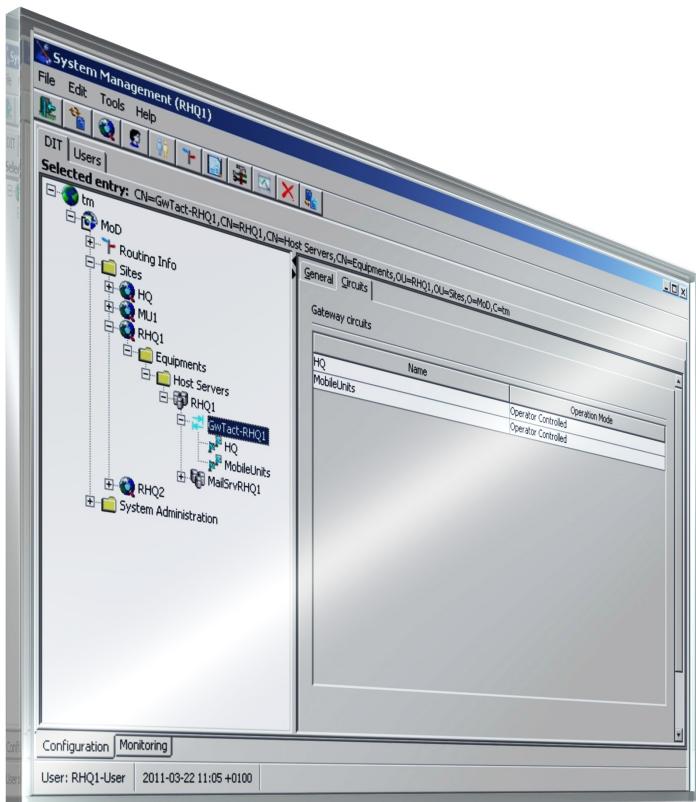


R&S®NS5150

R&S®Postman III

Installation Manual



6202401002

This software makes use of several valuable open source software packages. For information, see the "Open Source Acknowledgment" on the software disc (included in delivery).

Rohde & Schwarz would like to thank the open source community for their valuable contribution to embedded computing.

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Throughout this manual, products from Rohde & Schwarz are indicated without the ® symbol, e.g. R&S®NS5150 is indicated as R&S NS5150.

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1 Documentation Overview

The user documentation for the R&S NS5150 installation contains instructions to set up the environment for the R&S NS5150 system. This manual describes the installation concerning the release 04.06 or later.

R&S NS5150 can be installed in different environments. The following integration types are supported:

- R&S Postman III standalone
- R&S Postman III integrated (navy system)
- R&S Postman III router for R&S MMHS systems

For the different integration types, different aspects have to be taken into account. The following tasks are described in this manual depending on the integration types:

- [Chapter 1.1, "R&S Postman III Standalone and R&S Postman III Integrated", on page 9](#)
- [Chapter 1.2, "Postman III Router for MMHS Systems", on page 9](#)



Are you planning to update already existing Postman III installations?

Additional steps may be necessary if an already existing R&S Postman III installation shall be upgraded. Refer to the appendix to check if additional steps are necessary.

1.1 R&S Postman III Standalone and R&S Postman III Integrated

Depending on the chosen operating system for the server, an additional setup may be necessary.

- Planning the installation – values that are needed during installation and their meaning.
- Installation of the operating system – not a complete description, but the steps that are a necessary precondition for an R&S Postman III system.
- Installation of R&S Postman III – installing the R&S Postman III software packages
- Configuration of R&S Postman III – creating the local site in the management console of R&S Postman III
- Appendix – configuring the optional data transfer services and adding new users

1.2 Postman III Router for MMHS Systems

The installation for this integration type is described in a separate chapter. Refer directly to chapter [Chapter 6, "Installing R&S Postman III for R&S MMHS", on page 61](#).

2 Conventions

The following conventions are used throughout the R&S NS5150 Installation Manual:

Typographical conventions

Convention	Description
"Graphical user interface elements"	All names of graphical user interface elements both on the screen and on the front and rear panels, such as dialog boxes, softkeys, menus, options or buttons are enclosed by quotation marks.
"KEYS"	Key names are written in capital letters and enclosed by quotation marks.
<i>Input</i>	Input to be entered by the user is displayed in italics.
File names, commands, program code	File names, commands, coding samples and screen output are distinguished by their font.
Links	Links that you can click are displayed in blue font.
References	References to other parts of the documentation are enclosed by quotation marks.

Other conventions

- **Remote commands:**

Remote commands may include abbreviations to simplify input. In the description of such commands, all parts that have to be entered are written in capital letters. Additional text in lower-case characters is for information only.

3 Planning the R&S Postman III System Configuration

Before you start with the R&S Postman III system installation, create a system configuration plan with the following information categories:

- Global parameters
- Server parameters
- Client parameters
- User parameters

We recommend that you create a complete installation plan encompassing all servers and clients before starting with the installation.



This step is not necessary for the integration type "Postman III router for MMHS systems".



Create the system configuration plan before starting the installation.

Changing certain basic system parameters such as the hostname, domain name or IP address after the installation of the R&S Postman III software is not supported and requires a complete reinstallation of the software.

Changing these system parameters after an R&S Postman III software installation might corrupt the software configuration and put the software into a dysfunctional state.

3.1 Global Parameters

The following parameters must be defined globally for an R&S Postman III installation.

Property	Example	Description	Remarks
Language	en	A two-digit language code.	The only supported languages are en (English) and es (Spanish).
Region	US	A two-digit region (= sub-language) code.	
Country	en	A two-digit country code.	
Organization	RuS	An abbreviated name of your organization.	Must not contain spaces or special characters. Use ASCII characters only.

3.2 Server Parameters

The following parameters must be defined for each R&S Postman III server (= site).

Property	Example	Description	Remarks
Host Name	MU2	The host or computer name.	Should contain no hyphens. Note: You cannot change the host name later.
Domain Name	pm-mu2.com	The DNS domain name.	Must not be empty. Note: You cannot change the domain name later.
Email Domain	pm-mu2.com	The mail domain name.	Can be equal to the domain name property.
IP address	172.29.80.15	The IPv4 address.	Must be an IPv4 address. IPv6 addresses are not supported.
Subnet mask	255.255.255.0	The IPv4 subnet mask.	
Site ID	80	The Postman III site ID.	Each R&S Postman III server must have a unique site ID. The site ID is a numerical identifier. We recommend using a part of your IP network number as the site ID.



The host and domain names cannot be changed afterwards.

The host and the domain name cannot be changed after the R&S Postman III software has been installed and configured. Changing the host or domain name requires that you repeat the whole installation process starting with a fresh installation of the Microsoft Windows operating system.



Each R&S Postman III server must have a unique site ID.

3.3 Client Parameters

The following parameters must be defined for each R&S Postman III client.

Property	Example	Description	Remarks
Host Name	MU2WS	The host or computer name.	Can contain a number if you have multiple clients, e.g. MU2WS1, MU2WS2 etc.
Domain Name	pm-mu2.com	The DNS domain name.	Usually clients reside in the same DNS domain as the server on their network.
IP address	172.29.80.16	The IPv4 address.	Must be an IPv4 address. IPv6 addresses are not supported.
Subnet mask	255.255.255.0	The IPv4 subnet mask.	

4 Installing the Operating System

The R&S Postman III server and client software can be installed on one of the following operating systems:

- Microsoft Windows 10 Professional, Enterprise 64-bit
- Microsoft Windows Server 2016



The R&S NS5150 system software includes unmodified open-source components. The associated licenses and documentation are included on the distribution media in the "Third-Party" subfolder.

No responsibilities of any kind shall be imputable to their authors/contributors, in accordance with the respective licenses.

4.1 System Hardware Requirements

- Hardware requirements as defined by the selecting operating system
- At least 4 GB of RAM
- Graphics card or terminal with at least 1024 x 768 x 24 bpp resolution, 1280 x 1024 bpp recommended
- At least one 100 Mbit LAN adapter
- Keyboard, mouse, USB adapter, DVD-ROM drive supporting "Boot from DVD"
- Hard disk drive with at least 80 Gbyte free space

4.2 Installing Microsoft Windows

Install one of the supported Microsoft Windows operating systems. Refer to the accompanying documentation for further instructions.

4.3 User Configuration

The R&S Postman III installation process requires that you create a local Windows *Installer*.

The *Installer* user must be a member of the local Windows *Administrators* group.

Valid for systems without Windows Domain-Controller. If you select "Server and Client", the account must be installed on all computers.

With the Windows Domain-Controller, the account is created in the Windows domain.

A secure password should be used. On Windows Server 2016, the password must be created according to these rules:

- Do not use the name
- Use at least three character classes. The character classes are:
 - lowercase letter
 - capital letter
 - numeral
 - special character

For detailed information, refer to <https://docs.microsoft.com/en-us/windows/security/threat-protection/security-policy-settings/password-must-meet-complexity-requirements>.



Use the same password on all computers.



There must be an administrator account named *Installer*.

4.3.1 User Configuration for Windows 10

When installing Windows 10 as the operating system, we recommend using the user name *Installer* during installation. The user that you create here is automatically assigned to the *Administrators* group.

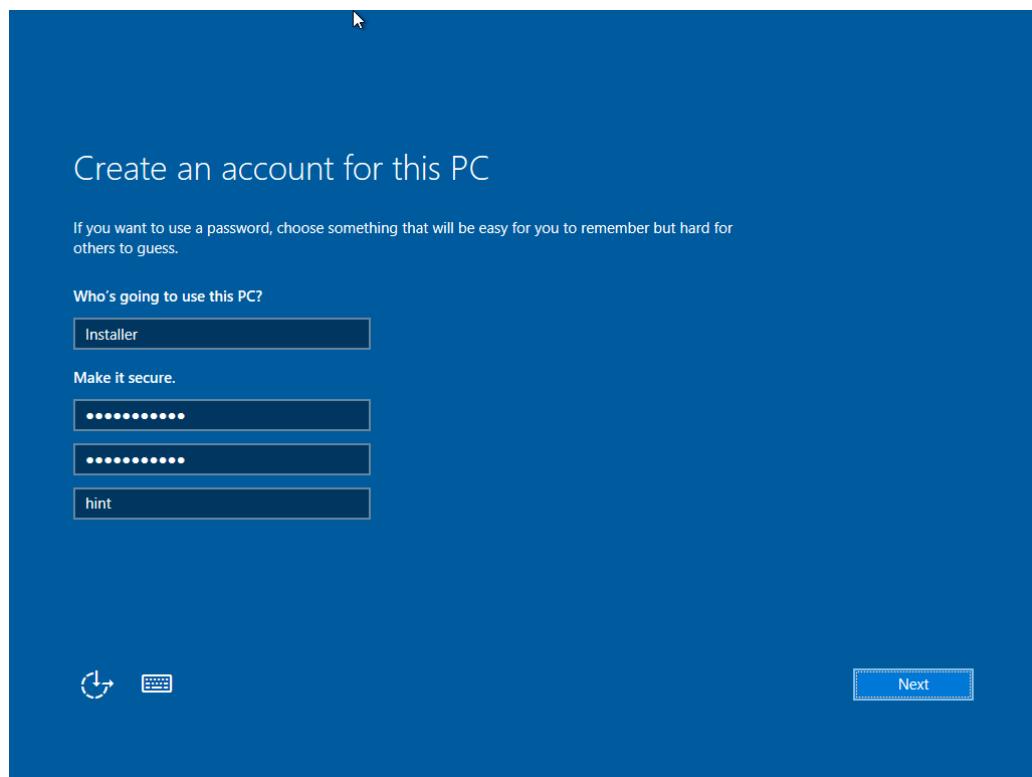


Figure 4-1: Windows 10 - installer account

4.3.2 User Configuration for Windows Server 2016

When installing Windows Server 2016 as the operating system, the *Installer* user must be manually created and assigned to the *Administrators* group using the Windows user manager.

A secure password should be used. On Windows Server 2016, the password must be created according to these rules:

- Do not use the name
- Use at least three character classes. The character classes are:
 - lowercase letter
 - capital letter
 - numeral
 - special character

For detailed information, refer to <https://docs.microsoft.com/en-us/windows/security/threat-protection/security-policy-settings/password-must-meet-complexity-requirements>.

4.4 Updating the Operating System



We recommend installing the latest Windows updates and patches.

They can be installed from the Microsoft update servers if you have an Internet connection. There are also offline installers available.

4.5 Network Configuration

4.5.1 Adapter Priority and Deactivating Unused Network Adapters

For correct operation, the system needs to have the network adapter. The network adapter is used by R&S Postman III to have the highest priority (lowest value of TCP/IPv4 interface metric) in the list. Unused/disconnected adapters must be disabled.

1. Press [Win+R] to open the "Run" window.
2. Enter the command `ncpa.cpl` and click the "OK" button.

The window "Network Connections" shows the detected network adapters.

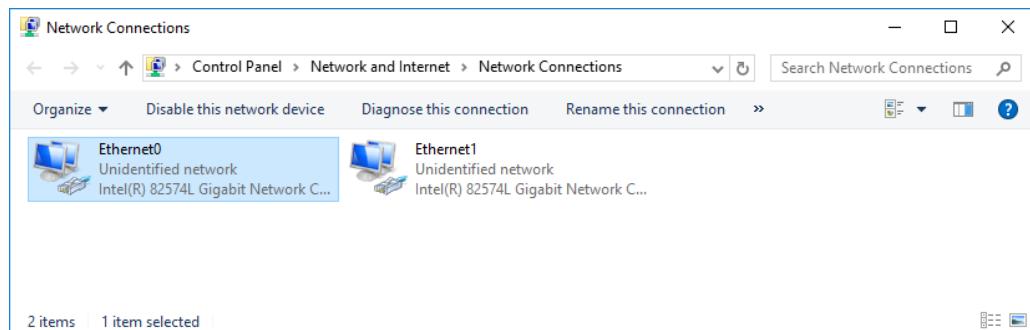
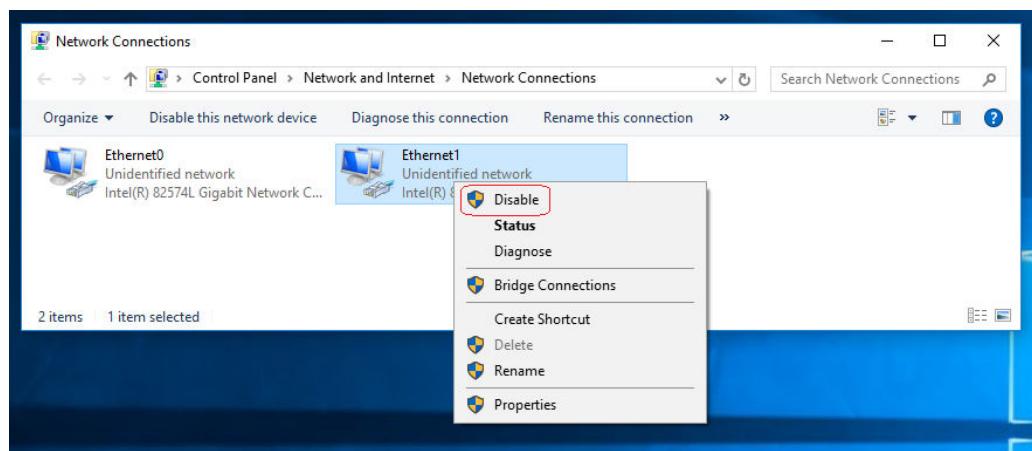


Figure 4-2: Network adapter list

4.5.1.1 Deactivating Unused Network Adapters

- In window "Network Connections", right-click the network adapter to be deactivated and select "Disable" from the popup menu.



4.5.1.2 Setting Adapter Priority

1. In window "Network Connections", right-click the network adapter to be modified and select "Properties" from the popup menu.
2. Select the item "Internet Protocol Version 4 (TCP/IPv4)" and click button "Properties".
3. In window "Internet Protocol Version 4 (TCP/IPv4) Properties", click button "Advanced".
4. In window "Advanced TCP/IP Settings", uncheck the box "Automatic metric" and enter a positive integral value.



The network adapter with the lowest value has the highest priority.

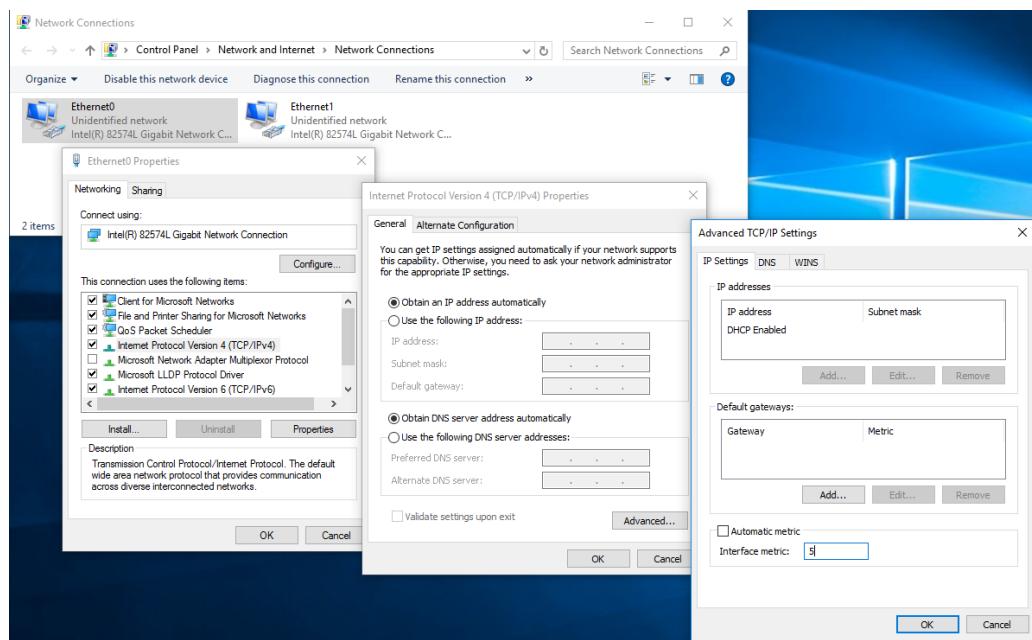


Figure 4-3: Setting network interface metric

4.5.2 Computer Name, IP Address and Workgroup

The computer needs a unique IP address according to the System Configuration sheet.



Using SysPrep for deployment

If you intend to use SysPrep for multiple deployments, take into account that every computer needs to get an individual name/IP address/workgroup. This step is the recommended procedure as opposed to simply cloning the HDD.

To set up the above configuration:

1. Press [Win+R] to open the "Run" window.
2. Enter the command `ncpa.cpl` and click the "OK" button.
The window "Network Connections" shows the detected network adapters.
3. In window "Network Connections", right-click the network adapter to be modified and select "Properties" from the popup menu.
4. Select the item "Internet Protocol Version 4 (TCP/IPv4)" and click button "Properties".
5. In the "General" tab, click "Use the following IP address" and enter the static IP address named in the System Configuration sheet (e.g. 172.29.81.16) with the "Subnet mask" 255.255.255.0. Leave the other values empty.

6. Click "OK" twice and "Close" to confirm the changes.

4.6 Changing the Host Name



The host or domain name cannot be changed after R&S Postman III has been installed and configured.

After the installation of the operating system, the server (e.g. with the host name "mu2" for "Mobile Unit2 Server") is per default member of the workgroup "WORKGROUP".

The next steps explain how to configure the local workgroup:

1. Press [Win+R] to open the "Run" window.
2. Enter the command `sysdm.cpl` and click the "OK" button.

The window "System Properties" opens:

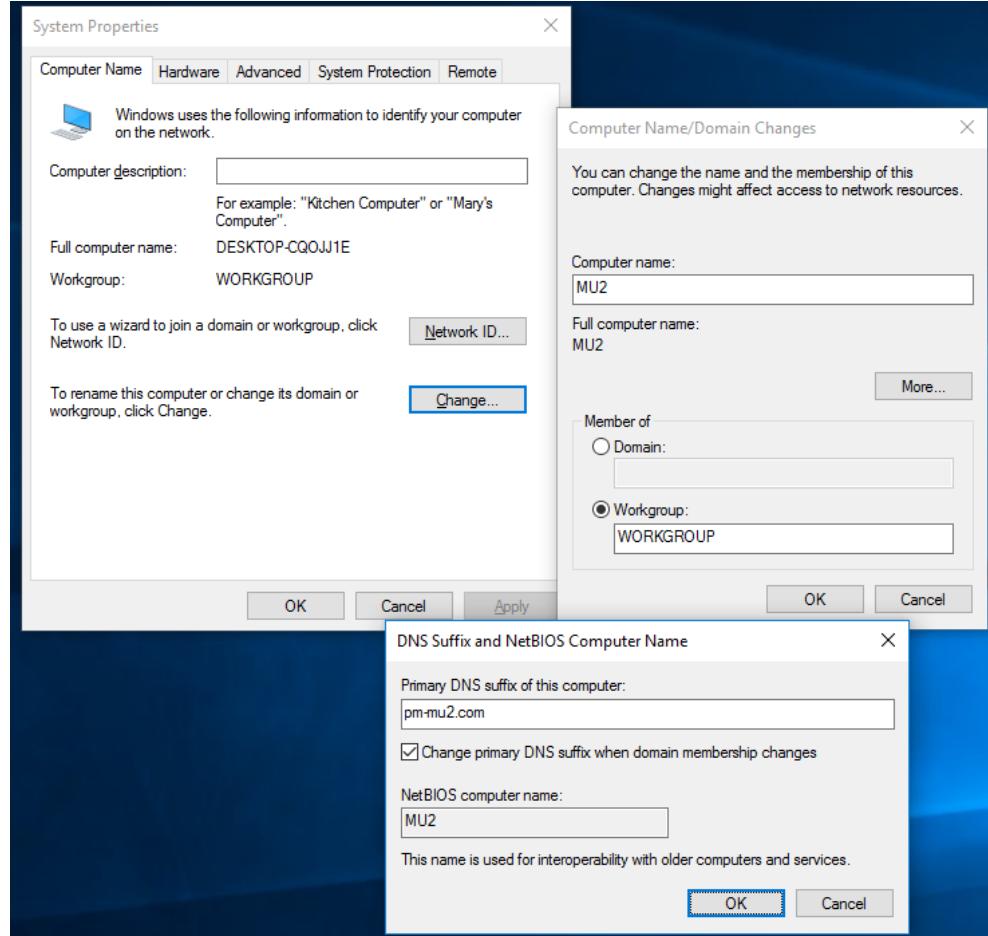


Figure 4-4: Changing computer name and description, workgroup and primary DNS suffix

3. Click the "Change" button and in the "Computer Name Changes" window enter the computer name of the server, i. e. "MU2".

