by Call Button name, $S by scanned barcode, $E by event type, $B by battery status, $$ by $

LAN

□ □ Obtain Server IP via DNS

DNS Server IP: 0 . 0 . 0 . 0

☑ HTTP Server IP: 192 . 168 . 168 . 5 Port: 80

□ Router to HTTP Server: 0 . 0 . 0 . 0 (local: 0.0.0.0)

☑ TCP timeout (sec.): 30

□ □ Gratitious ARP also on HTTP

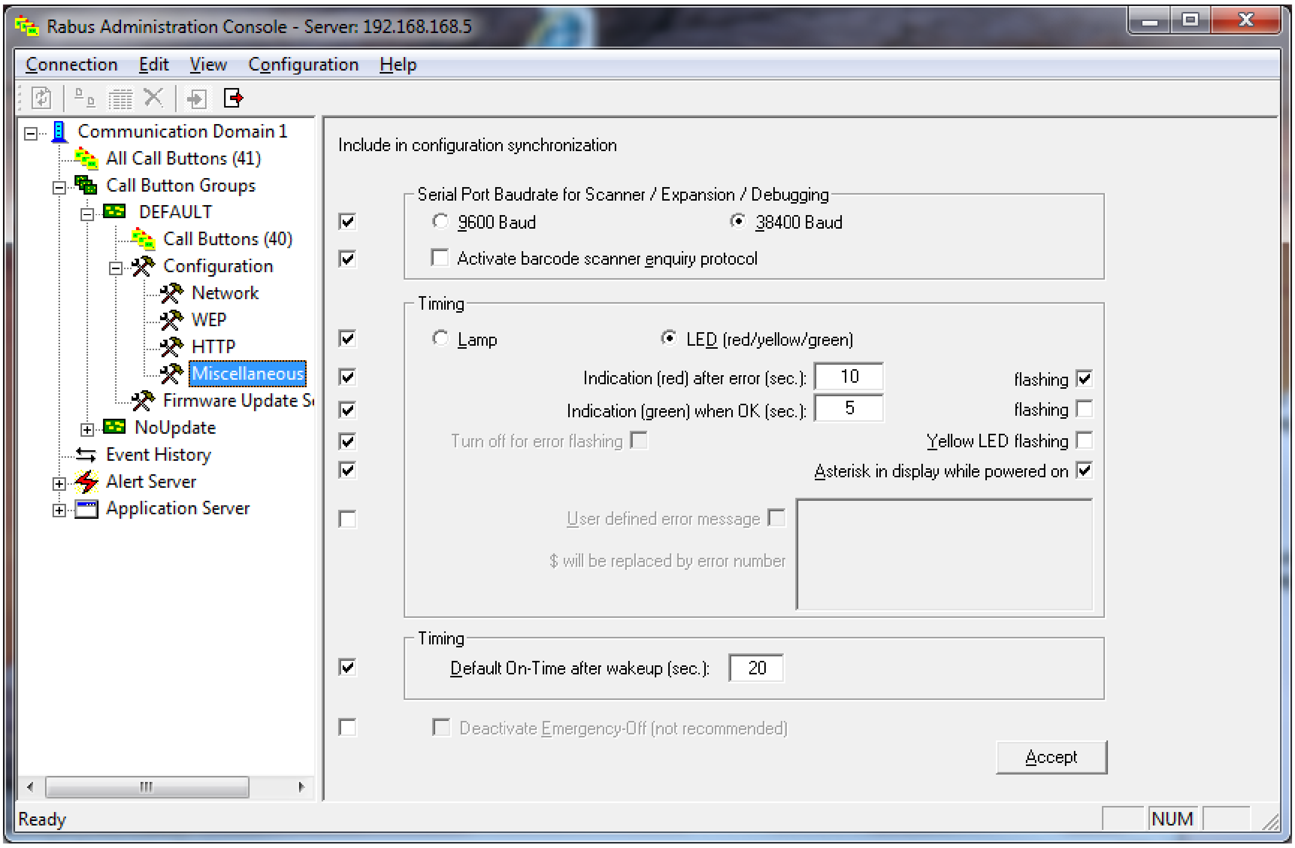
Administration Server

☑ Administration connection interval: 24 h 0 m

□ □ Connect to Admin Server after each HTTP event

5.8.4 Subitem Miscellaneous

In the item **Miscellaneous** various additional parameters can be configured.