4. Click the button "More" and enter the "Primary DNS suffix of this computer", e.g. "pm-mu2.com". Click "OK" to save the changes.

Back in the "Computer Name Changes" window, the "Full computer name (FCN)" is already displayed correctly. In the example above, it would be:

mu2 . pm-mu2 . com.

5. Click "OK" and confirm that a restart is necessary.

6. When the system asks you to restart the computer, click "Yes" to activate the new settings.

If you intend a SysPrep-assisted deployment, the above steps can be skipped since they have to be repeated for each cloned machine.

4.7 Configuring Data Execution Prevention

1. Press [Win+R] to open the "Run" window.

2. Enter the command `sysdm.cpl` and click the "OK" button.

The window "System Properties" is shown.

3. Navigate to tab "Advanced" and click button "Settings" in section "Performance".

4. Navigate to tab "Data Execution Prevention".

5. Activate the upper radio button "Turn on DEP for essential Windows programs and services only" as shown in [Figure 4-5](#), then click "OK" to confirm.

Configuring Data Execution Prevention

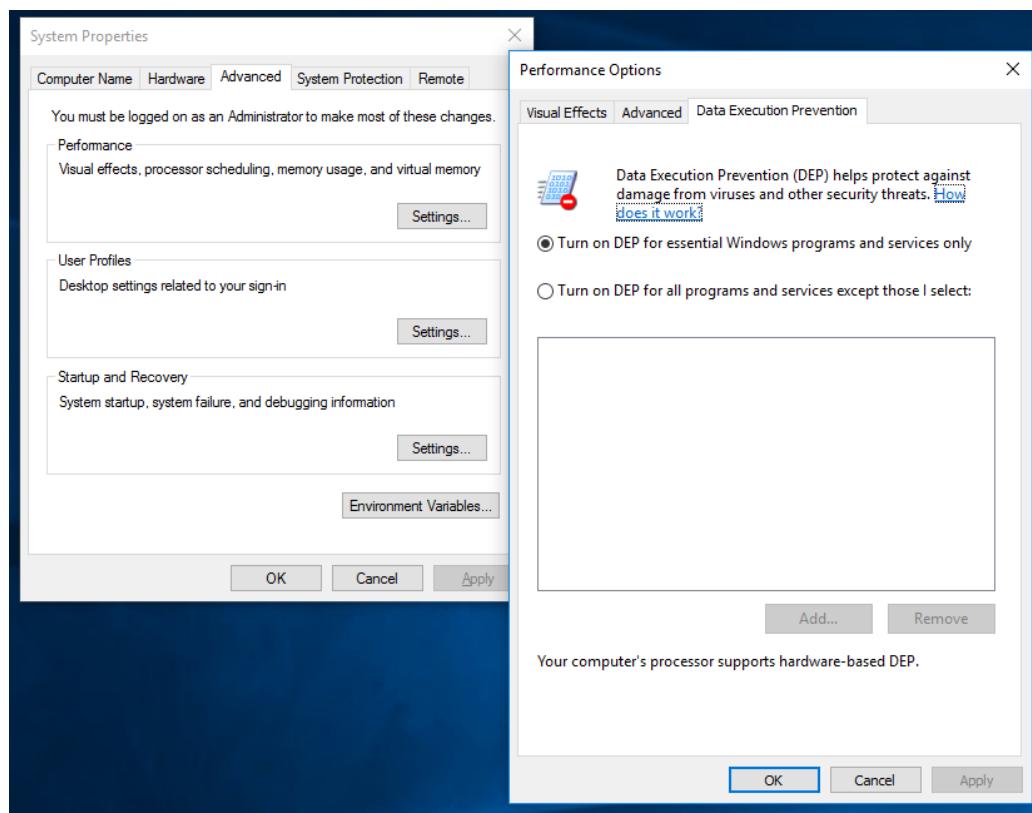


Figure 4-5: Data execution prevention

5 Installing the R&S Postman III Software

After the operating system has been installed and configured as described in chapter [Chapter 4, "Installing the Operating System", on page 17](#), the R&S Postman III software can be installed and configured using the R&S Postman III Setup Assistant.

This chapter describes an installation of type "Postman III standalone". If differences occur compared to the integration type "Postman III integrated with navy system", these differences are pointed out.

5.1 Creating the Data Carrier for the Installation



The PM3 and DEVICE CONTROL are supplied on separate disks. For the installation, a new data carrier must be created from the both disks.

To create the installation data carrier, proceed as follows:

- Copy the content from the PM3 CD (CDROM-NS51550-BASE) and paste it onto the new data carrier.
- Copy the MSI packages (simcosii-...msi, devicecontrol*.msi from the folder Rohde-Schwarz/SIMCOSII) from the DEVICE CONTROL and paste them in the CDROM-NS5150-BASE folder respectively in the root folder of the new data carrier.

Then you can perform the installation as described in the installation manual.

5.2 Logging In as Installer

Installation and configuration of the R&S Postman III software should be performed using the *Installer* account created during the installation of the operating system. So please log off and log in again as the *Installer* user if not already done so.

5.3 Launching the R&S Postman III Setup Assistant

Launch the R&S Postman III Setup Assistant by executing the `setup.exe` file in the installation folder.

5.4 Selecting the Installation Type and Options

After the R&S Postman III Setup Assistant has been launched, the **Welcome** page is shown. Select:

- Integration type (standalone or integrated with the R&S Navy or R&S MMHS system)
- Installation type (server and/or client)
- Additional options

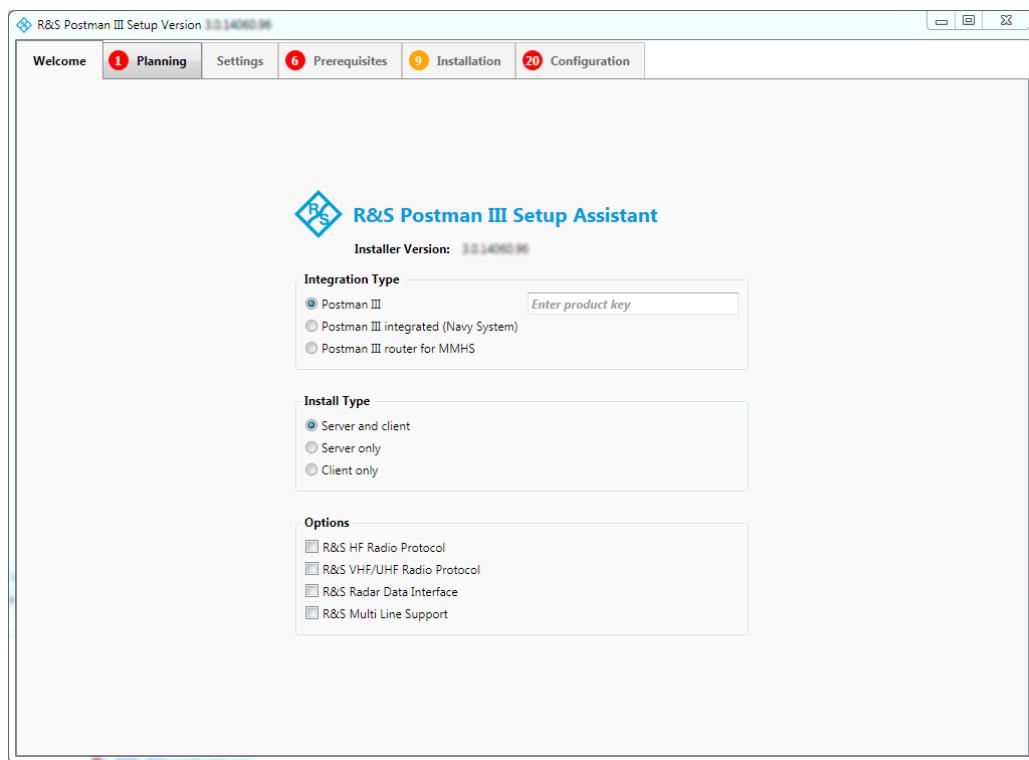


Figure 5-1: Welcome page

5.5 Entering Product Keys

For Postman III (standalone) and R&S Navy system-integrated installations and for every selected option, a valid product key must be entered. The product key is printed on the licensing papers that came with the software installation media.

Enter the appropriate product keys into the respective fields until a green checkmark is displayed next to each product key.

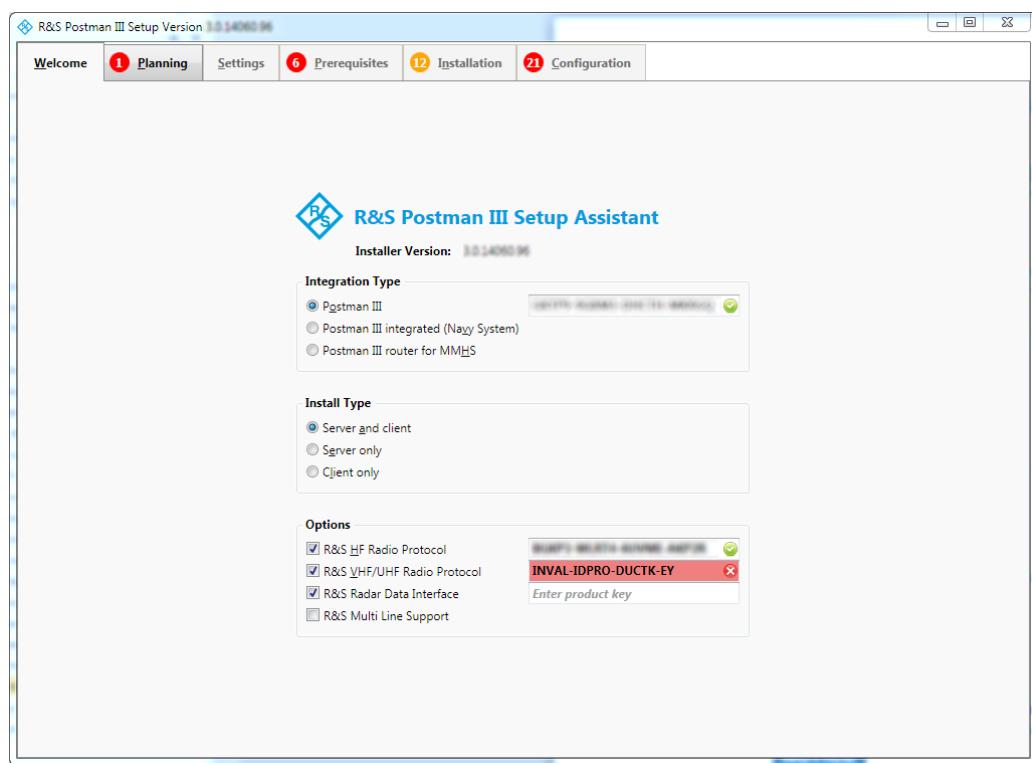


Figure 5-2: Entering product keys

5.6 Planning the Network

Click the "Planning" tab to display the network planning editor.



Planning tab not available for R&S Postman III router for MMHS

The "Planning" tab is only available for the "Postman III" standalone and "Postman III integrated (navy system)" integration types.

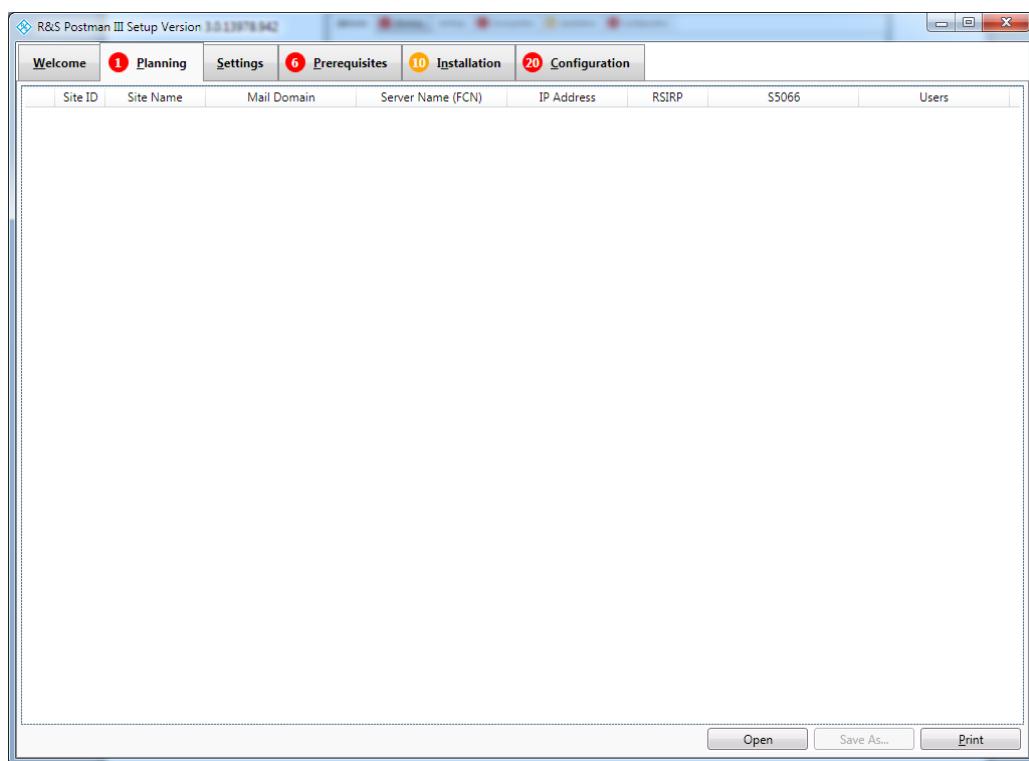


Figure 5-3: Planning

5.6.1 Adding Sites

1. Press the "Insert key" or right-click the site list and select "Add site" from the context menu to add a new site.
2. Fill in the following site parameters from the system configuration plan. See [Chapter 3, "Planning the R&S Postman III System Configuration", on page 13](#) for further information:
 - Site ID
 - Site Name
 - Mail Domain
 - Server Name (FCN)
 - IP Address
 - Check RSIRP and enter network and station ID.
This step is only required if the option "R&S VHF/UHF Radio Protocol" has been selected on the **Welcome** page.
 - Check S5066 and enter node id and ALE address.
This step is only required if the option "R&S HF Radio Protocol" has been selected on the **Welcome** page.
 - User (optional)

3. Repeat the previous steps for each R&S Postman III site.

5.6.2 Loading Sites

The configuration created by the R&S Postman III Setup Assistant can be loaded from a file. This configuration might be helpful to install multiple stations.

1. Click the "Open" button to import sites and users.
2. Select an XML file that has been previously saved by an existing R&S Postman III Setup Assistant.
3. Click "Open" to overwrite your current network plan with the loaded configuration.

5.6.3 Printing the Network Plan

The network plan can be printed for documentation purposes. The printing functionality is realized by exporting the network plan to an HTML file, which is then opened in the default browser.

1. Click the "Print" button to export the current network plan to an HTML file and open the file in the default browser.
2. Use your browser's functionality to format the print output (orientation, margins, headers, footers etc.) and print the network plan.

5.6.4 Selecting the Local Site

Right-click one of the sites in the network planning list and select "Select site" from the context menu or press [Ctrl+Enter].

This step copies the parameters of the selected site to the input fields of the "Settings" tab described in the next section.

The selected site is marked with a green checkmark.



One of the planned sites must be selected as the local site.

For each R&S Postman III server installation, exactly one of the planned sites must be selected as the local site. The other sites are configured as remote sites (from the point of view of the local site that is currently being installed and configured).

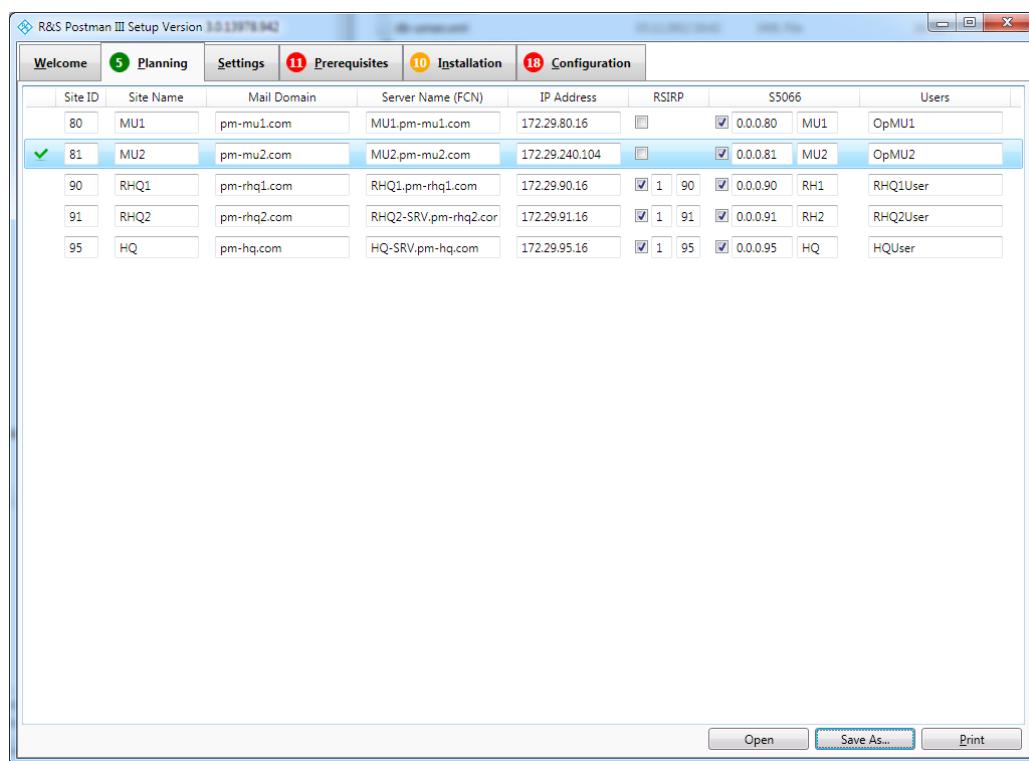


Figure 5-4: Complete network plan

5.6.5 Saving Sites

The current network plan can be saved to an XML file, which can be loaded by the R&S Postman III Setup Assistant. This step makes it easier to install multiple stations.

The function is only enabled if a local site has been selected.

1. Click the "Save As" button to open the "Save As" dialog.
2. Select a folder and enter an export file name (e.g. sites.xml).
3. Click "Save" to export the current network plan to an interchangeable format.

5.6.6 Managing Multiple Network Plans

The configuration of sites and users from the "Planning" tab can be saved into a file and loaded from a file. See chapters [Chapter 5.6.2, "Loading Sites"](#), on page 31 and [Chapter 5.6.5, "Saving Sites"](#), on page 32 for details.

5.7 Editing Installation Parameters

Click the "Settings" tab to display and edit the installation parameters.



"Settings" tab disabled if product key invalid

All tabs except the "Welcome" tab are disabled as long as you have not entered valid product keys for each selected option.

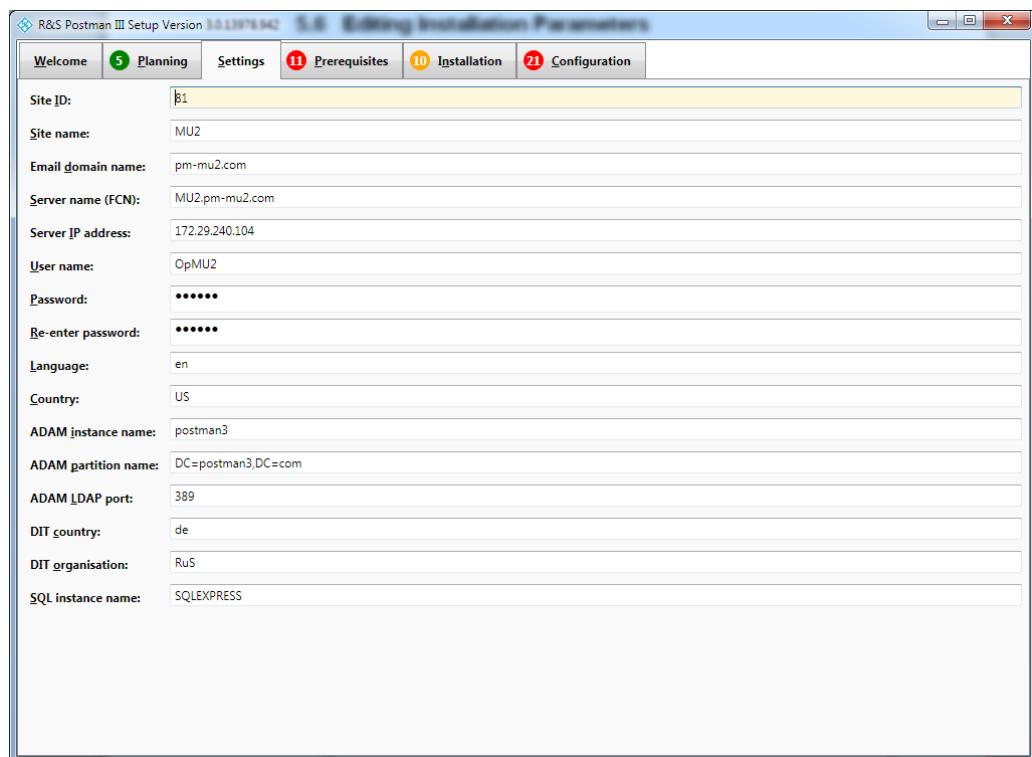


Figure 5-5: Settings page



Prerequisites are refreshed when settings are changed

Whenever an installer parameter is edited, the list of prerequisite tasks (see below) is automatically refreshed. This is required because some prerequisite tasks are dependent on the current installer parameter values. For example, the host name prerequisite task checks that the actual system hostname matches the value entered into the host name setting text box.

The default values for the settings are derived from your current system configuration. Once a value has been edited, the modified value is saved to the registry and restored on the next start of the R&S Postman III Setup Assistant. It is also possible to specify each setting through command line parameters.

Table 5-1: Default values and command line parameters

Setting	Default value	Command line parameter	Remarks
Site ID	3rd byte of IP address	Pm3Siteld	
Server host name	Host name	Pm3HostName	

Setting	Default value	Command line parameter	Remarks
Server domain name	DNS domain suffix	Pm3DomainName	
Email domain name	DNS domain suffix	Pm3EmailDomainName	
Server IP address	Host Ipv4 address	Pm3IpAddress	On multi-homed hosts (= hosts with multiple IP addresses) IPv4 addresses starting with "172.29." and "192.168." are preferred.
User name	"Op" + host name	Pm3UserName	
Password	"123456"	Pm3Password	Do no use the default value.
Language	"es"	Pm3Language	
Country	"CO"	Pm3Country	
ADAM instance name	"postman3"	AdamInstanceName	Do not change
ADAM partition name	DC=postman3,DC=com	AdamPartitionName	Do not change
DIT country	Depends on current system locale (e.g. "en" on an English Windows installation, "es" on a Spanish installation)	DITCountry	
DIT organization	"RuS"	DITOrganisation	
SQL instance name	"SQLEXPRESS"	SqlInstanceName	Name of SQL server instance. Set to an empty string for the default instance.

5.8 Completing Prerequisite Tasks

- ▶ Click the "Prerequisites" tab to show all prerequisite tasks that must be completed for a successful software installation.

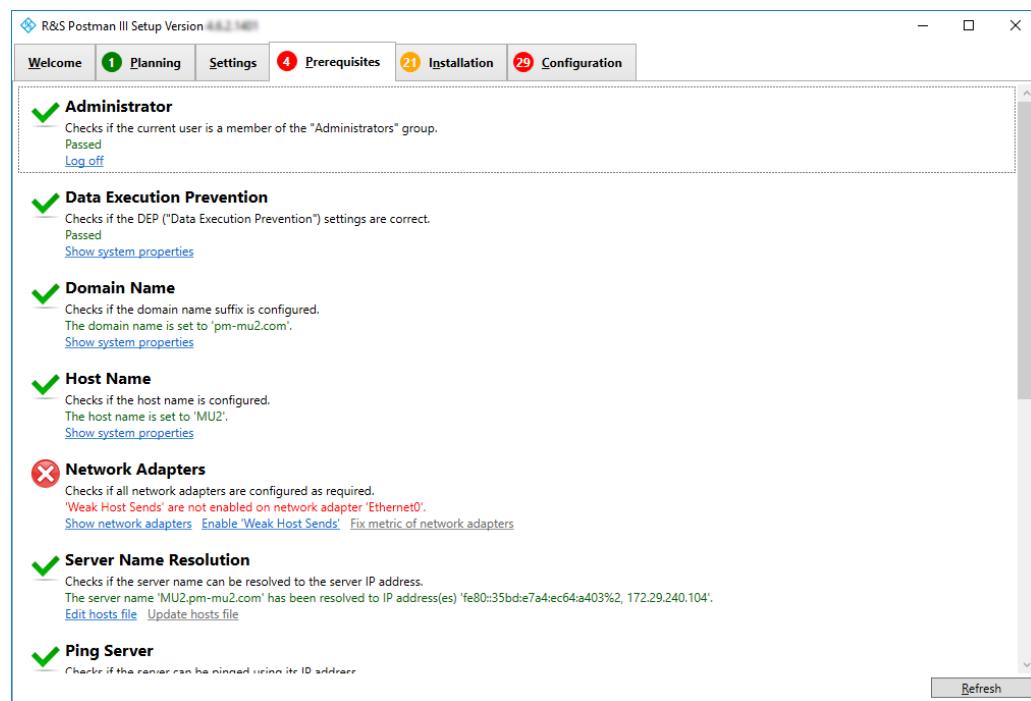


Figure 5-6: Prerequisites page

The colored badge on the "Prerequisites" tab shows the number of uncompleted tasks (red, if any) or the total number of completed tasks (green).

Each of the tasks has one or more command links that help you to complete the task. Depending on the type of task, there are command links that open the respective Windows system dialog where you can perform the required setting manually, or they have one or more command links that directly complete the system configuration task.

The list of tasks is automatically refreshed after a command link has been clicked and the command execution has finished. A manual refresh might be required if you chose to complete the task through some other means. Use the "Refresh" button in the lower right corner to perform a manual refresh.



The list of prerequisite tasks varies slightly depending on the selected installation type (server and/or client) and the target platform (Windows 10 or Windows Server 2010).

The following sections describe each of the configuration tasks in detail.

5.8.1 Administrator Prerequisite

Checks if the current user is a member of the *Administrators* group.

If this task fails, you are either not logged on as a user that is a member of the *Administrators* group, or Windows User Account Control (UAC) is not turned off.



5.8.2 Data Execution Prevention

Checks if the DEP ("Data Execution Prevention") settings are configured as required.

5.8.3 Network Adapters

Checks if all network adapters are configured as required.

- ▶ Click "Enable Weak Host Sends" to enable weak host sends.

5.8.4 Domain Name

Checks if a DNS domain name suffix is configured and if it matches the value configured on the "Settings" page.

5.8.5 Host Name

Checks if the host name matches the value configured on the "Settings" page.

5.8.6 Server Name Resolution

Checks if the server name can be resolved to the IP address configured on the "Settings" page.

Required for client installations only.

5.8.7 Ping Server

Checks if the server IP address can be pinged.

Required for client installations only.

5.8.8 PMIII-User Group

Checks if the local Windows group *PMIII-User* exists.

- ▶ Click "Create group" to create a local Windows user group.

5.8.9 Installer User Account

Checks if a Windows user account named *Installer* exists and is a member of the "Administrators" group.

5.8.10 [Pm3UserName] User Account

Checks if a Windows user account named as configured on the "Settings" page exists and is a member of the *PMIII-User* group.

1. Click "Create user" to create the local Windows user account.
2. Click "Add user to group(s)" to add the user account to the "PMIII-User" group.

5.8.11 Windows Features

Checks if all required Windows features are enabled.



The feature ".NET Framework 3.5" must be installed from Windows Server 2016 or Windows 10 installation medium or online.

To install the ".NET Framework 3.5" on Windows Server 2016 online, proceed as follows:

1. Open "Server Manager".
2. In "Server Manager", click Manage > Add Roles and Features > Features.
3. Select ".NET Framework 3.5 Features".

To install the ".NET Framework 3.5" on Windows 10 online, proceed as follows:

1. Click "Programs and Features" in the Windows 10 settings window.
2. Click "Turn Windows Feature on or off".
3. Select ".NET Framework 3.5 Features".

To install ".NET Framework 3.5" from Windows Server 2016 or Windows 10 installation medium, proceed as follows:

1. Click "Locate and Enable .NET Framework 3.5" to open a file selection window.
2. Select the file `microsoft-windows-netfx3-on-demand-package.cab`.
The file is on the Windows Server 2016 or Windows 10 installation medium in the subfolder "sources\sxs".
The installation medium must be compatible to the installed Windows version.

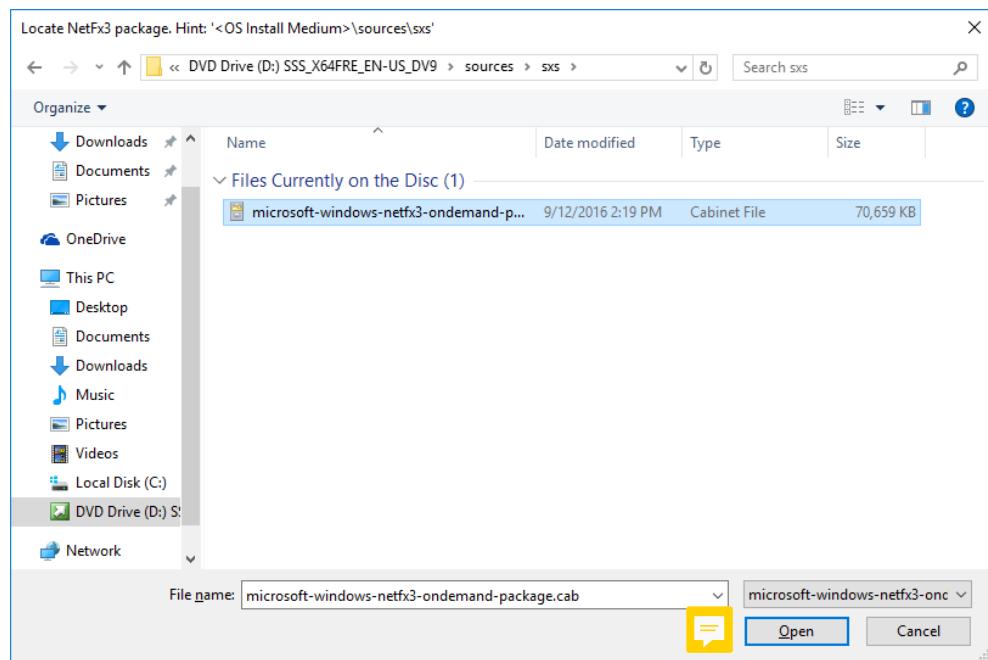


Figure 5-7: Installation from Windows installation medium

- ▶ Click "Enable Windows features" to enable all missing features.



The installation of missing Windows features might take up to several minutes. During this time, the GUI of the R&S Postman III Setup Assistant is unresponsive. Please be patient and wait for the task to complete.

5.9 Installing Software Packages

After all prerequisite tasks have been completed, the software installation can be started.

- ▶ Click the "Installation" tab to display the "Installation" page.

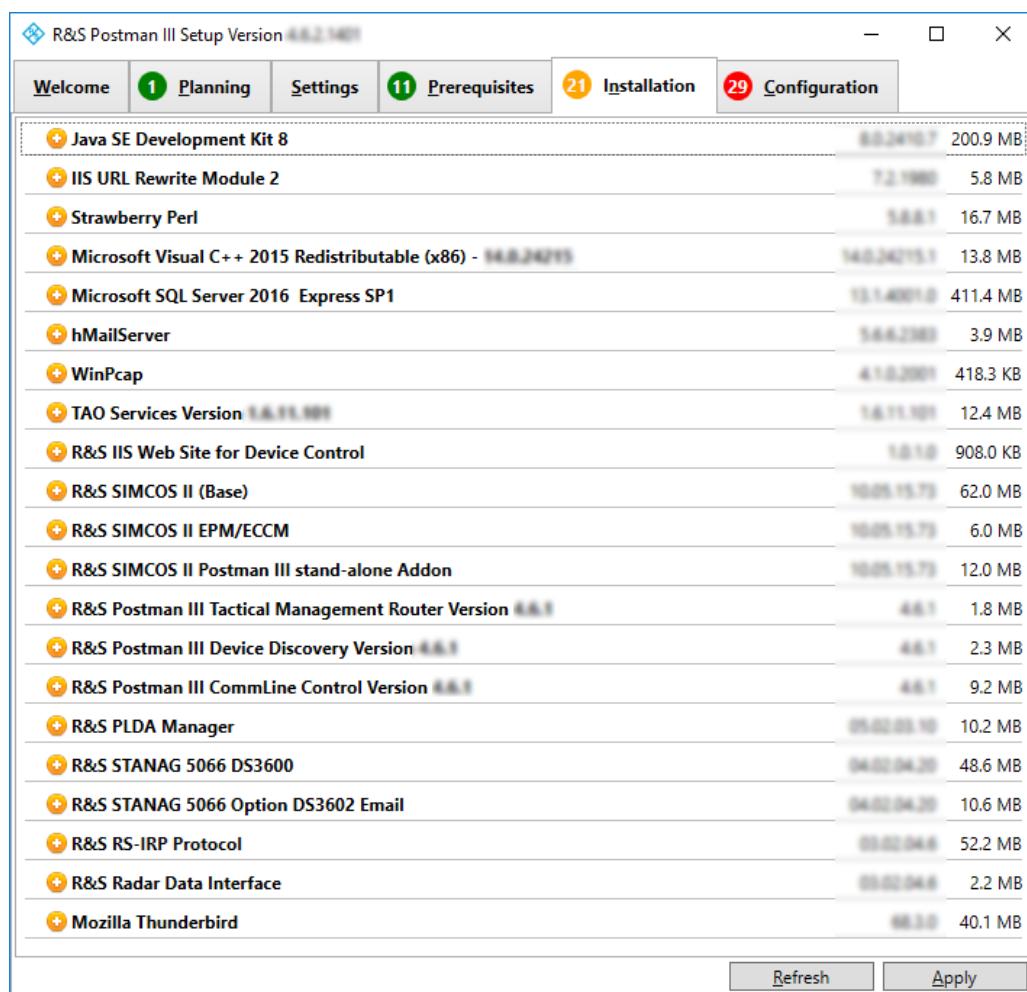


Figure 5-8: Installation page

5.9.1 Starting the Installation

- Click "Apply" to start the software package installation.



Complete all prerequisite tasks before starting the installation.

Starting the installation of the R&S Postman III software packages before all prerequisite tasks are completed (i. e. have a green checkmark) should be avoided. It might result in an installation error, or – even worse – one or more software packages might be installed with incorrect configuration causing probably hard to find runtime errors.

A status icon for each package indicates if the respective package will be installed depending on the selected installation type, platform and other conditions. Use the "Toggle Legend" link at the lower left button of the "Installation" page to display an explanation of the different status icons.



The collection of software packages that are installed varies based on the selected installation type (server and/or client) and the target platform (Windows 10 or Windows Server 2016).



The installation of the software packages takes approx. 20 minutes. Be patient and do not close the R&S Postman III Setup Assistant during this time.

5.9.2 Rebooting the Machine

Depending on the installation type (server and/or client), the "Reboot" dialog is shown after all software packages have been installed.

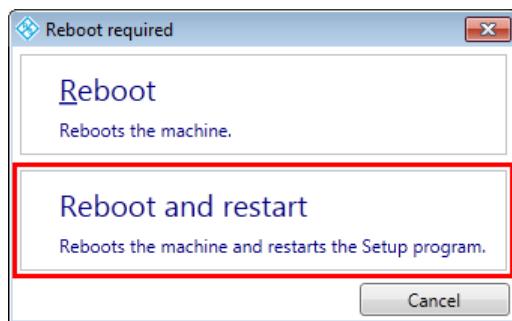


Figure 5-9: Reboot dialog

- ▶ Click "Reboot and restart" to initiate a system reboot and restart the R&S Postman III Setup Assistant.

5.10 Configuration Software Packages

After all required software packages have been installed and the machine has been rebooted, the software packages must be configured.

1. Click the "Configuration" tab to display the configuration tasks.
2. Complete each task until it shows a green checkmark.

Command links at the bottom of each task provide assistance in completing each task.



The list of configuration tasks varies depending on the selected installation type (server and/or client). For client-only installations, only a small subset of the configuration tasks must be performed.

The following sections describe each of the configuration tasks in detail.

5.10.1 SQL Server Configuration

1. Click "Configure TCP port 1433" to configure the static TCP port number 1433.
2. Click "(Re-)start SQL Server" to restart the SQL Server service.

5.10.2 SQL Server BUILTIN\Administrators Sysadmin Role

Verifies that the Administrators group is a member of the SQL Server "sysadmin" role. If SQL Server was pre-installed by some other setup program, a correction might be required.

- ▶ Click "Add 'BUILTIN\Administrators' to 'sysadmin' role" if this command is enabled.

5.10.3 hMailServer Configuration

- ▶ Click "Configure hMailServer" to configure hMailServer.

5.10.4 TMR Source Address

Checks if the TMR ("Tactical Management Router") public IP address is set to the configured IP address. The public IP address is used as the IP source address for outgoing IP packets.

- ▶ Click "Adjust address and restart TMR service" if a mismatch is detected.

5.10.5 Java Updates

- ▶ Click "Disable updates" to disable the Java auto-updater.

5.10.6 Java System Tray Icon

- ▶ Click "Hide system tray icon" to disable the Java system tray icon.

5.10.7 Java Deployment

- ▶ Click "Adjust" to adjust the Java deployment settings.

5.10.8 Java Cache

Verifies that the Java cache is empty.

- ▶ Click "Clear cache" to clear the cache (if necessary).

5.10.9 SIMCOS_ROOT Environment Variable

Verifies that the SIMCOS_ROOT environment variable has been set.

5.10.10 EVL Catalog Files

- ▶ Click "Copy files" to install the EVL catalog files.

5.10.11 UMAN Database

- ▶ Click "Update database" to apply all required modifications to the UMAN database.

5.10.12 DEVCON Database

- ▶ Click "Update database" to apply all required modifications to the DEVCON database.

5.10.13 S5066 Stack Config

Checks if the relevant settings of the config file `s5066.xml` are correct.

This task is only present if the option "R&S HF Radio Protocol" had been selected on the "Welcome" page.

- ▶ Click "Fix config" to adjust the S5066 stack configuration.

5.10.14 S5066 Mail Config

Checks if the relevant settings of the config file "`s5066_mail.xml`" are correct.

This task is only present if the option "R&S HF Radio Protocol" had been selected on the "Welcome" page.

- ▶ Click "Fix config" to adjust the S5066 mail configuration.

5.10.15 SIMCOS II Services

1. Click "Configure services" to set the startup type of all services to "Automatic".
2. Click "Start services" to start the R&S Device Control (SIMCOS II was renamed to Device Control) services.

5.10.16 SIMCOS II Web Interface

Verifies that the R&S Device Control (SIMCOS II was renamed to Device Control) web interface is accessible.

5.10.17 ADAM (AD LDS) Instance

1. Click "Install instance (unattended)" to install the postman3 ADAM instance.
2. Click "Add<hostname>\PMIII-User to Readers role" to grant read rights to the members of the PMIII User group.

5.10.18 ADAM Installer Administrators Role

Verifies that the current user (*Installer*) is a member of the ADAM "Administrators" role.

5.10.19 R&S Postman III Setup Wizard

1. Click "Launch setup wizard" to launch the R&S Postman III Setup Wizard.

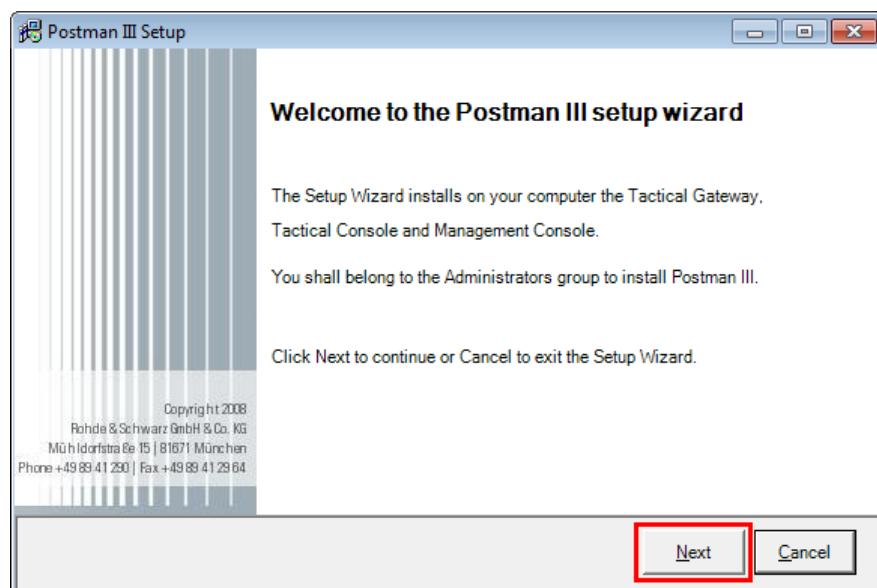


Figure 5-10: Postman III setup wizard welcome screen

Note: Understanding the Postman III Setup Wizard

The Postman III Setup Wizard is an additional installer that installs and configures an additional part of the R&S Postman III software packages.

2. Click "Next" on the welcome screen of the R&S Postman III setup wizard.

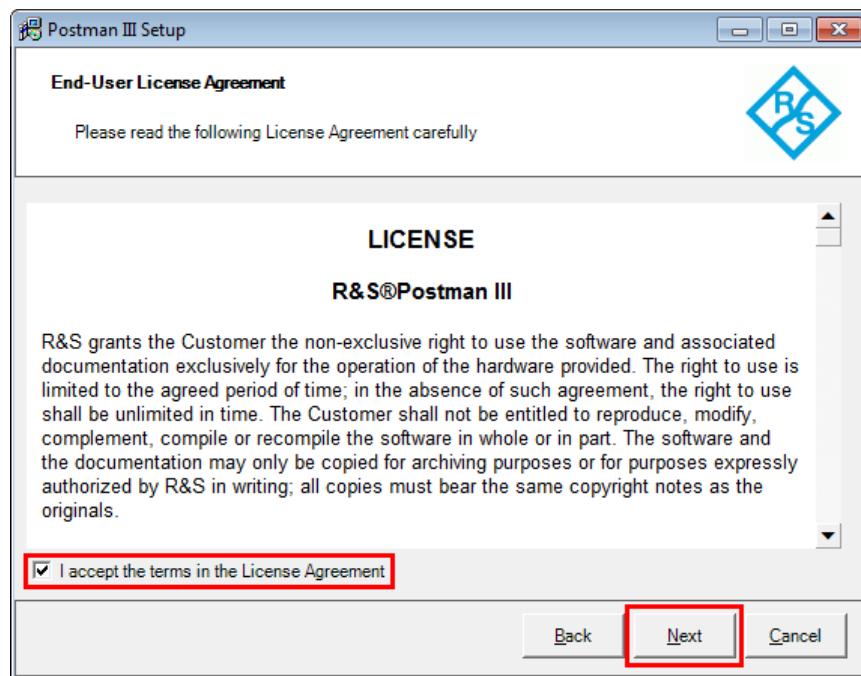


Figure 5-11: License screen

3. Tick the "I accept the terms in the License Agreement" checkbox and click "Next" to continue.

The "Site Configuration" screen is displayed. All required parameters are already filled in.