Include in configuration synchronization

Serial Port Baudrate for Scanner / Expansion / Debugging

☑ ○ 9600 Baud ● 38400 Baud

☑ ☐ Activate barcode scanner enquiry protocol

Timing

☑ ○ Lamp ● LED (red/yellow/green)

☑ Indication (red) after error (sec.): 10 flashing ☑

☑ Indication (green) when OK (sec.): 5 flashing ☐

☑ Turn off for error flashing ☐ Yellow LED flashing ☐

☑ Asterisk in display while powered on ☑

☐ User defined error message ☐

$ will be replaced by error number

Timing

☑ Default On-Time after wakeup (sec.): 20

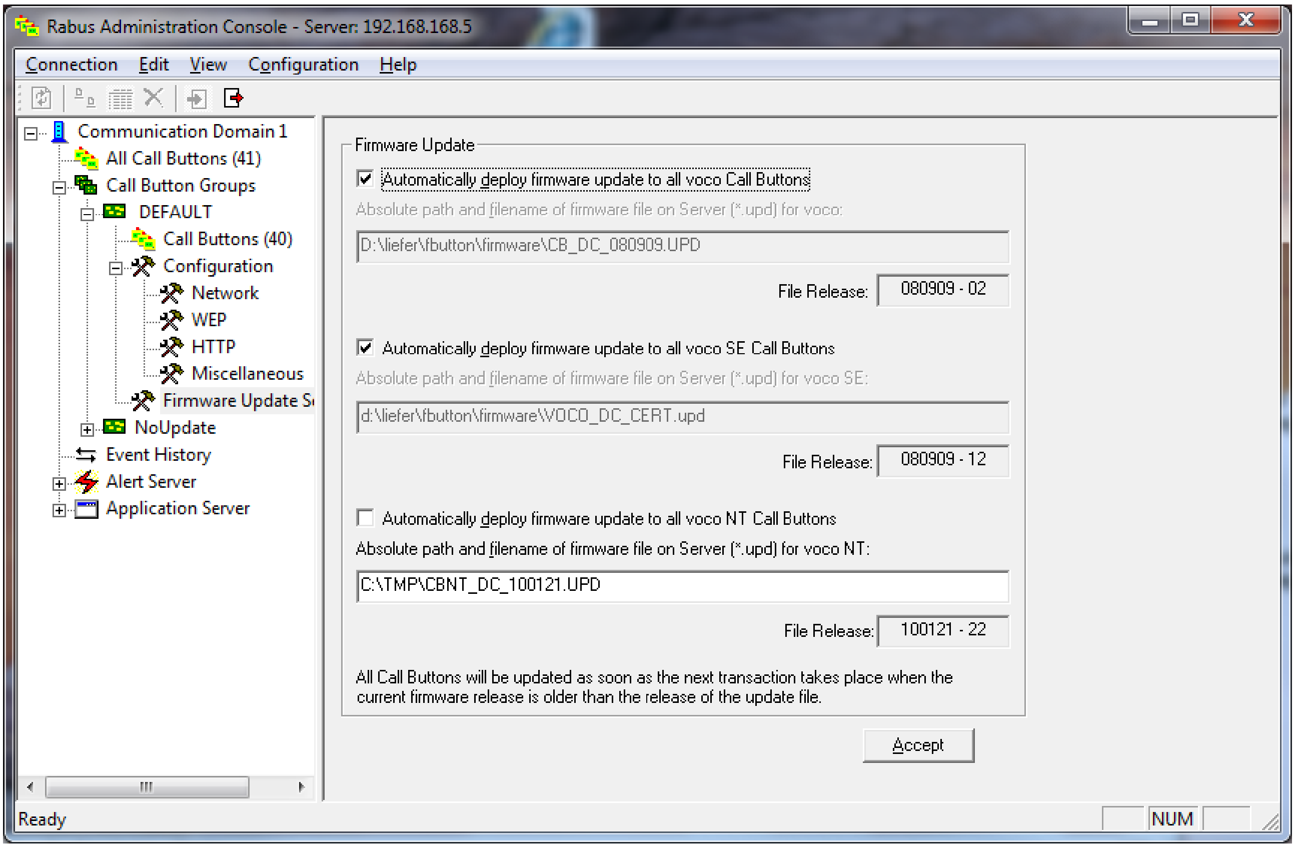
☐ ☐ Deactivate Emergency-Off (not recommended)

5.9 Firmware Deployment Settings

By selecting the **Firmware Update Settings** item, the firmware update form shows up on the right view. A firmware update will be performed by *Rabus Server* when a Call Button with a different firmware version connects. There are three entries for the different Call Button versions (voco, vocoSE or vocoNT).