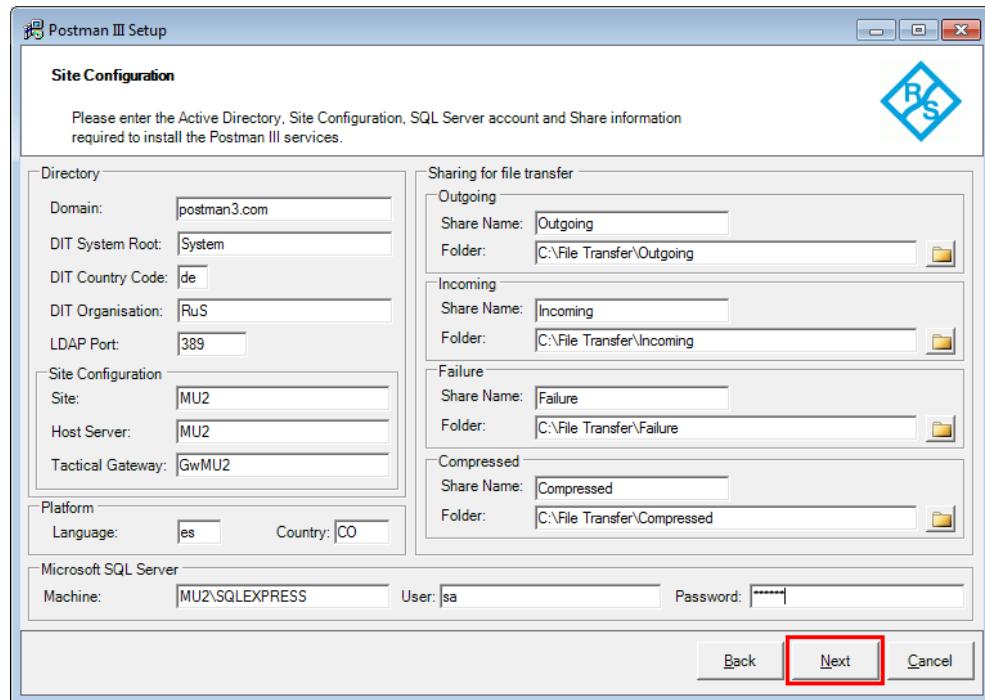


Figure 5-12: Site configuration screen filled in

4. Click "Next" to continue.
The "Install" page opens.

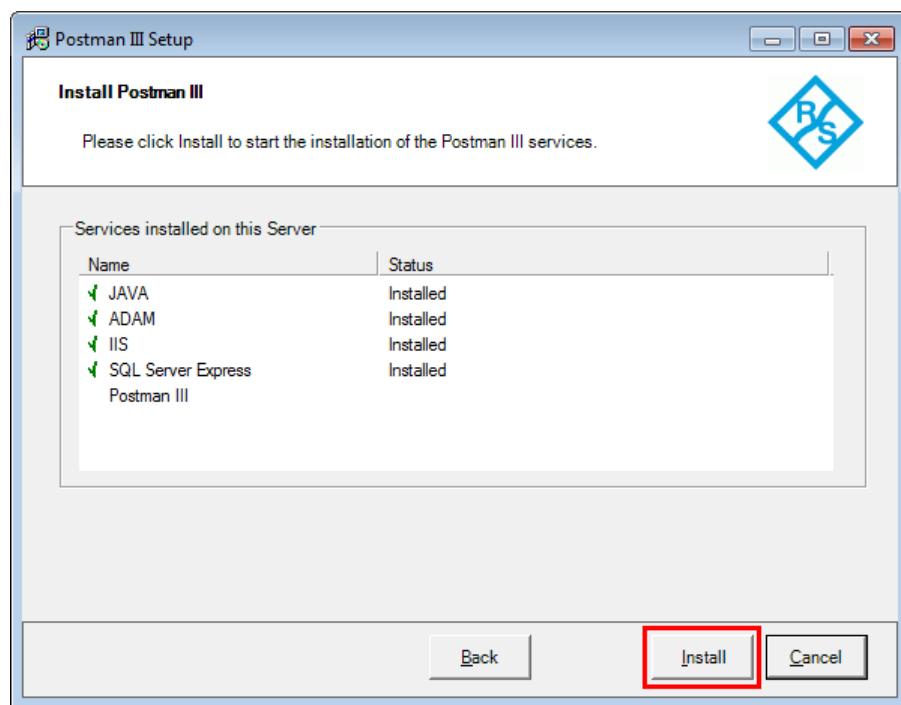


Figure 5-13: Install page

5. Click "Install" to start the installation of the R&S Postman III subsystem.
Note: The installation of the R&S Postman III subsystem takes a few minutes.
Please be patient while the R&S Postman III subsystem is installed and configured.
6. After the R&S Postman III subsystem has been installed, click "Finish" to close the R&S Postman III Setup Wizard and return to the R&S Postman III Setup Assistant.

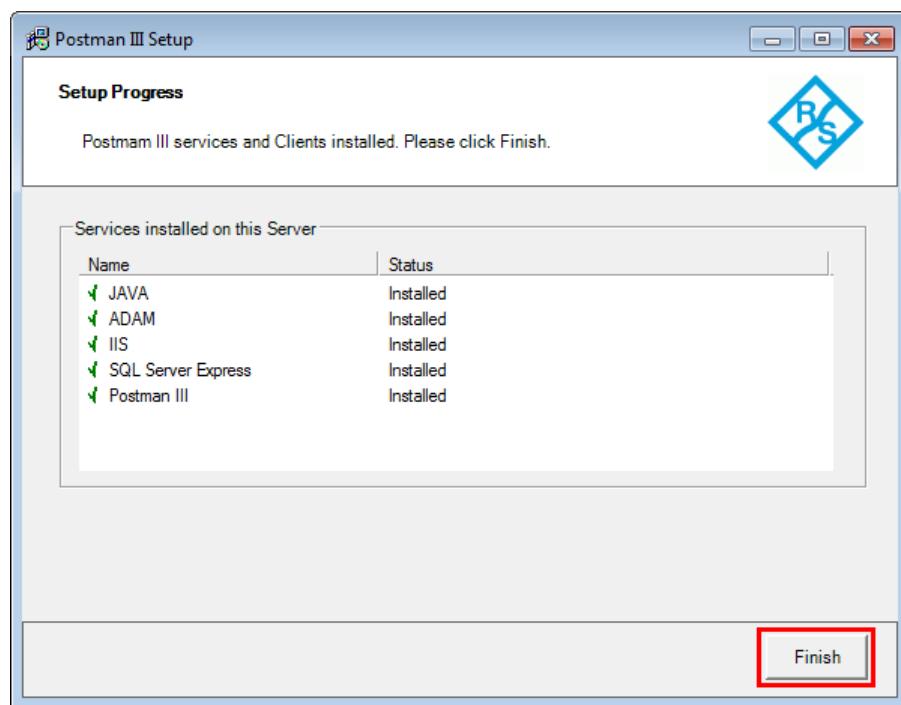


Figure 5-14: Installation complete

5.10.20 R&S Postman III Service Firewall Rules

Installs or updates the Postman III Service Firewall Rules.

5.10.21 R&S Postman III System Services Account

Checks the configuration of the R&S Postman III System Services account.

5.10.22 R&S Postman III Path and Registry

Verifies that the R&S Postman III software has been installed to the correct directory and that the registry settings are correct.

5.10.23 R&S Postman III Configuration

The R&S Postman III Configuration task ensures that the configuration of the R&S Postman III sites and users matches the network plan, which has been configured on the "Planning" page. When a deviation is detected, a warning icon is displayed and commands for adjusting the configuration are offered.

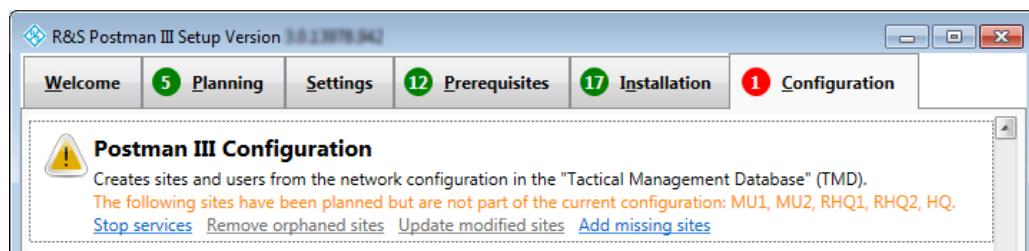


Figure 5-15: R&S Postman III configuration task

1. Click "Stop Services" to stop all services that are dependent on the configuration of sites and users.
2. Click "Remove orphaned sites" (if enabled) to remove all sites that are part of the current configuration but are (no longer) part of the network plan.
This step might be required if R&S Postman III is upgraded or the network configuration is changed.
3. Click "Update modified sites" (if enabled) to update all existing sites of the current configuration with the parameters defined in the network plan.
This step might be required if R&S Postman III is upgraded or the network configuration is changed.
4. Click "Add missing sites" to add all missing sites.

5.10.24 R&S Postman III Config Files

Verifies that the settings in the R&S Postman III configuration files (.config, .jnlp) are consistent with the parameters from the "Settings" page.

5.10.25 R&S Postman III Web Interface

The Postman III Web Interface task provides a set of command links that helps to launch the respective Java GUI applications.

Usually, no action is required for this configuration task.

5.10.26 R&S Postman III Shortcuts

- ▶ Click "Create shortcuts" to create shortcuts ("icons") on the desktop and in the R&S Postman III start menu to launch the following R&S Postman III applications:
 - R&S Postman III Management Console
 - R&S Postman III Tactical Console
 - R&S Postman III Chat Console

5.10.27 R&S Postman III Services

- ▶ Click "Start services" to start the R&S Postman III services.

Note: Startup of GwTact service fails if local site is not configured.

The GwTact service cannot be started if the local site has not been added through the R&S Postman III Management Console. Startup might also fail if the site configuration is erroneous and does not match the parameters entered into the R&S Postman III Setup Wizard.

5.10.28 PLDA Manager Configuration

For navy systems, it is possible to configure the connection to the service that manages the communication lines (a service that provides the Data Application Interface).

5.10.29 SendTo Shortcuts

The SendTo shortcuts task ensures that an entry for each remote R&S Postman III site is added to the Windows Explorer "Send To" context menu. It should be executed only after all remote sites have been entered or imported into the R&S Postman III Management Console.

- ▶ Click "Create "SendTo" shortcuts" to add SendTo shortcuts for each remote site.
This step must be done once per user.

5.10.30 Disabling AutoRun for Removable Drives

The disable AutoRun for removable drives task checks whether the auto-run feature is disabled or enabled. When the auto-run feature is enabled, the operating system might automatically launch programs when media is inserted into a removable drive. This is a security risk, e.g. if the inserted media is infected by a virus. The setting is valid system wide. The setting is not mandatory but recommended.

1. Click "Disable AutoRun" to disable the auto-run feature.
2. Click "Restart Explorer" to apply the new setting immediately without rebooting the system.

5.10.31 SQL Server Databases Recovery Model

The SQL Server Databases Recovery Model task checks whether the databases for R&S Postman III are in "simple recovery model".

- ▶ Click "Adjust recovery models" to set the recovery model to "Simple" for all existing SQL server databases.

5.10.32 Thunderbird Autoconfiguration

The Thunderbird Autoconfiguration creates a file with the parameters for creating an email account in thunderbird (e.g. email domain, email server).

5.10.33 Thunderbird Add-ons

Copies the supplied Thunderbird addons to the Thunderbird installation.

Observe the language setting on the "Settings" page.

5.11 Configuring the Routing

1. Start the R&S Postman III Management Console by double-clicking its icon on the desktop.
2. On the "Routing Info – Edit" page (right-click "Routing Info"), go to the tab "Routing Configuration".
3. Set the routing to the other mobile units to "Direct".
4. Select the name of your "Access Gateway" and the "Tactical Circuit" to be used according to your system environment.
5. Finally click "OK".

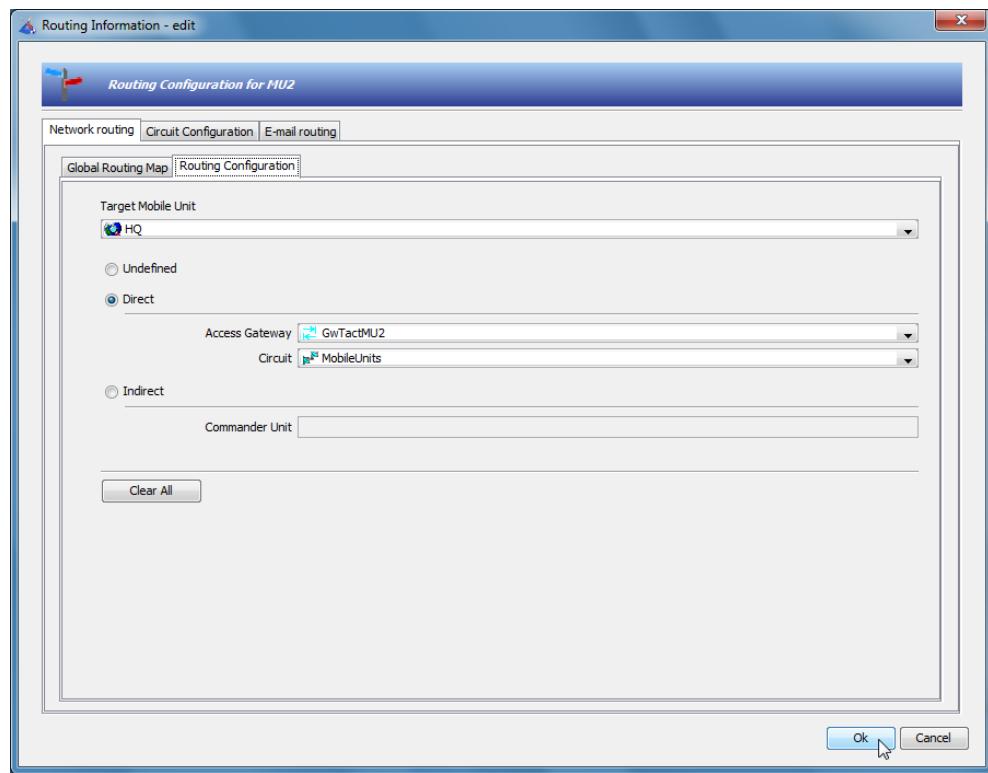


Figure 5-16: Management console - routing configuration

After the window is closed, the updated routing can be found in the table of the "Global Routing Map". This table shows which target can be reached using which circuit.

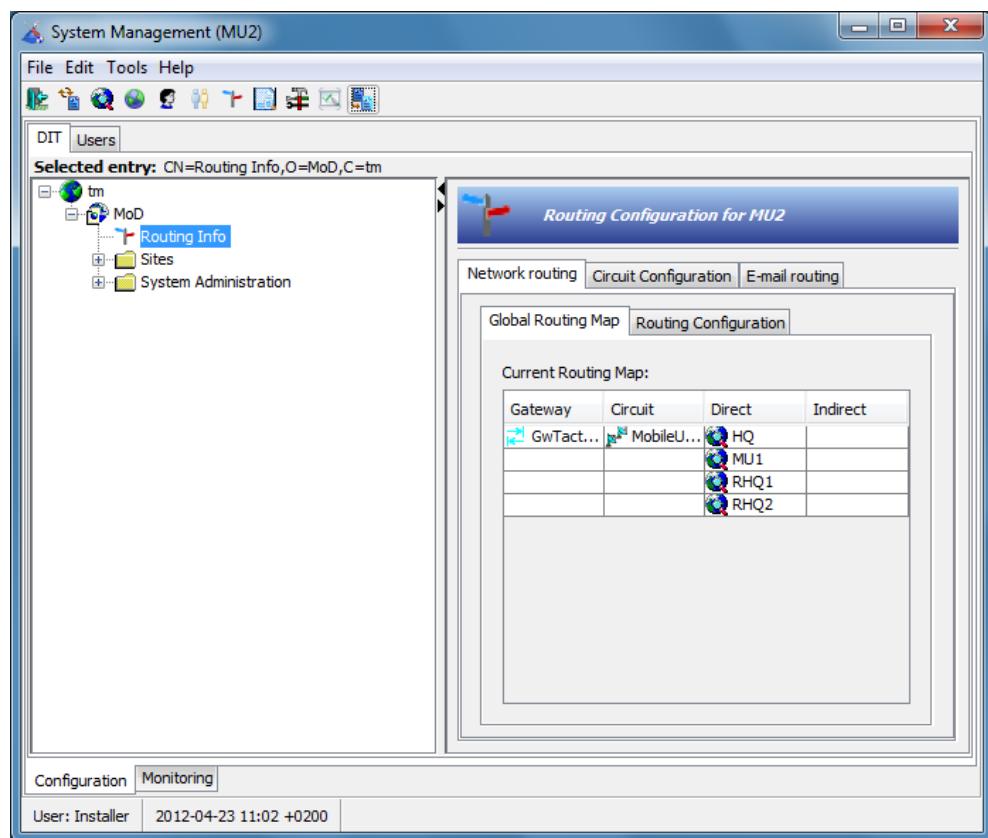


Figure 5-17: Management console - global routing map

6. To update the configuration of the local tactical gateway, click the blinking button in the toolbar of the management console:


5.12 User Configuration

1. Log on to the R&S NS5150 server as user Installer with the password assigned in the account.
2. Open Internet Explorer and browse to the NS5150 Web Interface at the URL
<http://localhost:8080/simcos2>.
3. Open the R&S Postman III user manager "UMAN" and click the "Add..." button.

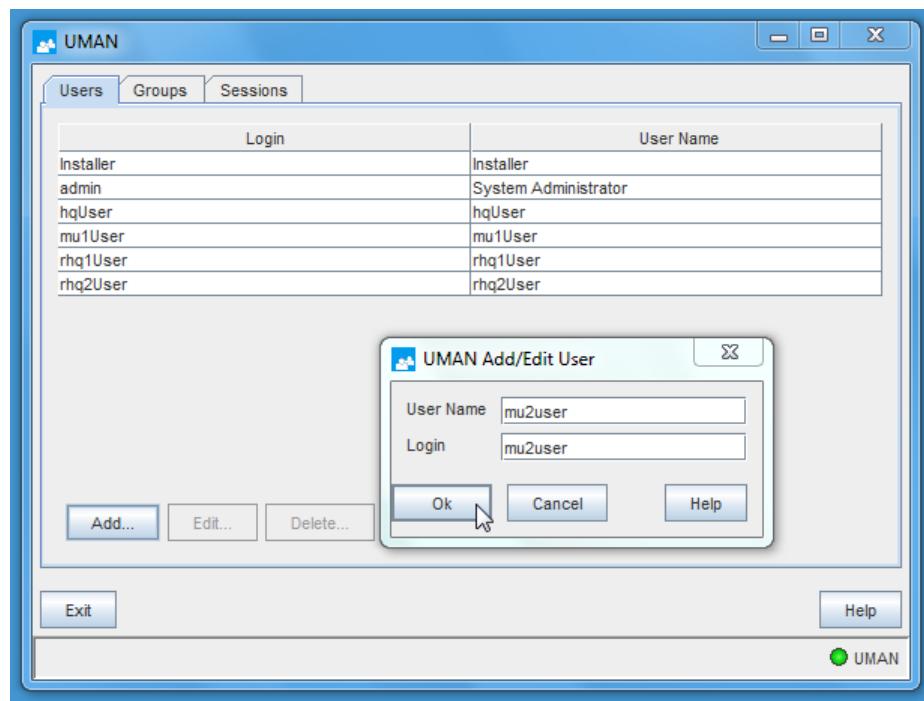


Figure 5-18: UMAN - adding a user

4. Enter the values for "User Name" and "Login". Confirm with "Ok".
In this example, both are the same to keep it simple.

Tip: Additional Users

Repeat this step for all users who are planned to work on this server and via the connected workstations later.

5. Select the "Groups" tab and select the *Operators* group.
6. Click "Edit" to open the UMAN "Add/Edit Group" dialog.
7. Select the "Members" tab.
8. Click "Add ..." to open the UMAN "Add/Edit Group" > "Add Members" dialog.
9. Select the name of the new user account and click "Ok" to add the user to the *Operators* group.

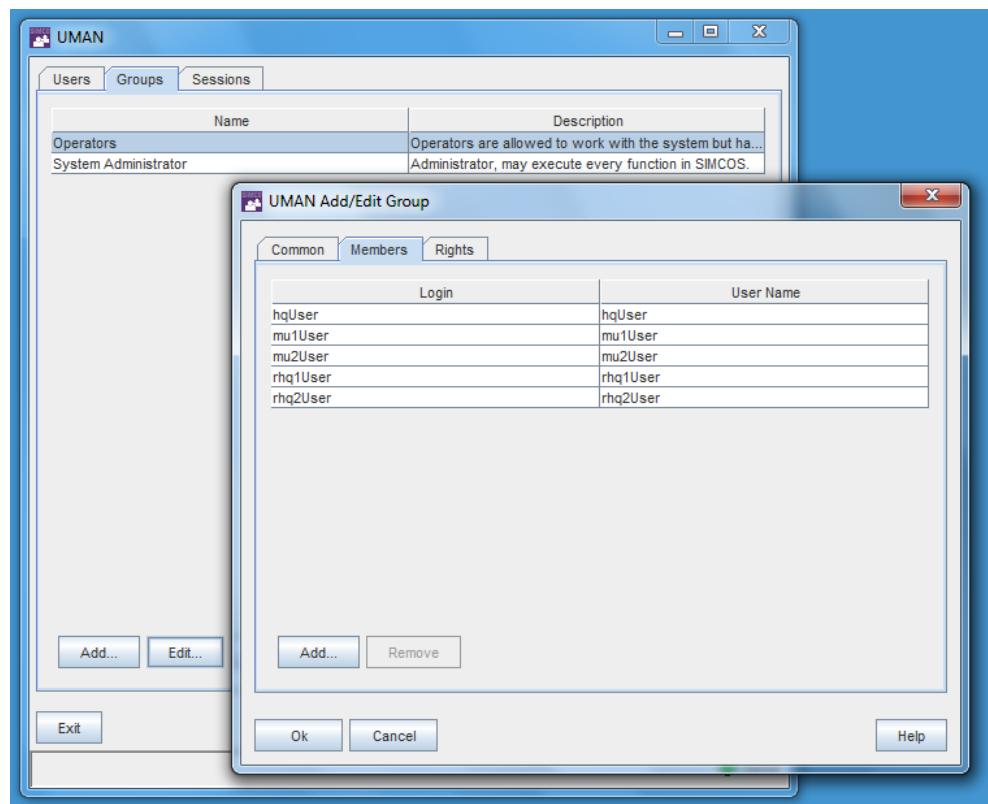


Figure 5-19: UMAN - add/edit group: members

10. Close UMAN.

5.13 Detecting Radios and Updating Database

Before the system is able to work with the radios, Device Discovery must detect and write the radios into the DEVCON database.



Preconditions for radio detection

- A radio firmware is already programmed that supports IPoA.
- Correct radio names and IP addresses are set according to the system environment sheet.
- The radios must be loaded with valid missions using R&S RNMS3000 and/or a fill gun.

1. Log on to the server as user *Installer*.
2. Open R&S Device Discovery by clicking the desktop icon:



3. If VHF/UHF radios of the type Xx4400x are used in the system, the IP address range must be entered first. Open the settings window by clicking the "Settings" button in the upper right corner (framed red in the screenshot).