The file definition must be set with drive letter and complete path (or UNC path) of the new firmware file from the server’s point of view.

By clicking the **Accept** button the settings are transferred to the server.



Firmware Update

☑ Automatically deploy firmware update to all voco Call Buttons

Absolute path and filename of firmware file on Server (*.upd) for voco:

D:\liefer\fbutton\firmware\CB_DC_080909.UPD

File Release: 080909 - 02

☑ Automatically deploy firmware update to all voco SE Call Buttons

Absolute path and filename of firmware file on Server (*.upd) for voco SE:

d:\liefer\fbutton\firmware\VOCO_DC_CERT.upd

File Release: 080909 - 12

☐ Automatically deploy firmware update to all voco NT Call Buttons

Absolute path and filename of firmware file on Server (*.upd) for voco NT:

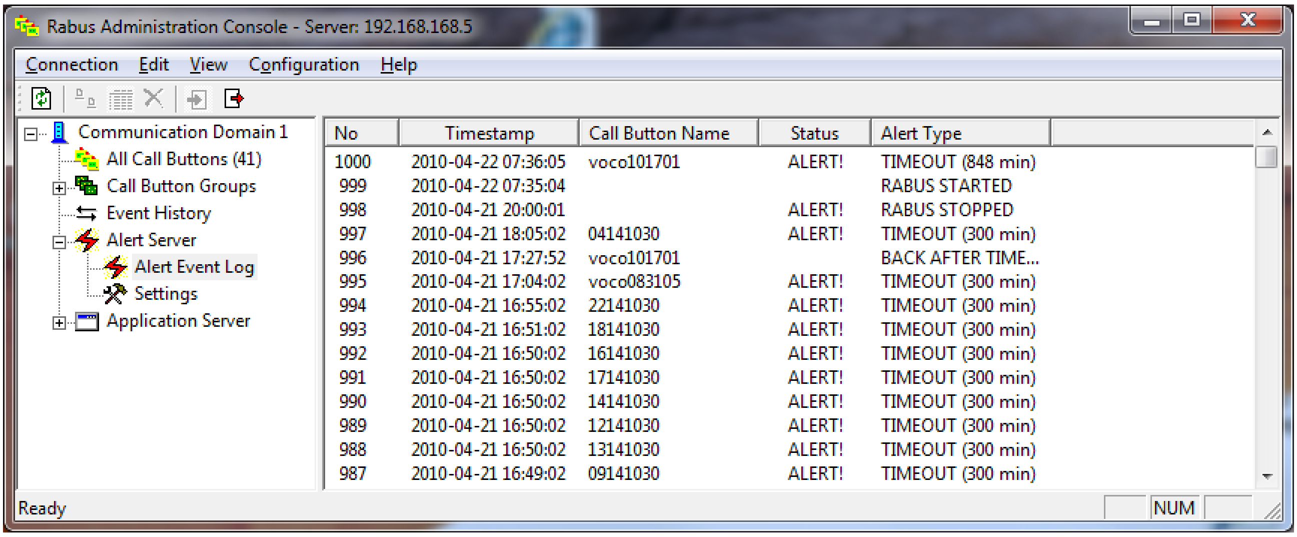
C:\TMP\CBNT_DC_100121.UPD

File Release: 100121 - 22

All Call Buttons will be updated as soon as the next transaction takes place when the current firmware release is older than the release of the update file.

5.10 Alert View

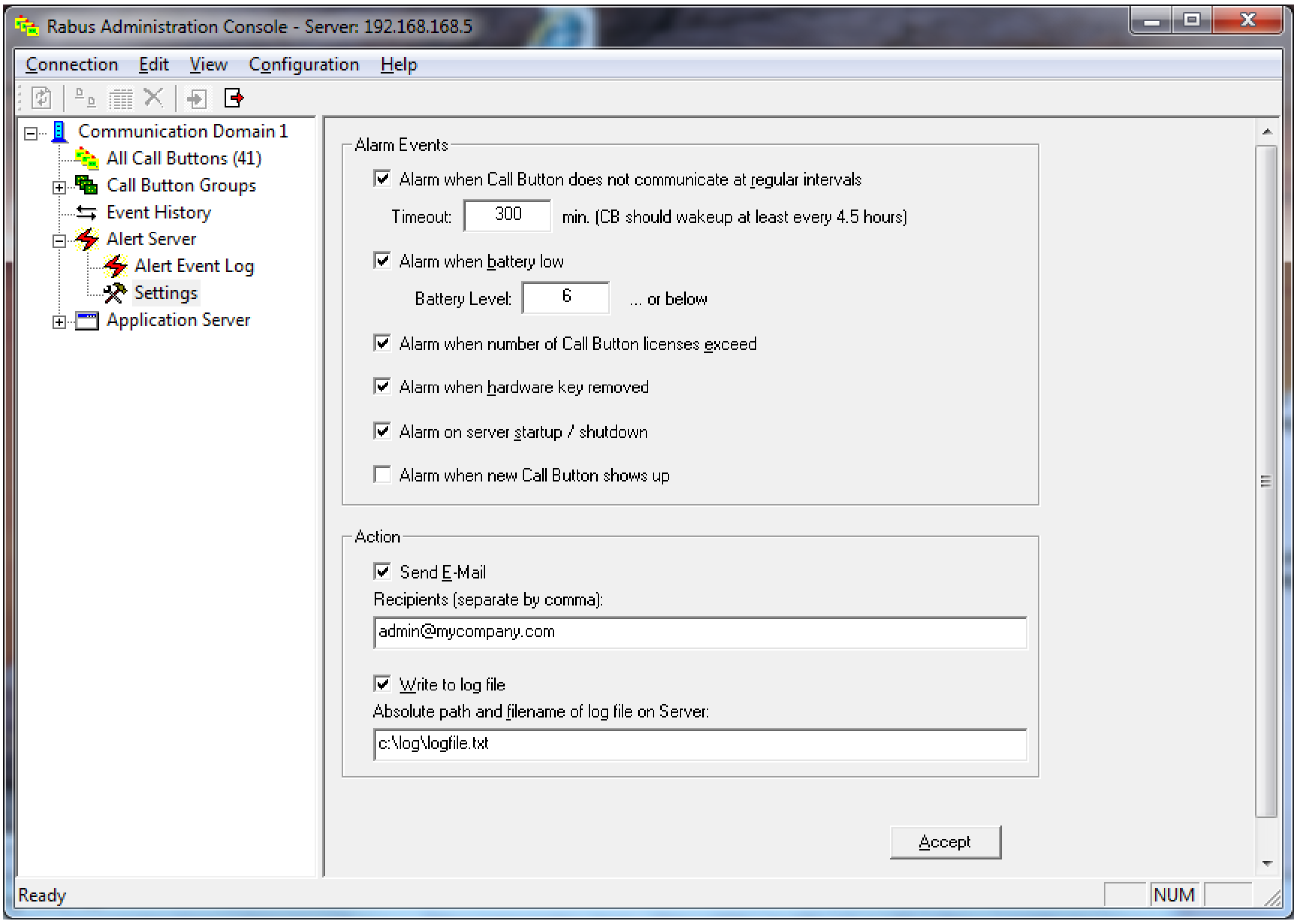
By selecting the **Alert Event Log** item, a list of the last recent 200 alerts shows up on the right hand side.