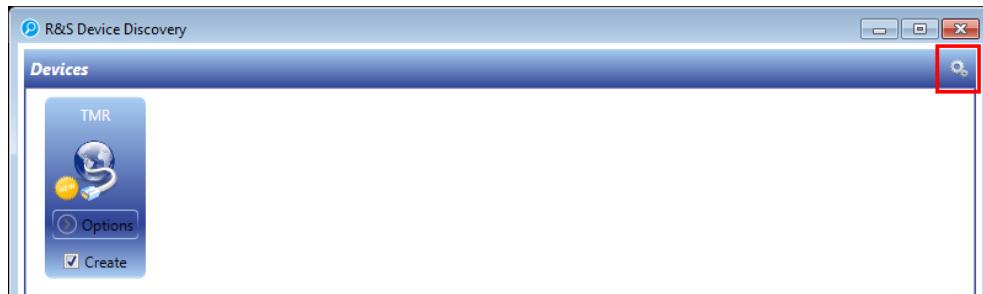


Figure 5-20: Device discovery settings button

Note: TMR, R&S M3TR and R&S XK4100 radios should be detected with the default settings of this tool.

4. In the settings window, enter the <first IP address>-<last IP address> (separated by a hyphen) of the R&S 4400 radios at PortSweepAddresses and click "Save". You can also enter distinct IP addresses (separated by a comma).

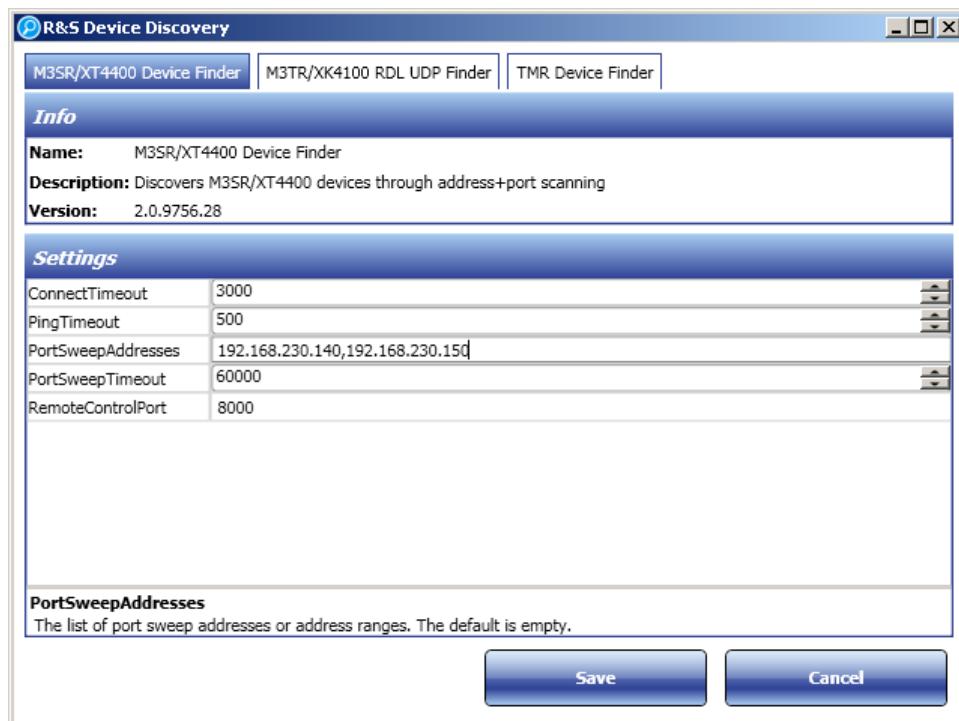


Figure 5-21: Device discovery - settings window

5. Back in the main window of Device Discovery, click the "Discover" button.
6. When all devices are listed here, click "Update DEVCON".

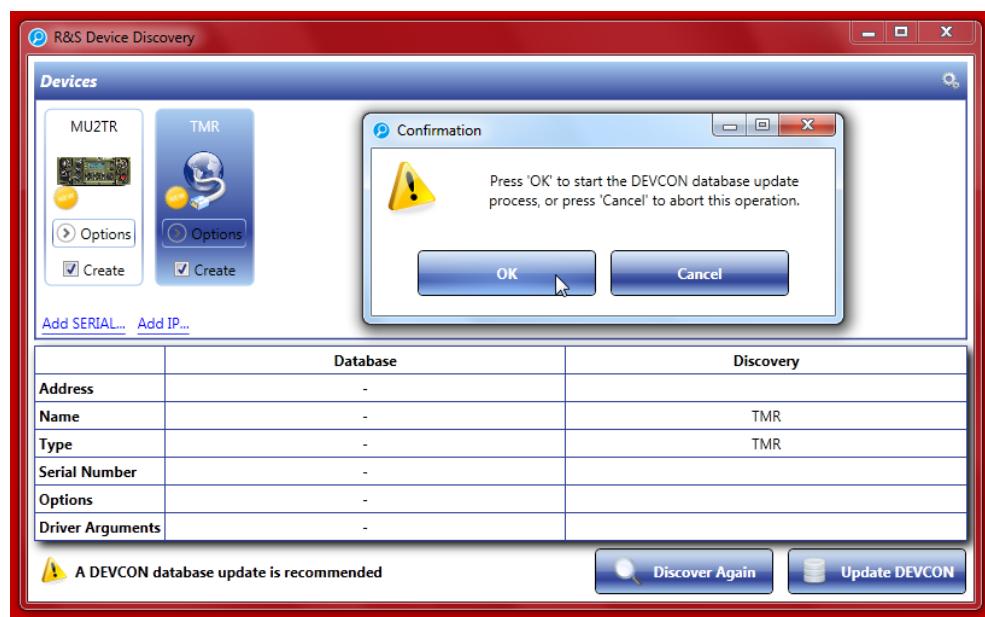


Figure 5-22: Device discovery - updating DEVCON

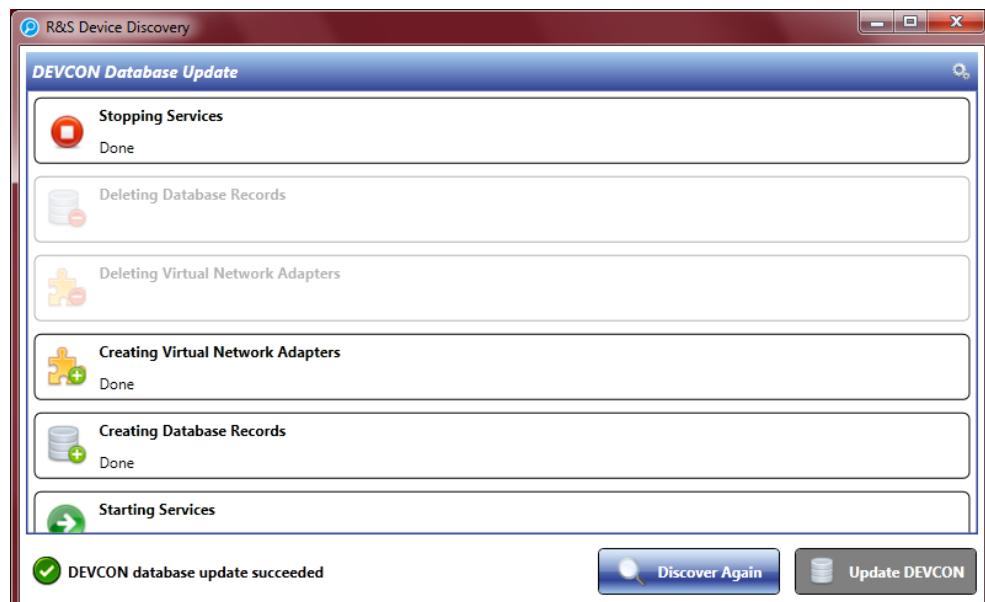


Figure 5-23: Device discovery - database update process

In the following screenshot, the database is already up-to-date. Accordingly, the "Update DEVCON" button is grayed out and a green check symbol says: "No DEVCON database update is required".



Figure 5-24: Device discovery - devices overview

7. Close the tool after successful update.

5.14 Email Client Configuration

5.14.1 Setting Up the Email Account

1. Launch the Mozilla Thunderbird application.
2. Enter the values from the "Settings" tab in the R&S Postman III Setup Assistant. The Email address has to be built from the settings "User name" (property Pm3UserName) and "Email domain name" (property Pm3EmailDomainName), e.g. OpMu2@pm-mu2.com.

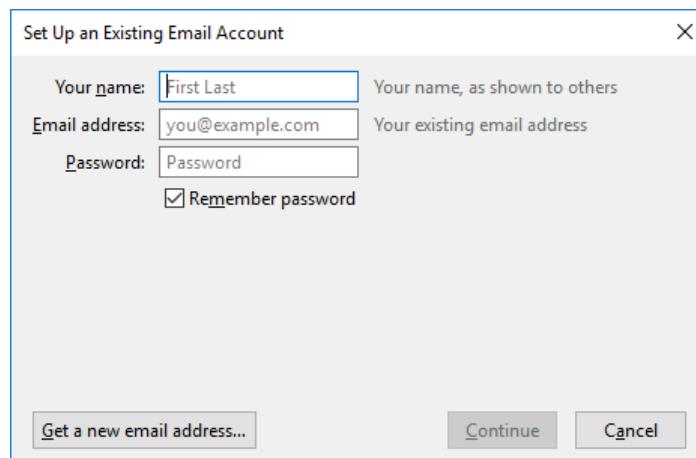


Figure 5-25: Thunderbird setup (1)

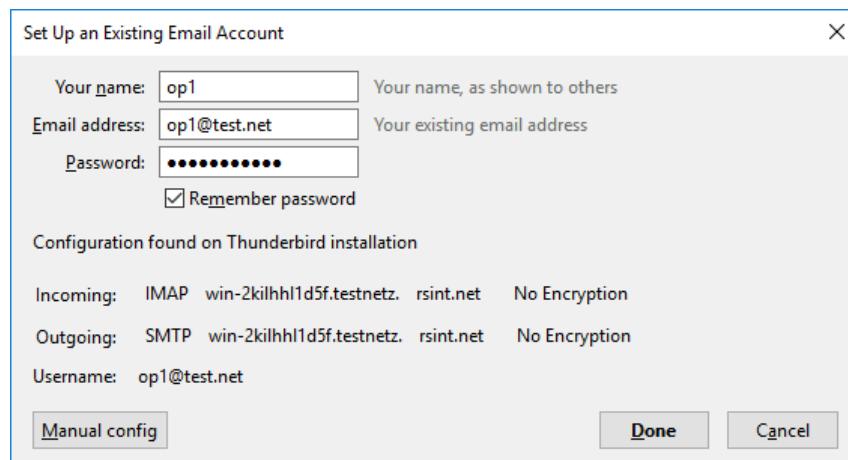


Figure 5-26: Thunderbird setup (2)

3. In the warning window, click "Done" to finish the configuration.

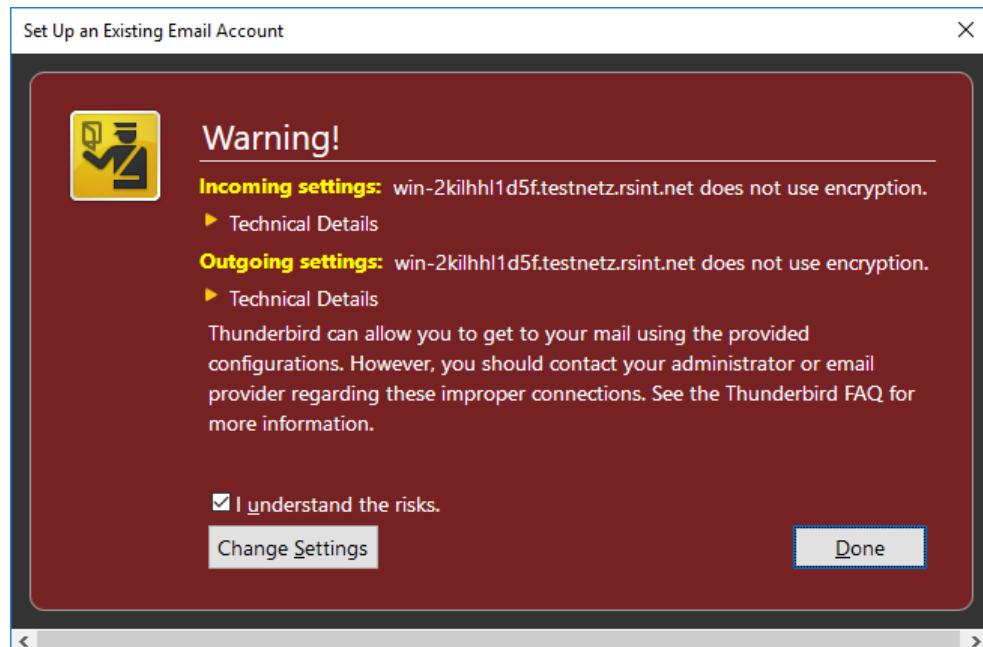


Figure 5-27: Thunderbird setup (3)

5.14.2 Changing the Language

1. Launch the Mozilla Thunderbird application.
2. Click \equiv > "Options".

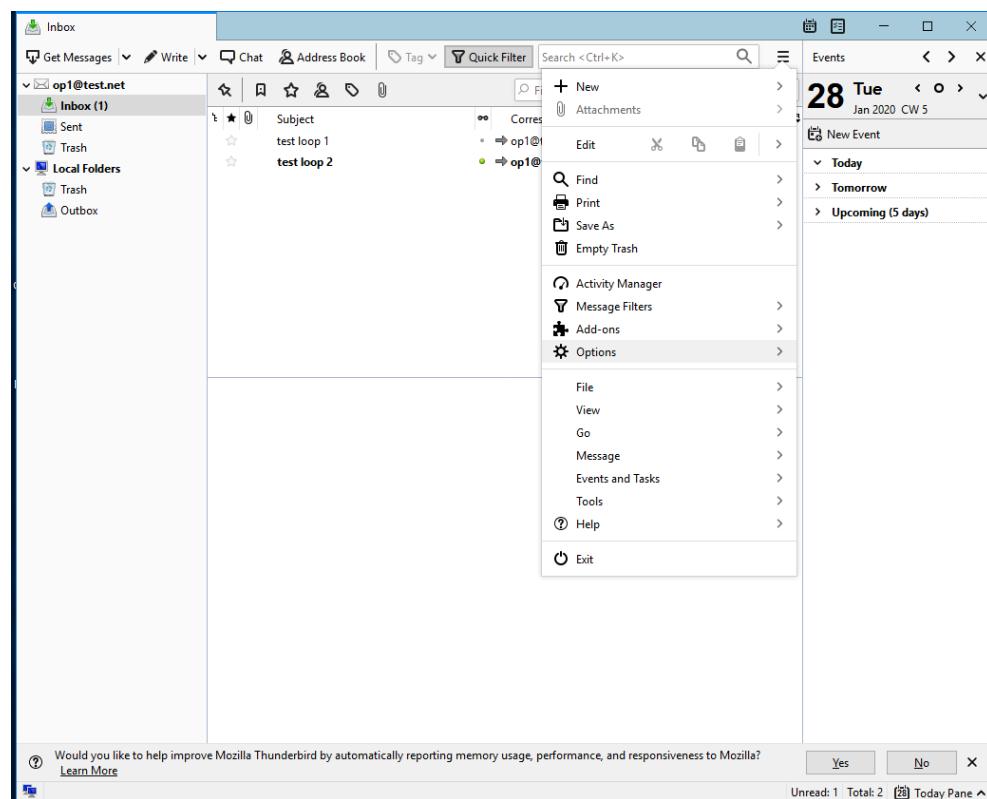


Figure 5-28: Language setting (1)

3. In the section "Language", you can change the language.

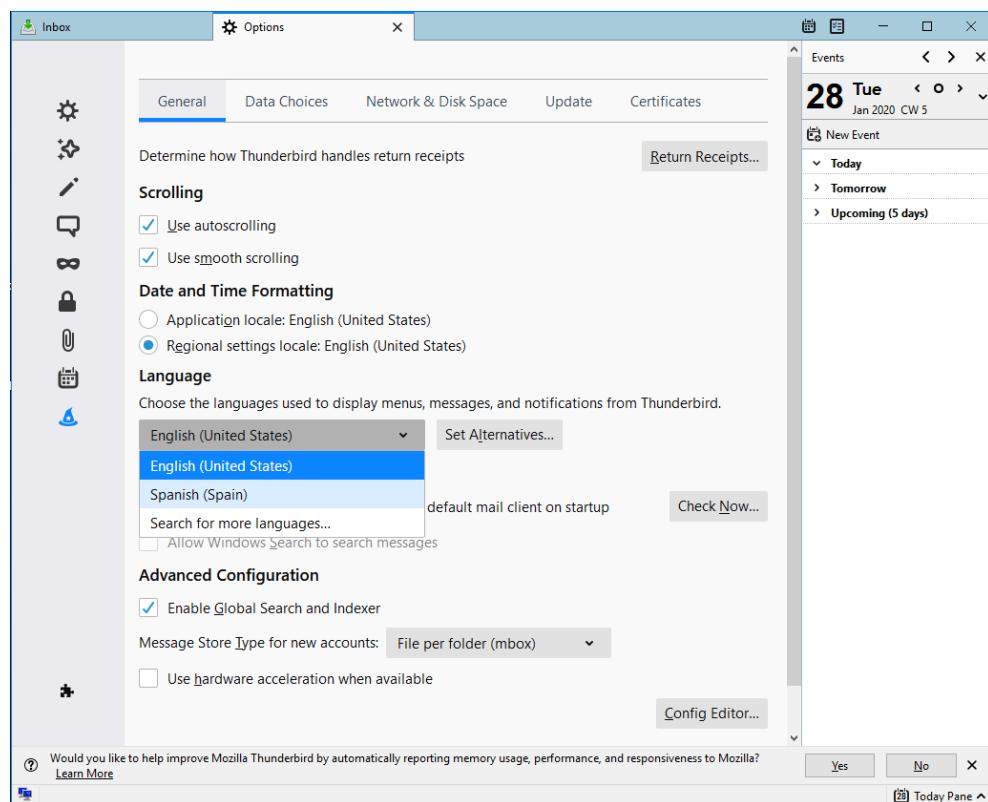


Figure 5-29: Language setting (2)

6 Installing R&S Postman III for R&S MMHS

6.1 Pre-requisites

6.1.1 Other Rohde & Schwarz Products

For the installation of R&S Postman III with the integration type "Postman III router for MMHS", the product R&S Device Control (SIMCOS II was renamed to Device Control) must be installed before the R&S Postman III installation process.

6.1.2 User Configuration

The R&S Postman III installation process requires that you create a local Windows user account, which must be a member of the local Windows *Administrators* group.

This user must be used for the installation process.

6.2 Installation

6.2.1 Launching the R&S Postman III Setup Assistant

Launch the R&S Postman III Setup Assistant by executing the `setup.exe` file in the installation folder.



Implicit .NET framework installation

The R&S Postman III Setup Assistant depends on the Microsoft .NET Framework Version 4.0 (or later). If this version is not already installed, it is automatically installed when the setup assistant is launched for the first time.

6.2.2 Selecting the Installation Type and Options

After the R&S Postman III Setup Assistant has been launched, the "Welcome" page is shown.

1. Select the following:
 - Integration type: Postman III for MMHS
 - Installation type: Server only
 - Additional options: RS-IRP (if this option is valid in the target environment)

2. Switch to the "Settings" tab to continue.

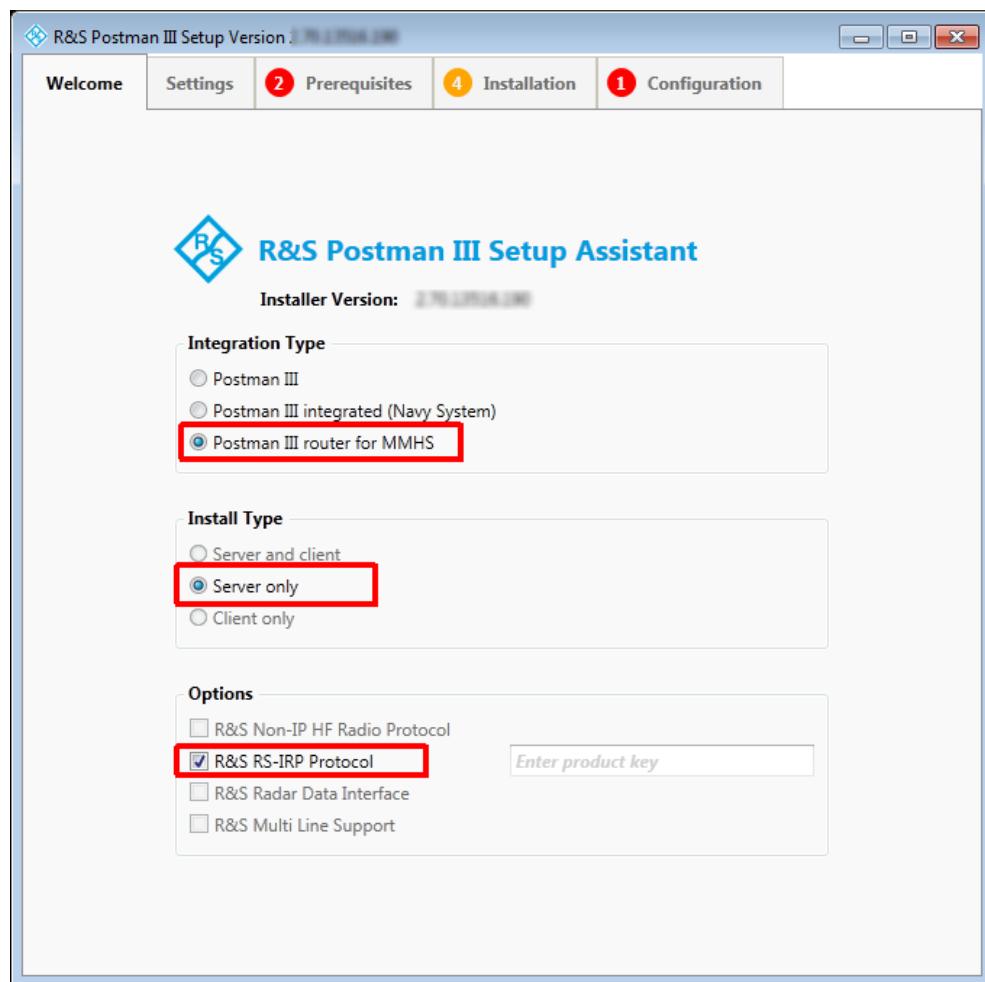


Figure 6-1: Welcome options

6.2.3 Checking the Settings Tab

When the options from the "Welcome" screen are selected, the "Settings" tab must be opened. For the integration type "Postman III router for MMHS", only three configuration items are of importance. The "Settings" tab shows the current state of the machine. Here you can make sure that the settings are required once.