No	Timestamp	Call Button Name	Status	Alert Type
1000	2010-04-22 07:36:05	voco101701	ALERT!	TIMEOUT (848 min)
999	2010-04-22 07:35:04			RABUS STARTED
998	2010-04-21 20:00:01		ALERT!	RABUS STOPPED
997	2010-04-21 18:05:02	04141030	ALERT!	TIMEOUT (300 min)
996	2010-04-21 17:27:52	voco101701		BACK AFTER TIME...
995	2010-04-21 17:04:02	voco083105	ALERT!	TIMEOUT (300 min)
994	2010-04-21 16:55:02	22141030	ALERT!	TIMEOUT (300 min)
993	2010-04-21 16:51:02	18141030	ALERT!	TIMEOUT (300 min)
992	2010-04-21 16:50:02	16141030	ALERT!	TIMEOUT (300 min)
991	2010-04-21 16:50:02	17141030	ALERT!	TIMEOUT (300 min)
990	2010-04-21 16:50:02	14141030	ALERT!	TIMEOUT (300 min)
989	2010-04-21 16:50:02	12141030	ALERT!	TIMEOUT (300 min)
988	2010-04-21 16:50:02	13141030	ALERT!	TIMEOUT (300 min)
987	2010-04-21 16:49:02	09141030	ALERT!	TIMEOUT (300 min)

5.11 Alert Settings

By selecting the **Alert Server Settings** item, the alert settings form shows up on the right view.



Alarm Events

☑ Alarm when Call Button does not communicate at regular intervals

Timeout: 300 min. (CB should wakeup at least every 4.5 hours)

☑ Alarm when battery low

Battery Level: 6 ... or below

☑ Alarm when number of Call Button licenses exceed

☑ Alarm when hardware key removed

☑ Alarm on server startup / shutdown

□ Alarm when new Call Button shows up

Action

☑ Send E-Mail

Recipients (separate by comma):

admin@mycompany.com

☑ Write to log file

Absolute path and filename of log file on Server:

c:\log\logfile.txt

In the upper part the type of monitored events can be selected as there are:

- Communication Timeout

An alert will be released when there was no transaction to a specific Call Button for the defined period. As the Call Buttons wake up frequently (at least every 255 minutes) a timeout value of e.g. 300 minutes would cause an alert when a Call Button is out of normal operation. An opposite alert will be released as soon as the device connects in again.

- Battery Low

An alert will be released when a Call Button communicates a battery level of a defined value or below. An opposite alert will be released when the battery level is 2 above the defined level again.

- License Exceed

An alert will be released when a new Call Button tries to connect and the number of available Call Button licenses is exceeded.

- Hardware Key Removed

An alert will be released when the hardware key is removed.

- Server startup / shutdown

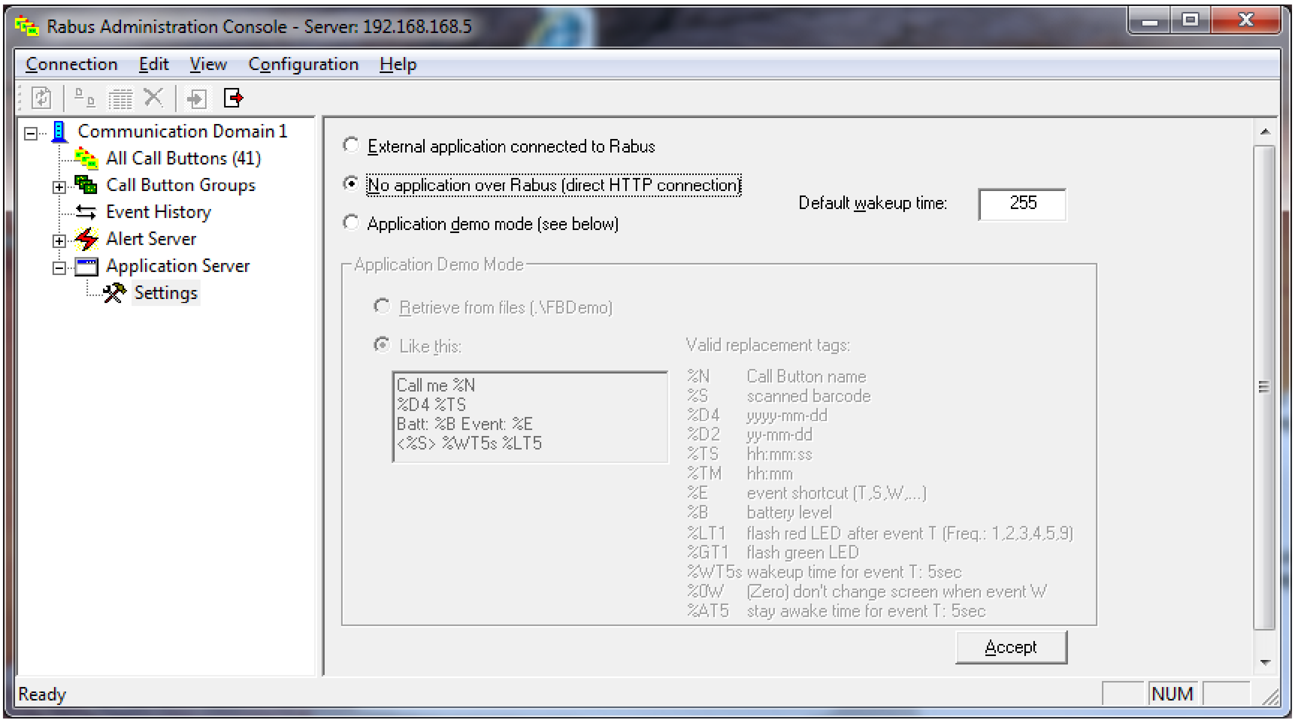
An alert will be released when Rabus starts up or shuts down.

The alerts will be recorded by the server and can be recalled by this program. Additionally a log file can be configured on the server.

By clicking the **Accept** button the settings are transferred to the Server.

5.12 Application Demo Mode

By selecting the **Application Server Settings** item, the application demo mode form shows up on the right view. After logging in changes to the settings can be performed. Please note that the demo mode can only be switched on when no application is connected to *Rabus Server*. The login password is defined in the *Rabus Server* INI file.



○ External application connected to Rabus

● No application over Rabus (direct HTTP connection)

○ Application demo mode (see below)

Default wakeup time: 255

Application Demo Mode

○ Retrieve from files (.\FBDemo)

● Like this:

```
Call me %N
%D4 %TS
Batt: %B Event: %E
<%S> %WT5s %LT5
```

Valid replacement tags:

%N	Call Button name
%S	scanned barcode
%D4	yyyy-mm-dd
%D2	yy-mm-dd
%TS	hh:mm:ss
%TM	hh:mm
%E	event shortcut (T,S,W,...)
%B	battery level
%LT1	flash red LED after event T (Freq.: 1,2,3,4,5,9)
%GT1	flash green LED
%WT5s	wakeup time for event T: 5sec
%0W	(Zero) don't change screen when event W
%AT5	stay awake time for event T: 5sec

If *Rabus Server* is to be used as the communication server for the application and the Call Buttons, please select the first option. The Call Button events will be notified to the connected application and the application generates the display contents to be shown.

If the Call Button use *Rabus Server* only as administration server and communicate to the application over a web server, choose the second option. The default wakeup time determines the interval (1 to 255 minutes) the Call Buttons are to connect to Rabus independently from the HTTP communication.

In order to use *Rabus Server* as demo application, choose the third option. Rabus then generates the response to a Call Button event on its own. The wakeup time can be set between 1 to 255 minutes. The display content can be set to be read out of text files or set directly. If set to **Retrieve from files** the *Rabus Server* looks for a text file in the **DemoDir** path set in the INI file in the following order:

- <Call Button name>.<event letter>
- <Call Button name>.txt
- FBDemo.<event letter>

- FBDemo.txt

The event letter is ‘T’ for button pushed, ‘S’ for barcode scanned, ‘W’ for wakeup event, ‘A’ for auto call.

If a corresponding file is found it is loaded and used as the new display content. Some wildcards in the text will be replaced dynamically:

- %N - replaced by the Call Button name
- %S - replaced by the barcode scanned (or empty)
- %D4 - replaced by the current server date (YYYY-MM-DD)
- %D2 - replaced by the current server date (YY-MM-DD)
- %TS - replaced by the current server time (HH:MM:SS)
- %TM - replaced by the current server time (HH:MM)
- %E - replaced by the event letter (T, S, W, A)
- %B - replaced by the current Call Button battery level (0 to 9)
- %L[<event>]<freq> - will switch the lamp on (flashing: <freq>: 1=0.5Hz; 2=1Hz; 3=2Hz; 4=3Hz; 5=5Hz; 9=constant on) after an event of type <event> (T=key pressed, A=auto call; S=barcode scanned) or after any event. Example: %L1 will flash the lamp with 0.5Hz after any event; %L2T will flash the lamp only after key events. Please consider the power consumption of the lamp!
- %W<event><time> - will wakeup again after <time> (minutes: 1 to 255 or seconds: 5s to 255s) after an event of type <event> (T, A, S), Example: %WT2 will wakeup 2 minutes after a key event. Can be used in combination with the L parameter in order to switch off the lamp after a certain time. Example: %LT2%W5Ts will flash the lamp for 5 seconds after a key event.
- %A<event><time> – will set a stay awake time of <time> seconds after an event of type <event>.
- %% - replaced by %