Note that the settings in this screenshot are an example.

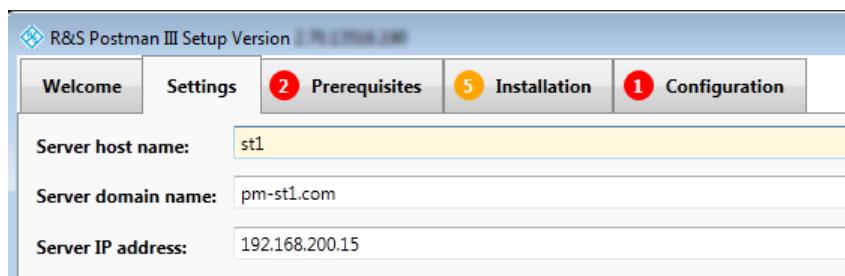


Figure 6-2: Settings for MMHS



Installation prerequisites

R&S TMR relies on the correct version of the WinPcap library installed. Often this library is already installed in a wrong version, for example after the usage of the Wireshark application.

Before continuing, ensure the following:

- No Wireshark application opens (check also open remote desktop sessions)
- WinPcap is not installed – make sure to uninstall it if applicable

Close and restart `setup.exe` afterwards.

6.2.4 Prerequisites Tab

When the "Settings" tab displays all required values from the current machine, switch to the "Prerequisites" tab. The tab may display settings that do not allow operation of TMR. The settings can be adjusted by clicking the appropriate buttons.

The firewall can be disabled by clicking "Disable firewall".

The weak host routing necessary for TMR can be enabled by clicking "Enable weak host send".

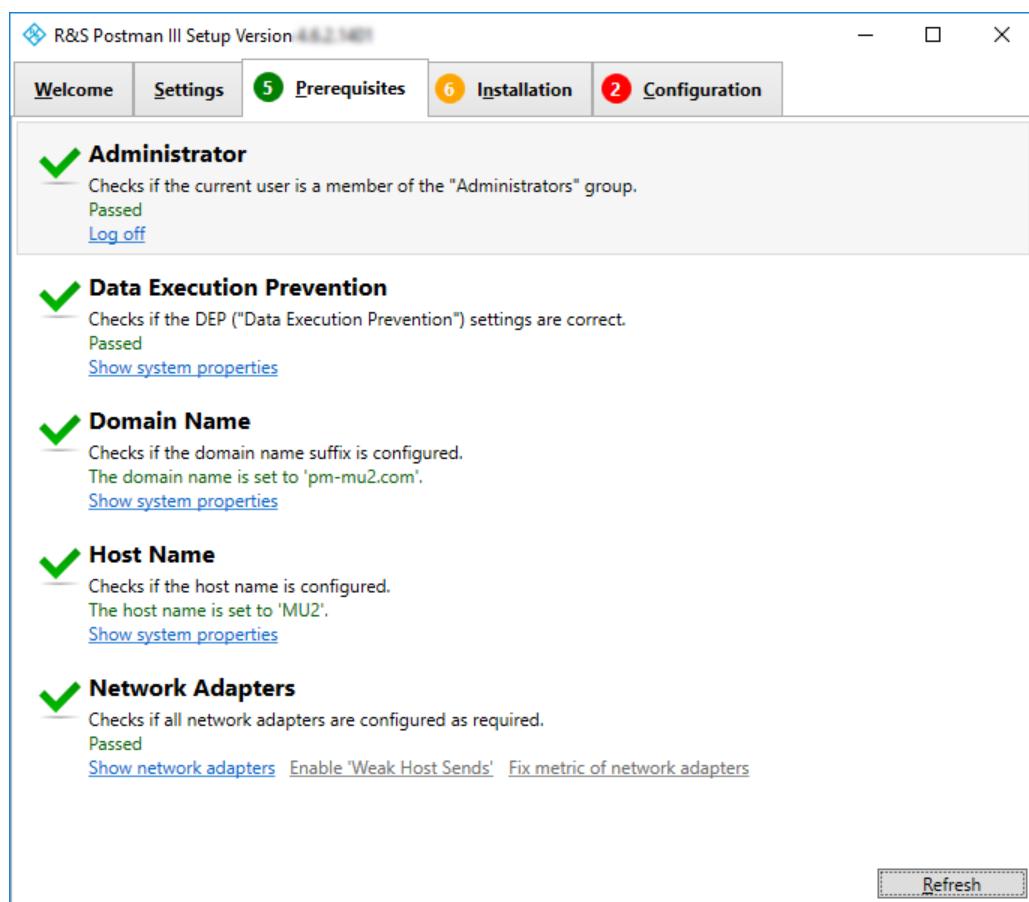


Figure 6-3: Prerequisites for MMHS (1)

The result should look like this:

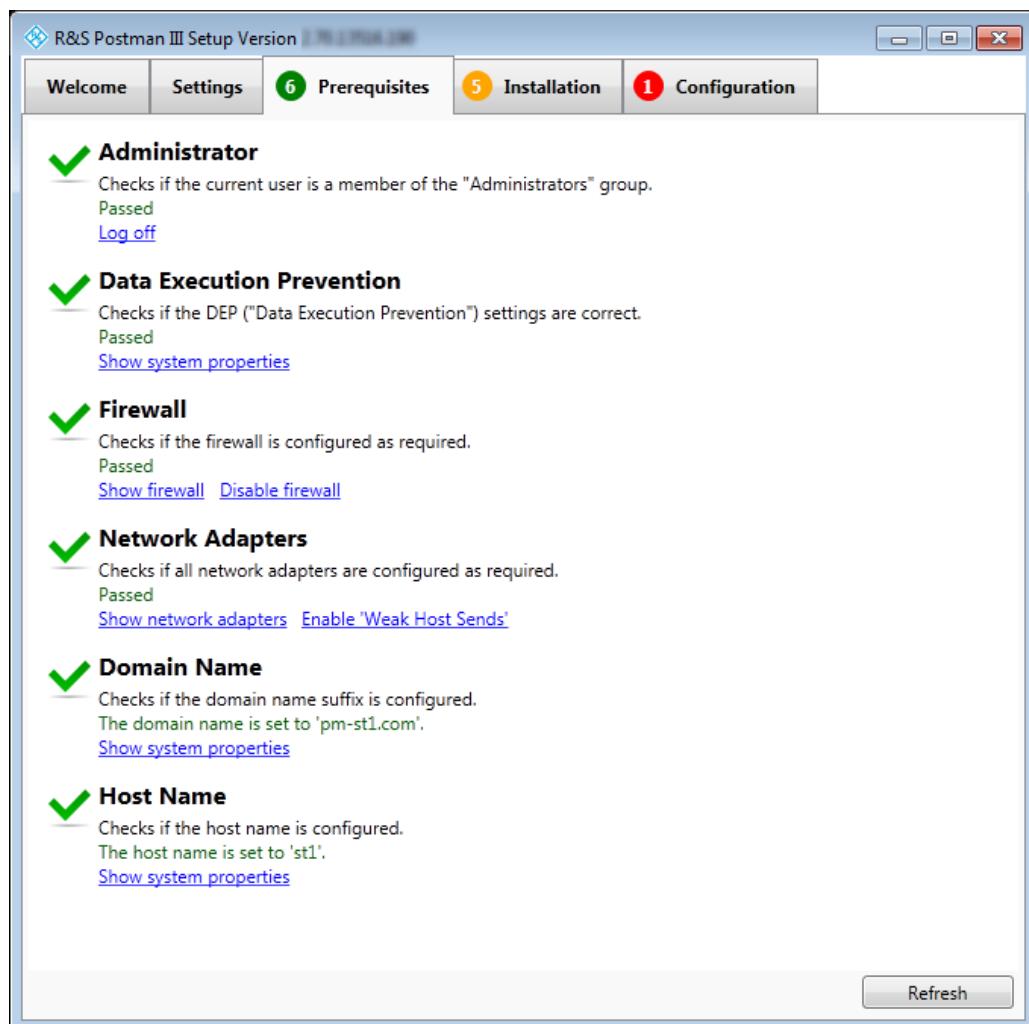


Figure 6-4: Prerequisites for MMHS (2)

6.2.5 Installation Tab

The necessary packets for the chosen integration type are displayed here. For the integration type "Postman III router for MMHS", the following packets must be installed:

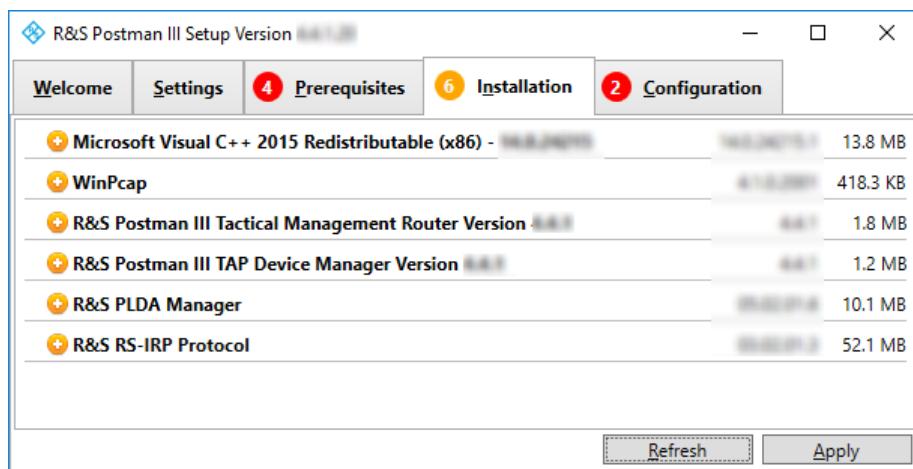


Figure 6-5: Setup assistant MMHS installation tab

- ▶ Click "Apply" to start the installation.

6.2.6 Configuration Tab

After all required software packages have been installed, the software packages must be configured.

1. Click the "Configuration" tab to display the configuration tasks.
2. Complete each task until it shows a green checkmark.

Command links at the bottom of each task provide assistance in completing each task.

The following task is shown:

- [Chapter 5.10.4, "TMR Source Address", on page 41](#)
- [Chapter 5.10.28, "PLDA Manager Configuration", on page 49](#)
- [Chapter 5.10.30, "Disabling AutoRun for Removable Drives", on page 49](#)

6.3 Post Installation Steps

6.3.1 Adaptation of PLDA Manager Service

If R&S Postman III with the integration type 'Postman III router for MMHS' was installed on an R&S MMHS member server then the PLDA Manager Service has to be manually adapted to run under the MMHS account "MMHHSservices".



If the PLDA Manager Service is running as localSystem, it does not have sufficient privileges to access the MMHS AD-LDS directory.

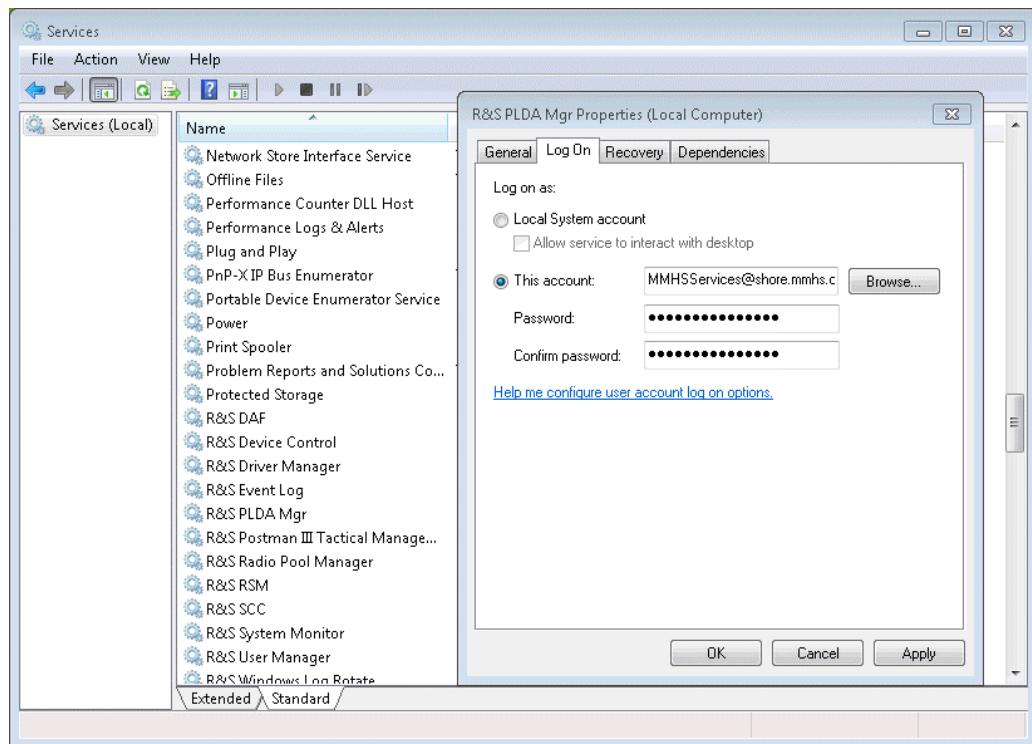


Figure 6-6: Adaptation of PLDA manager service

6.3.2 Installation of TAP Devices

During the installation of R&S TMR, a shortcut was created on the desktop.

1. Start the R&S TAP Device Manager via this shortcut.
A window like the one shown below should appear.

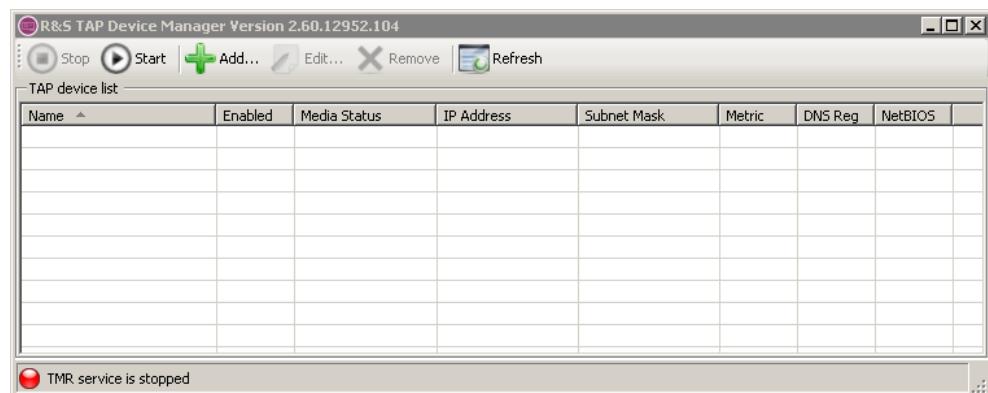


Figure 6-7: Tap device

Depending on already installed TAP devices, the TAP device list shown by the R&S TAP Device Manager might be empty or not.

The TAP device list is shown with a gray background and the R&S TMR service is indicated as running. In this state, it is only possible to monitor the current setup, no changes are allowed.

2. To set the R&S TAP Device Manager into the edit mode, click the "Stop" button. This stops the TMR service and allows you to make changes.
3. Remove all existing (if any) entries via the "Remove" button.
4. Click "Add" to create the first TAP device.
5. Enter the name "TAP-TMR", set the checkmark for "Bind TCP/IP" and assign the IP address as stated in your system information manual.
6. Make sure that the other settings are configured as shown in the figure below.

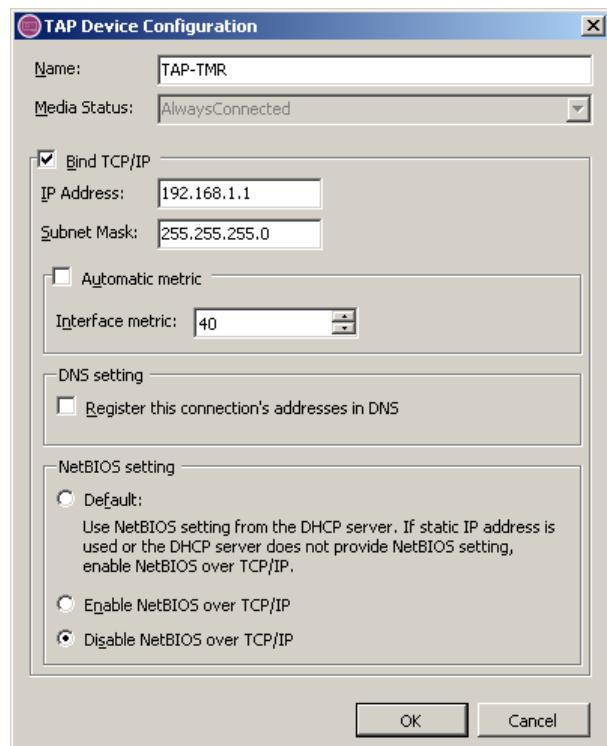


Figure 6-8: Create tab device

7. Click "OK" to confirm.

After pressing "OK", a security warning appears that Windows cannot verify the publisher of the driver software.

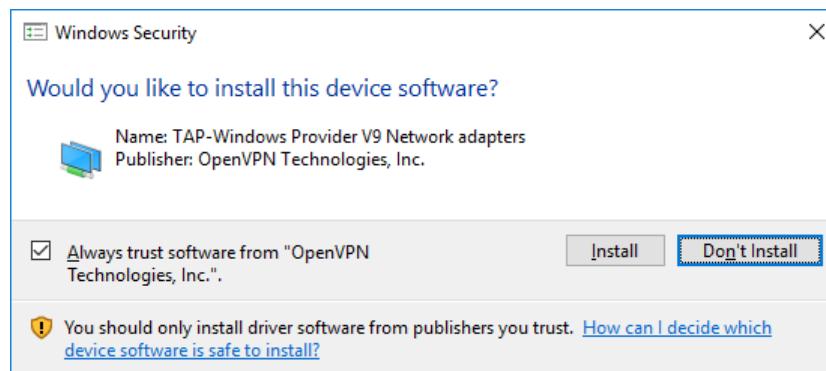


Figure 6-9: Install tab device

8. Click "Install" to install the driver.
9. After the TAP-TMR has been created, click "Add" again to add the first TAP device for a protocol instance. The naming convention is explained in detail in step 12.
10. For the first RSIRP device, assign the name "TAP-RSIRP-1" without assigning any IP address.
11. Click "OK" to confirm.

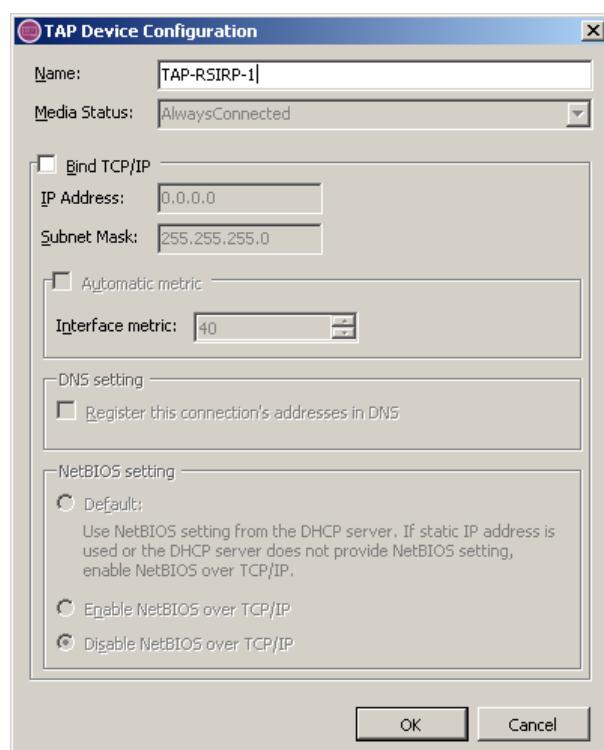


Figure 6-10: TAP device for a protocol instance

12. Repeat this step to create the following additional TAP devices:
 - TAP-RSIRP-2
 - TAP-S5066Device1

- TAP-S5066Device2
- TAP-S5066Device3

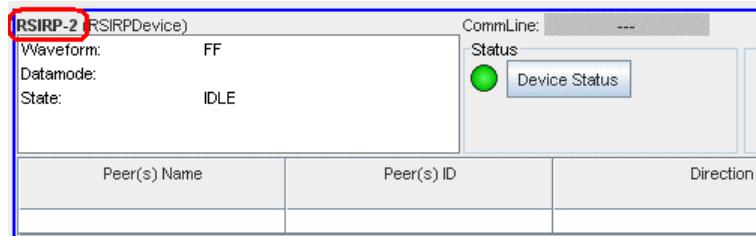


Figure 6-11: Protocol instance name in DEVCON GUI

After creation of all TAP devices, the R&S TAP Device Manager should look like shown below:

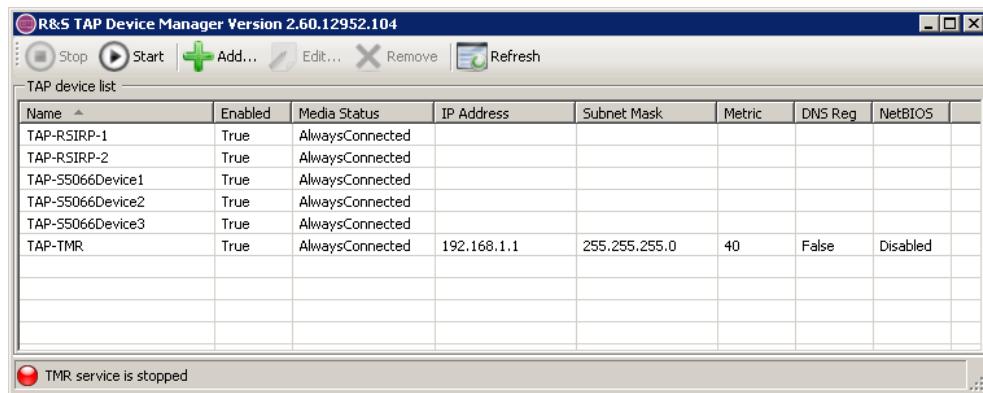


Figure 6-12: Complete list of all TAP devices

Note: Naming convention for creating TAP devices

The R&S TMR service recognizes the TAP devices by their name.

Therefore, the first created TAP device must be named "TAP-TMR" and this device is the only TAP device that has an IP address.

The other TAP devices must be named according to names of all the available protocol instances. These instances can be found in the DEVCON GUI or the R&S Device Control database. The naming convention is "TAP-" plus protocol instance name. For the protocol instance shown in the screenshot (RSIRP-2), the correct name of the TAP device to be created is "TAP-RSIRP-2".