By clicking the **Accept** button the settings are transferred to the server.

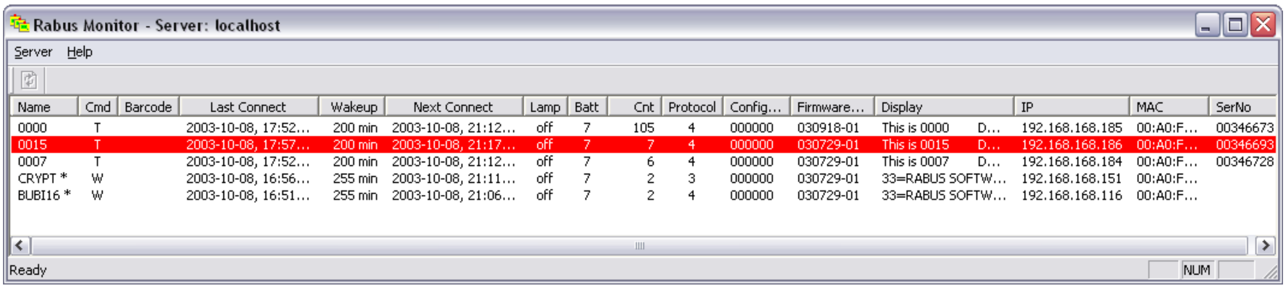
6 Monitor

6.1 Connecting the Server

On startup the *Rabus Monitor Tool* asks for the server host network parameters (host name or IP address and IP port which is 18301 by default) and then tries to connect it. The parameters will be saved for subsequent startups.

The current statuses of all Call Buttons are shown in a list and updated automatically. When a Call Button connects to the server, the corresponding line in the list is highlighted red for 10 seconds.

By clicking the column headers, the sort order can be changed. By dragging the column separators in the head line the column widths can be changed and columns can be hidden. These settings will be saved.



Name	Cmd	Barcode	Last Connect	Wakeup	Next Connect	Lamp	Batt	Cnt	Protocol	Config...	Firmware...	Display	IP	MAC	SerNo
0000	T		2003-10-08, 17:52...	200 min	2003-10-08, 21:12...	off	7	105	4	000000	030918-01	This is 0000 D...	192.168.168.185	00:A0:F...	00346673
0015	T		2003-10-08, 17:57...	200 min	2003-10-08, 21:17...	off	7	7	4	000000	030729-01	This is 0015 D...	192.168.168.186	00:A0:F...	00346693
0007	T		2003-10-08, 17:52...	200 min	2003-10-08, 21:12...	off	7	6	4	000000	030729-01	This is 0007 D...	192.168.168.184	00:A0:F...	00346728
CRYPT *	W		2003-10-08, 16:56...	255 min	2003-10-08, 21:11...	off	7	2	3	000000	030729-01	33=RABUS SOFTW...	192.168.168.151	00:A0:F...	
BUBI16 *	W		2003-10-08, 16:51...	255 min	2003-10-08, 21:06...	off	7	2	4	000000	030729-01	33=RABUS SOFTW...	192.168.168.116	00:A0:F...	

- Call Button name

- Last event type (T – Button pressed, A – Auto call, S – Barcode scanned, W – Wakeup)

- Barcode (if last even was of type S)

- Time of last connect

- Configured wakeup time

- Next expected connect by wakeup event

- Current lamp state (flash frequency)

- Battery load (0 to 9)

- Number of connects since *Rabus Server* start

- Call Button protocol type

- Configuration version

- Firmware version

- Current display content

- IP address

- MAC address

- Serial number