13. Click "Start" to activate the TMR service again.

The TMR is running (indicated by green status LED) and the background of the TAP device list changes its color to gray.

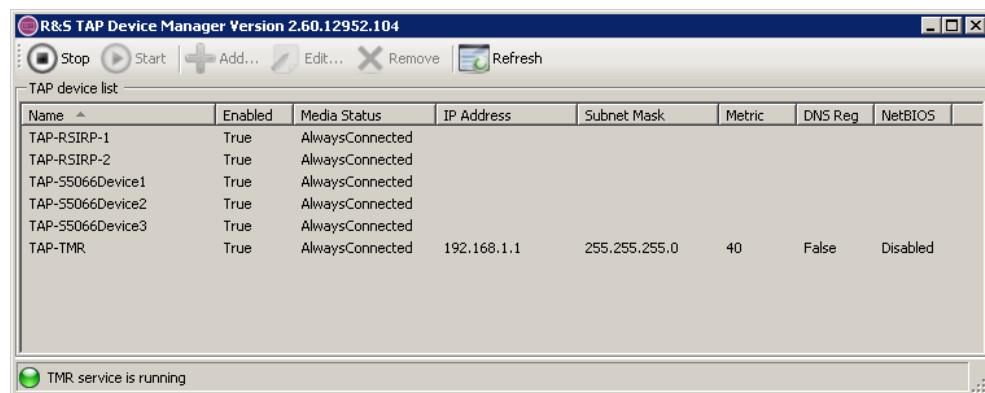


Figure 6-13: Configuration complete and active

The R&S Tactical Management Router is now configured and ready for use.

6.3.3 Activating Flexible Ack Routing (FAR)

After the TMR installation, the FAR must be activated.

- ▶ Open the TMRGUI (C:\%programfiles%\Rohde-Schwarz\PostmanIII\TMR\TmrGui.exe) and make sure that the "FAR" button is activated.



Figure 6-14: TMR management GUI

With a gray background as shown in Figure 6-14, the button is activated.

Relationship between TMR service, TMR driver and R&S Device Control services

The R&S TMR consists of a TMR service that is set to automatic during installation and that is always running. Also, the R&S TMR installs a TMR driver, which is installed into the R&S Device Control directory (SIMCOS II was renamed to Device Control). It is started and stopped along with the R&S Device Control services.

Thus, restarting the R&S Device Control services only triggers a restart of the TMR driver. The TMR service must be restarted manually via the Microsoft Windows services console, in case this step should ever be necessary.

7 Updating R&S Postman III Installations

Updating from older version to 04.06

R&S Postman III beginning with versions later than 04.00 requires new operating systems Windows 10 and Microsoft Server 2016 instead of Windows 7 and Microsoft Server 2008 R2.

Therefore, a reinstallation of the operating systems and R&S Postman III is required to upgrade.

8 Appendix

8.1 Integrating External Data Transfer Services (DTS)

R&S Postman III supports the following types of external DTS ("Data Transfer Service") software:

- S5066
- RSIRP

8.2 Installing DTS Software

To use one of the DTS software packages, the respective option must be selected during installation as described in chapter [Chapter 5.4, "Selecting the Installation Type and Options", on page 27](#).

8.3 Creating DTS Instances

To use the installed DTS software packages, one or more instances of each DTS type must be configured using the R&S Device Discovery utility. An instance is also called a "virtual device".

1. Log in as user *Installer* and start the R&S Device Discovery utility.
2. Click the "Add S5066Device..." or "Add RSIRPDevice..." command to add a DTS instance (virtual device) to the devices panel.

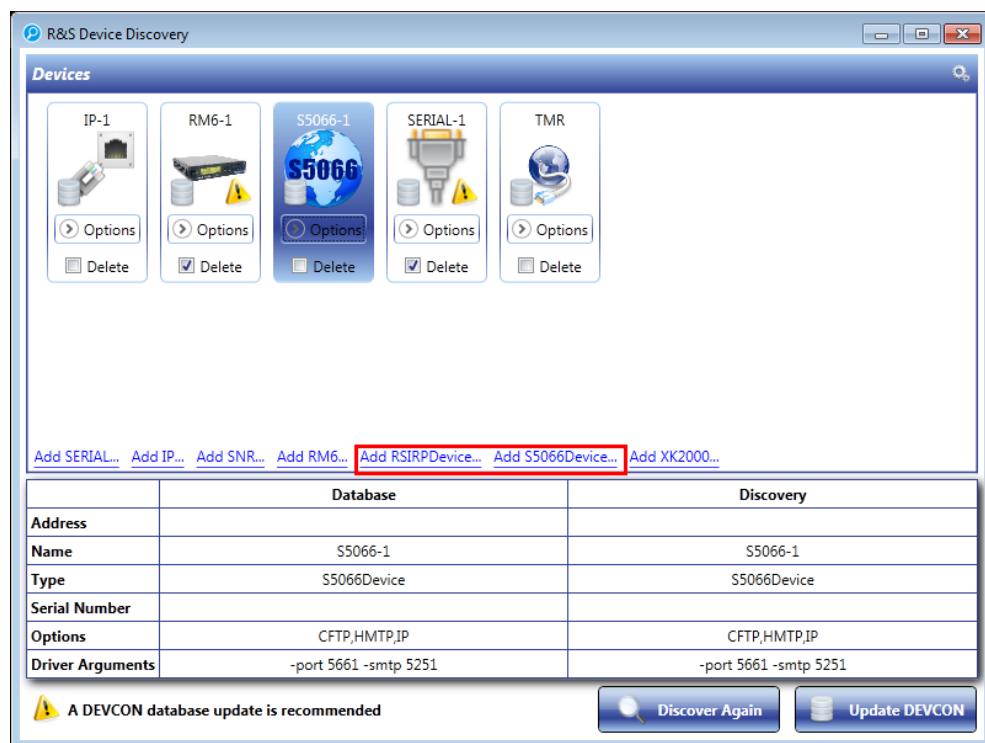


Figure 8-1: Add an RSIRP or S5066 virtual device

3. Edit the virtual device name by clicking the device name.

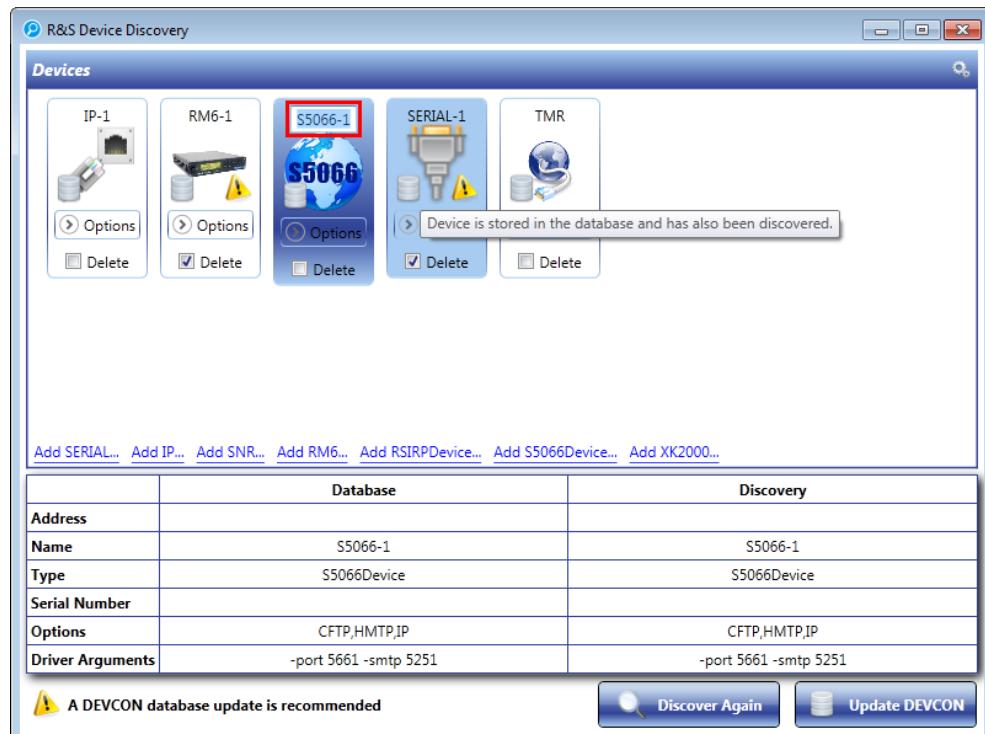


Figure 8-2: Edit the device name

- Click "Options" to expand the options panel and verify or adjust the virtual device options.

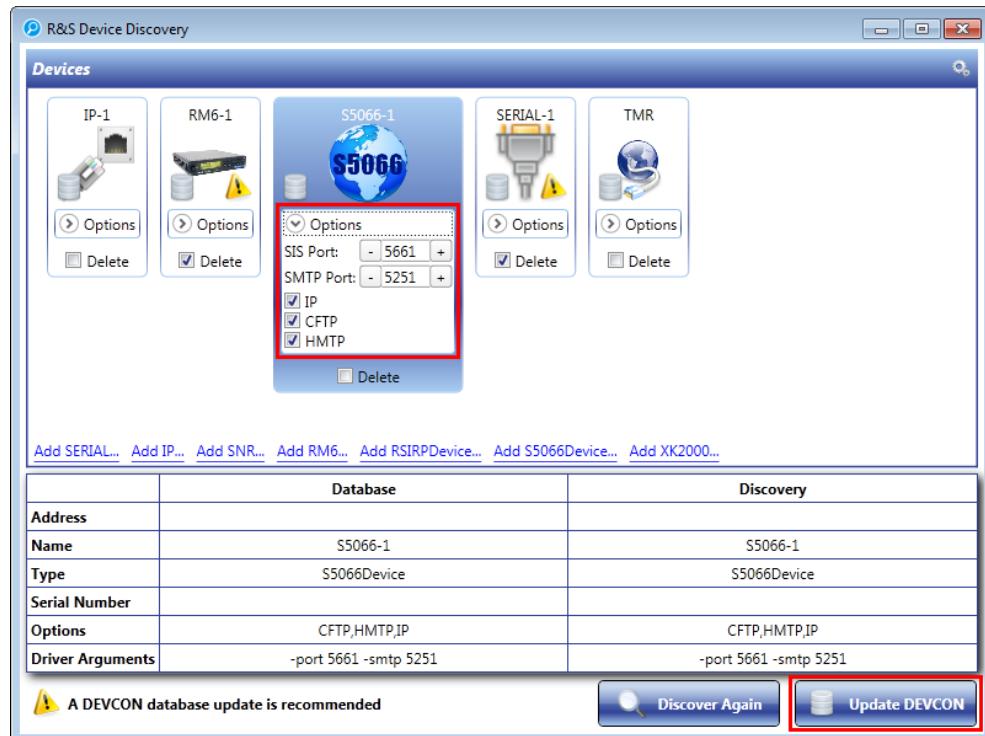


Figure 8-3: Adjust virtual device options

- Finally click "Update DEVCON" to add the virtual device to the system and restart all dependent services.

8.4 Adding a New User

To add a new R&S Postman III user to a site, proceed as follows:

- Create a Windows user account for the new user both on the server and one or more clients.
- Add the Windows user account to the *PMIII-User* group on the server.
- Create a UMAN user account using the user's name as the login name using the R&S Postman III Extended User Manager (UMAN).
- Add the UMAN user account to the UMAN *Operators* group.
- Create a Postman III user account using the R&S Postman III Management Console. This will implicitly create a mail account for the new user.
- Configure the mail client (Mozilla Thunderbird) on each client PC.

These steps are described in more detail in the following sections.

8.4.1 Planning User Properties

The following parameters must be defined for each R&S Postman III user of each R&S Postman III site.

Table 8-1: User Properties

Property	Example	Description	Remarks
User name	OpMU2	The name of the user	Used for: <ul style="list-style-type: none">• Windows user account• R&S Postman III user account• Mail account• UMAN account
Password	123456	The user's password	Do not use the default value.
Mail account	OpMU2	The user's mail account name	The mail account name should be identical to the user name.
Management privileges	All	The R&S Postman III management privileges	



User name limitation

Only the underscore "_" is allowed as special character in the user name later in R&S NS5150 UMAN. It is not allowed to create Windows and R&S NS5150 users with special characters like "-" that cannot be created in R&S NS5150 UMAN later on.

8.4.2 Creating the Windows User Account

Perform the following steps on both an R&S Postman III server and each R&S Postman III client that should be accessible to the new user.

Valid for systems without Windows Domain-Controller.



Use the same password on all computers.

1. Log on to Windows using the *Installer* account.
2. Click "Start" > "Windows Administrative Tools" > "Computer Management". In the tree, navigate to the "Computer Management" > "System Tools" > *Local Users and Groups* manager. Alternatively, start `lusrmgr.msc`.
3. Right-click "Users" and select "New User..." to open the "New User" dialog.
4. Enter the user name.

5. Enter the password twice.
6. Untick the "User must change password at next logon" checkbox.
7. Check the "Password never expires" checkbox.
8. Click "Create" to create the new user.
9. Click "Close" to close the "New User" dialog.

With the Windows Domain-Controller, the account is created in the Windows domain.

The following steps are required only on the server:

1. Right-click the newly created user and select "Properties" to open the "User Properties" dialog.
2. Select the "Member Of" tab.
3. Click the "Add..." button to open the "Select Groups" dialog.
4. Click "Advanced" and click "Find Now" to list all Windows groups.
5. Select the *PMIII-User* group and click "OK" three times to close all dialogs.

8.4.3 Creating the UMAN User Account

The following steps must be performed only on an R&S Postman III server:

1. Log on to Windows using the *Installer* account.
2. Press [Win+R] to open the "Run" dialog.
3. Enter `http://localhost:8080/simcos2` to launch the Postman Extended Web Interface.
4. Click the "UMAN" icon to launch the Postman Extended User Manager.
5. Click "Add..." on the "Users" tab to open the UMAN "Add/Edit User" dialog.
6. Enter the new user name into the "User Name" and "Login" fields.
7. Click "Ok" to add the UMAN user account and close the dialog.
8. Select the "Groups" tab.
9. Select the "Operators" group.
10. Click "Edit..." to open the UMAN "Add/Edit Group" dialog.
11. Select the "Members" tab.
12. Click "Add..." to open the UMAN "Add/Edit Group" – "Add Members" dialog.
13. Select the new user name.
14. Click "Ok" twice to add the user to the group and close all dialogs.

15. Click "Exit" to close the UMAN window.

8.4.4 Creating the Postman III User Account

The following steps must be performed only on an R&S Postman III server.

1. Log on to Windows using the *Installer* account.
2. Launch the R&S Postman III Management Console.
3. Select the "Users" tab.
4. Click the "Create new user" toolbar button or press [Ctrl+Shift+U] to open the "User" dialog.
5. Enter the new user name into the "First Name" field.
6. Enter the new user name into the "User logon name" field.
7. Select the "E-mail" tab.
8. Enter the new mail account name into the "E-mail Account Name" field.
9. Select the local site name from the "Mail Server Site" dropdown list.
10. Select the "Management Authorisation" tab.
11. Click "Assign all" to assign all management privileges to the new user.
12. Click "Ok" to add the new user.
The "Create New User" dialog is shown.
13. Enter a password for the new user's mail account (twice) and click "Ok".
14. If the "Mail Server Authentication" dialog is shown, enter `Administrator` into the "User Name" field and enter the administrator's password into the "Password" field.
15. Click "Ok" to create a mail account for the new user.

8.4.5 Configuring Mozilla Thunderbird Mail

The following steps must be performed on each R&S Postman III client where the Mozilla Thunderbird client should be accessible to the new user.

1. Log on to Windows using the new user account.
2. Start the Mozilla Thunderbird application.
3. Enter the values from the [Table 8-1](#) for the user. For detailed information, refer to [Chapter 5.14.1, "Setting Up the Email Account"](#), on page 57.

8.5 Customizing the Installation Workflow

The R&S Postman III Setup Assistant uses so-called installer properties internally to control and customize the installation process. The mechanics are similar to the installer properties supported by Windows Installer based setups (.msi packages).

8.5.1 Command Line Syntax

Some installer properties can be modified using the controls on the "Welcome" and "Settings" page of the installer GUI. Additional properties are used internally.

Every property can be set or overwritten using the following command line syntax:

```
Setup.exe <PropertyName>=<PropertyValue>
```

Example:

```
Setup.exe Pm3UserName=mu2User
```

8.5.2 User Installer Properties

The following installer properties are supported and can be modified via command line parameters by an administrative user:

Table 8-2: Installer properties

Property name	Default value	Example	Description
IntegrationType	<None>	Standalone	Selects the integration type. One of: • Standalone • Navy • Mmhs
InstallType	<None>	Server	Selects the installation type. One of: • Server, Client • Server • Client
OptionRSIRP	"0"	"1"	Controls if the option "R&S RS IRP Protocol" is checked.
OptionS5066	"0"	"1"	Controls if the option "R&S Non-IP HF Radio Protocol" is checked.
Pm3SiteId	3rd byte of IP address	240	The Postman III site ID.
Pm3HostName	<hostname>	MU2	Initialized from the computer's host name.
Pm3DomainName	<domain name>	pm-mu2.com	Initialized from the computer's domain name suffix.

Property name	Default value	Example	Description
Pm3EmailDomainName	<domain name>	pm-mu2.com	Initialized from the computer's domain name suffix.
Pm3GroupName	PMIII-User	Users	Name of local Windows group which is granted read rights on the R&S Postman III address book.
Pm3UserName	Op<hostname>	mu2User	Name of the local Windows user account created as the primary R&S Postman III user on the system.
Pm3IpAddress	<IPv4 address>	192.168.30.15	R&S Postman III IPv4 address
Pm3Password	123456	pass	Default password used during installation. Used for: <ul style="list-style-type: none"> • Password for [Pm3UserName] user account. • Password for SQL Server "sa" account. • Password for hMail-Server "Administrator" account. • Password for hMail-Server mail accounts.
Pm3Language	en	es	UI language for the R&S Postman III GUIs. Supported languages: en (English) es (Spanish)
Pm3Country	US	CO	UI sublanguage code for the R&S Postman III GUIs. Currently unused.
AdamInstanceName	postman3		Win32 service name of the ADAM instance. Should not be changed.
AdamLdapPort	389	3891	Listening port number of the ADAM instance (Active Directory server).
AdamPartitionName	DC=postman3,DC=com	DC=postman3,DC=pt	Name of the Active Directory partition. Must match with DITDomain property (see below).

Property name	Default value	Example	Description
ApacheServerAdmin	admin	root	Email account name used by the Apache HTTP server for sending notification emails.
ApacheServerPort	8080	8081	Listening port number of the Apache HTTP server. Do not use port 80 to avoid conflict with the IIS server that is also running on the same server machine.
DITDomain	postman3.com	postman3.pt	Domain name of the Active Directory DIT. Must match with the property AdamPartitionName.
DITOrganisation	RuS	ABC	Abbreviated name of your organization.
DITCountry	Determined by current system locale.	en	Two-letter ISO country code.
SqlInstanceName	SQLEXPRESS		Name of the SQL server instance name.
SqlServerPort	1433		Static port number of the SQL server TCP protocol interface. Do not change!
SqlSysAdminAccounts	BUILTIN\Administrators The default value depends on the current system locale (e.g. "BUILTIN\Administradores" on a Spanish Windows installation).	MU2\Administrator	Name of the user account or group that is assigned to the SQL sysadmin server role during installation. By default, the localized name of the built-in Administrators group is used.
SetupXml	"Setup.xml"	"G:\Setup.xml"	Name and location of the XML file which controls the packages to be installed. The same search pattern rules apply as for searching the packages themselves (see below).

8.5.3 System Installer Properties

The following installer properties are read-only and calculated at runtime during startup of the installer. Their values are taken from system provided properties.

Property name	Property type	Default value	Example
IsAdministrator	bool	True if the current user is a member of the BUILTIN\Administrators group, false otherwise. Note that UAC must be turned off. Otherwise Windows hides the Administrators group membership from the executing process even if the current user is an Administrator.	true
IsWindows8	bool	True if the current Windows operating system is Windows 8 or Windows Server 2012 or later.	false
IsWindowsServer	bool	True if the current Windows operating system is a server version (e.g. Windows Server 2003 to 2016), false otherwise (e.g. Windows 7 to 10).	false
VersionNT	int	Major and minor version number of the Windows operating system. The major version is multiplied by 100 before the minor version is added. Examples: 501 = Windows XP (v5.1) 502 = Windows Server 2003 (v5.2) 600 = Windows Vista or Server 2008 (v6.0) 601 = Windows 7 or Server 2008 R2 (v6.1) 602 = Windows 8 or Server 2012 (v6.2) 1000 = Windows 10 or Server 2016	601
ServicePackLevel	int	The service pack level or 0 if no service pack is installed.	1

8.5.4 Package Configuration (setup.xml)

The list of software packages to be installed is provided through an XML configuration file. The default name of this configuration file is `setup.xml`. The XML root element of

the XML document contains one XML package element for each package. The following XML attributes are used to describe each package:

Attribute name	Description
xsi:type	Must be either "MsiPackage" for .msi (Windows Installer) packages or "ExePackage" for .exe packages.
PackageId	The unique package identifier. Can be a short name like "AdLds" or "MsSql". Some well-known package identifiers are used internally to control the installation workflow, so the existing package identifiers should not be modified.
SourceFile	File and/or directory name or search pattern (= wildcards) to locate the package source file.
InstallCommand	Command line arguments for installation of this package. Command line arguments can contain runtime evaluated expressions enclosed within square brackets.
InstallCondition	Expression returning a logical boolean value that determines if this package is shown in the list of packages. Install conditions can reference installer property values (documented in the previous section). Example: "IntegrationType=Standalone"

ExePackage Configuration

For executable packages, the following XML attributes can be additionally specified in the `setup.xml` configuration file:

Attribute name	Description
ProductName	Allows explicitly overriding the product name. By default, the product name is taken from the EXE file summary information stream. This attribute should be specified if no or no suitable product name is present in the EXE file metadata.
ProductDescription	Allows explicitly overriding the product description. By default, the product description is taken from the EXE file summary information stream. This attribute should be specified if no or no suitable product description is present in the EXE file metadata.
ProductVersion	Allows explicitly overriding the product version. By default, the product version is taken from the ProductVersion of FileVersion fields of the EXE file summary information stream. This attribute should be specified if no or no suitable version is present in the EXE file metadata.
RegistryKey	Name of a registry key where information about an existing installed version is taken from. The registry key is searched below the HKEY_CURRENT_USER and also the HKEY_LOCAL_MACHINE (both 32-bit and 64-bit views) root keys. If the RegistryKey value does not contain a backslash, a subkey of "Software\Microsoft\Windows\CurrentVersion\Uninstall" is assumed.

Attribute name	Description
RegistryVersion	Name of a registry value of the registry key which the version number of an already installed package. By default, the registry value "DisplayVersion" is used.
VersionPattern	An optional regular expression pattern that is used to parse numerical version information from the package source file name or the package's version registry key. The regular expression pattern must be formed to retrieve between 1 and 4 numerical values. Example: The regular expression "(d+)\.(d+)\.(d+)-B(d+)" parses version "5.3.4.1913" from file name "hMailServer-5.3.4-B1913.exe".

SourceFile searching

The SourceFile attribute is used to specify where the package installer source file can be found. The following features are supported when locating the installer source file:

- Filename wildcards "*" and/or "?".
Example: simcosii-base-* .msi
- Absolute or relative directory paths. Relative paths are probed against the current directory and the directory from where the Setup.exe file has been loaded.
Example: packages\simcosii\simcosii-base-* .msi
- Wildcards "*" and/or "?" within directory names.
Example: packages*\simcosii-base-* .msi
- Recursive directory search up to n levels deep (where $1 \leq n \leq 9$) using the special "*n" syntax.
Example: packages*3\simcosii-base-* .msi

InstallCondition Evaluation

Install conditions are logical expressions determining whether a package is shown in the package list depending on system and user defined installer properties. Packages not shown in the package list are ignored and not managed by the R&S Postman III Setup Assistant.

The FLEE ("Fast Lightweight Expression Evaluator") open-source library is used to evaluate these expressions. See the documentation at <http://flee.codeplex.com> for detailed information about the syntax and capabilities of the expression language.

Expressions have access to the values of all user and system defined installer properties. Installer properties are exposed as variables to the FLEE expression evaluation engine.

All FLEE supported comparison operators ($=, <, >, <=, >=$) and logical operators (AND, OR, NOT, XOR) as well as the very convenient IN operator and the IF function can be used.

Methods can be called on the expression variables depending on the type of the variable. If the variable is e.g. of type string - like all user installer properties are - e.g. the

Contains method can be used to test if the installer variable value contains a specific substring. Example: InstallType.Contains("Server").

String literals usually have to be enclosed within double quotes (e.g. IntegrationType="Standalone"). Since double quotes are hard to use within XML files (since they have to be encoded as """), a special feature has been implemented to allow writing string literals as "on-the-fly" variable names without double quotes. Example: IntegrationType=Standalone

InstallCommand Expression Evaluation

The InstallCommand attribute may contain variable expressions ("placeholders") enclosed within square brackets.

Example: InstallCommand=" SERVERNAME=[Pm3HostName].[Pm3DomainName]"

The expressions inside the angle brackets are evaluated using the same expression evaluation logic as used for the InstallCondition attribute. This supports complex, run-time evaluated expressions within the command line arguments.

Example: InstallCommand="ADDLOCAL=[IF(InstallType.Contains(Server), "CommLineControlServiceFeature,", "")]CommLineControlUIFeature,SpanishLanguage"

The preceding example constructs a value for the ADDLOCAL command line argument that depends on the value of the InstallType installer property. If the installer property value contains the string "Server", the resulting ADDLOCAL command line argument is:

CommLineControlServiceFeature,CommLineControlUIFeature,SpanishLanguage

Otherwise the value of the ADDLOCAL command line argument is just:

CommLineControlUIFeature,SpanishLanguage

8.6 Changing the Server IP Address

It is possible to change the IP address of an R&S Postman III server after installation and configuration following these steps:

1. Change the network adapter IP address in the Network Control Panel applet (ncpa.cpl).
2. Change the site IP address in the R&S Postman III Management Console.
3. Change the TMR ("Tactical Management Router") public IP address.
4. Reboot the server.

These steps are described in more detail below.

8.6.1 Changing the Network Adapter IP Address

1. Click Start > Control Panel > Network and Sharing Center > Change adapter settings or launch `ncpa.cpl` to open the "Network Control Panel" applet.
2. Right-click the network adapter and select "Properties" from the context menu to open the "Network Adapter Properties" dialog.
3. Select Internet Protocol Version 4 (TCP/IPv4) and click "Properties" to open the Internet Protocol Version 4 (TCP/IPv4) dialog.
4. Enter the new IP address and click "OK" twice to close all dialogs.

8.6.2 Changing the Site IP Address

1. Log in as *Installer*.
2. Open the R&S Postman III Management Console.
3. Right-click the <country>/<organization>/Sites/<SiteName>/Equipments/Host Servers/<HostName>/Gw<HostName> node to open the "Tactical Gateway" context menu.
4. Select "Edit Tactical Gateway" to open the "Tactical Gateway" dialog.
5. Enter the new IP address into the "Unicast Address" field.
6. Click "Ok" to save the changes and close the "Tactical Gateway" dialog.
7. Click the blinking "Update Gateway Configuration" toolbar button.
8. Repeat the above steps for each Postman III server.
9. Alternatively, you can export the current site configuration from the local server and reimport it into each other server.

8.6.3 Changing the TMR Public IP Address

The TMR ("Tactical Management Router") public IP address must be changed to match the new IP address. Use one of the following methods to change the public IP address:

1. Launch the R&S Postman III Setup Assistant.
2. Activate the "Settings" page.
3. Ensure that the new server IP address is displayed in the "Server IP address" field.
4. Activate the "Configuration" page.
5. Select the TMR Source Address task.

6. Click the "Adjust address and restart TMR service" command.

Alternatively you can modify the settings directly in the Windows registry:

1. Start the Registry Editor (`regedit.exe`).
2. Navigate to the `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Rohde-Schwarz\TMR` registry key.
3. Change the `PublicIpAddress` value to the new IP address.

8.6.4 Rebooting the Server

- Reboot the server to restart all services and bind them to the new IP address.

8.7 Address Book Sharing

The concept is to manage the address book in one Thunderbird account. There, the address book is exported to a file.

The file is distributed to other machines and then imported in Thunderbird.

8.7.1 Exporting Address Book

1. In the Thunderbird "Home" window, click the "Address Book" tab.

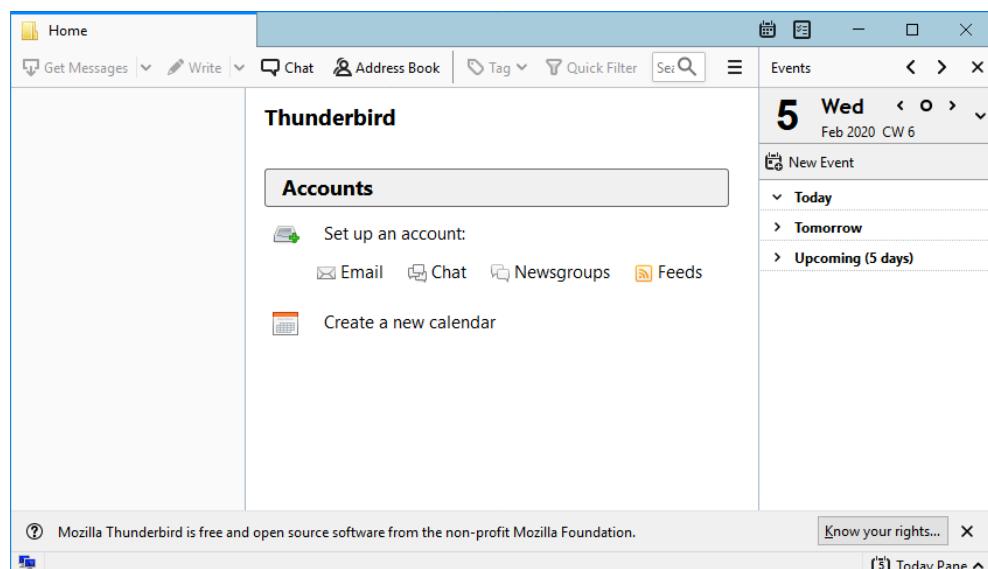


Figure 8-4: Thunderbird home

2. In the "Address Book" tab, select the "Personal Address Book".

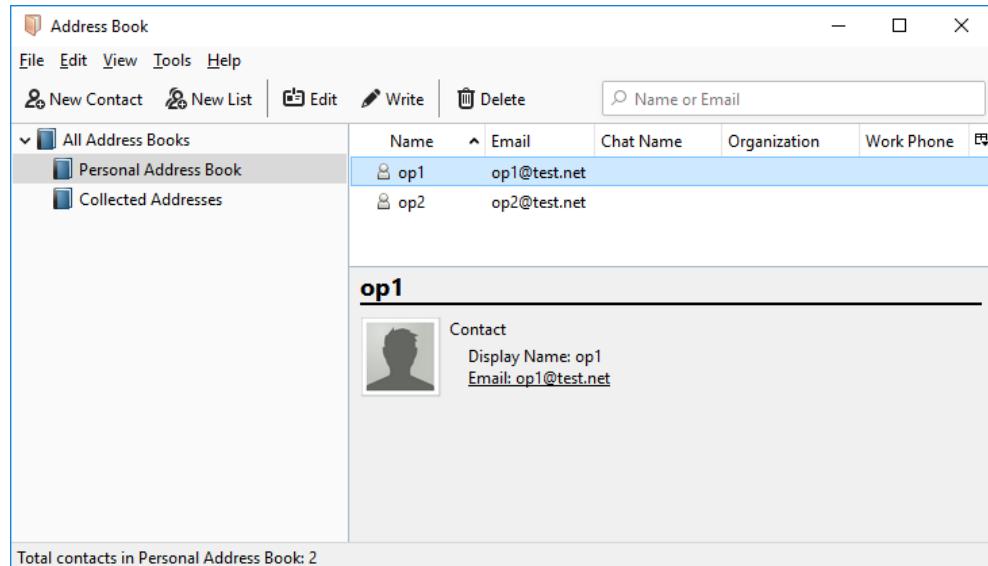


Figure 8-5: Thunderbird address book

3. In the "Address Book" bar, click "Tools" > "Export" to export the address book. Select the file type "vCard (*.vcf)".

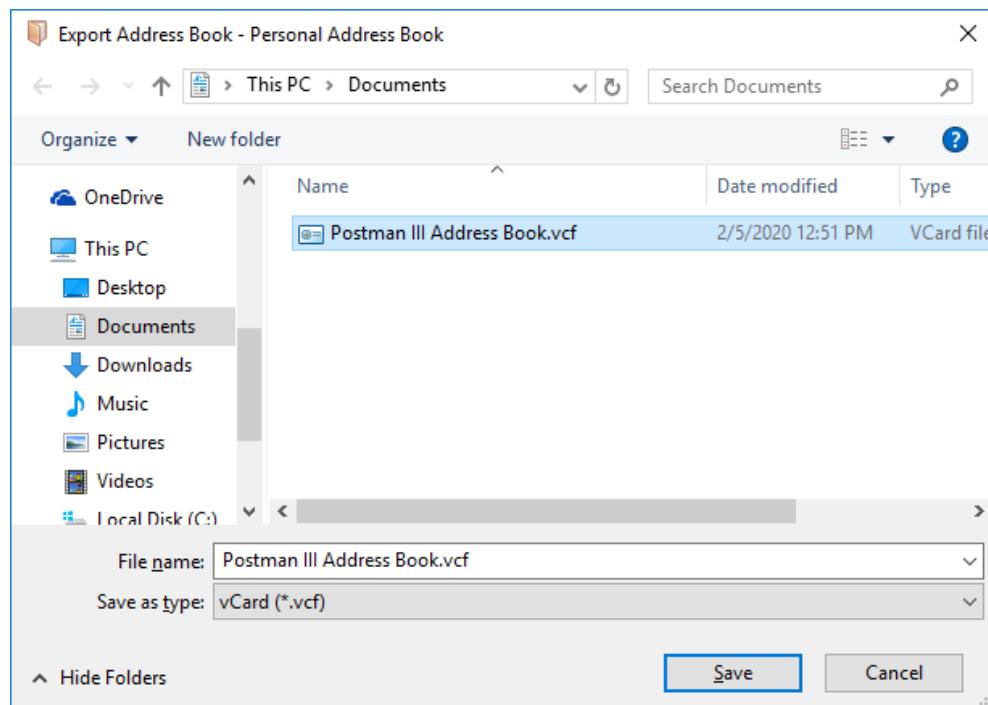


Figure 8-6: Thunderbird address book type

8.7.2 Importing Address Book

1. In the Thunderbird "Home" window, click the "Address Book" tab.

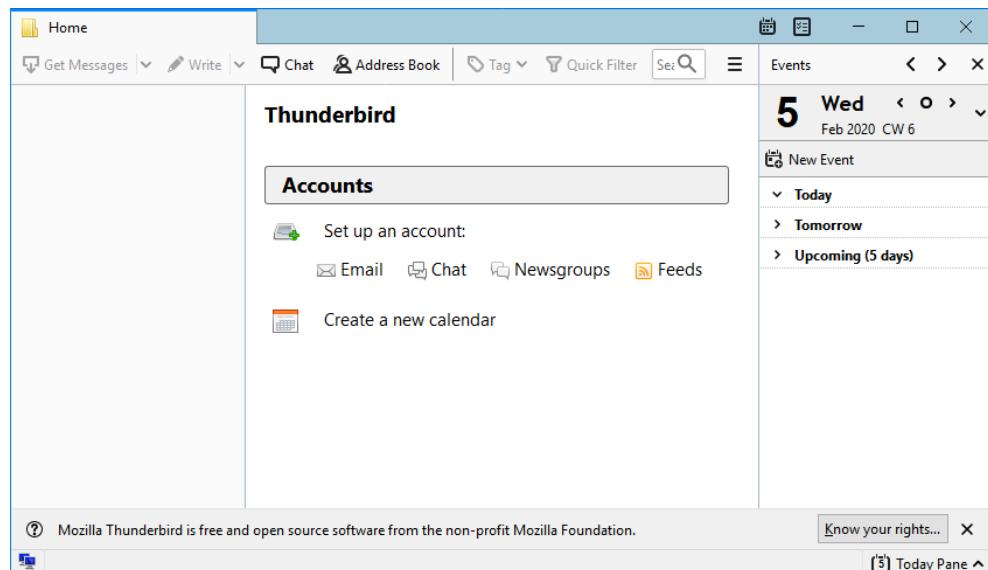


Figure 8-7: Thunderbird home

2. In the "Address Book" tab, select the "Personal Address Book".

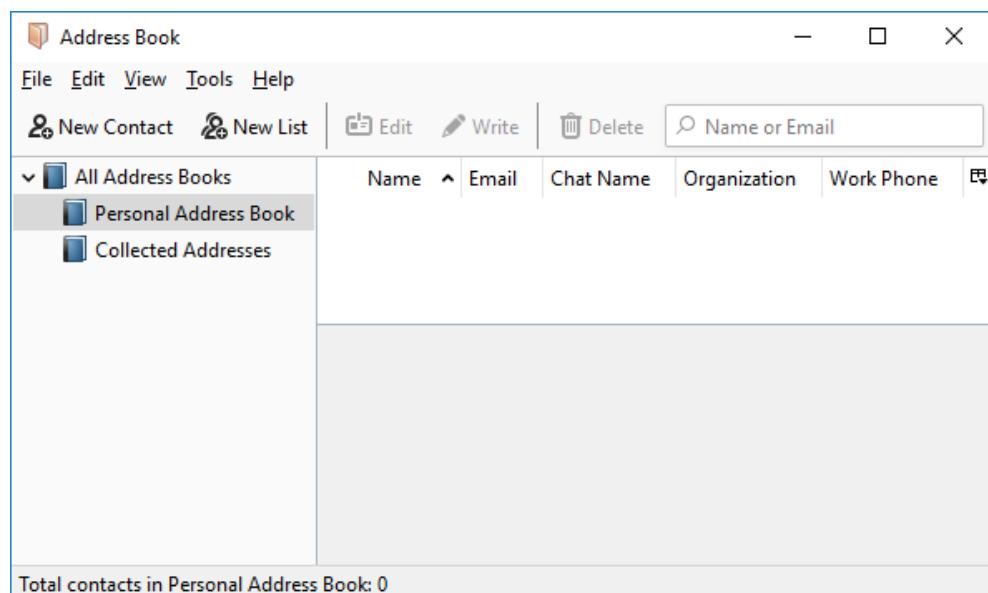


Figure 8-8: Thunderbird address book empty

3. In the "Address Book" bar, click "Tools" > "Import" to import the address book.
4. In the wizard, select "Address Books" and click "Next".

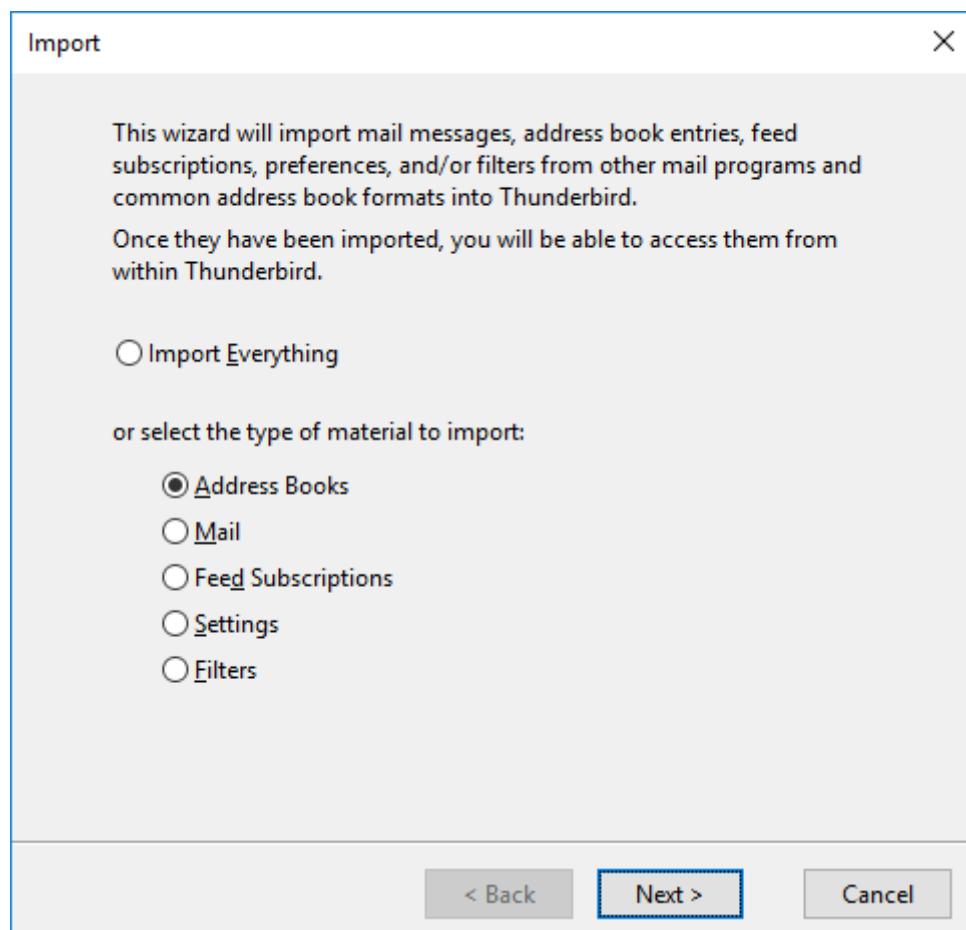


Figure 8-9: Thunderbird address book import (1)

5. Select the file type "vCard (*.vcf)" and click "Next".

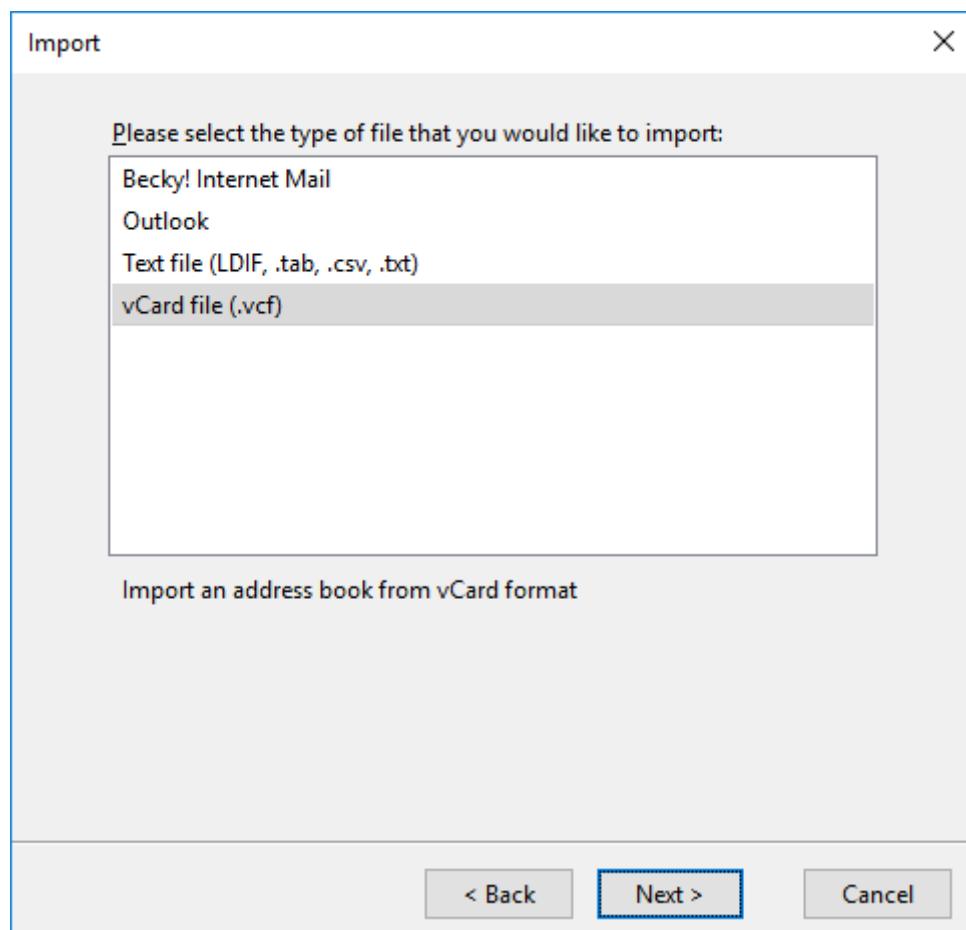


Figure 8-10: Thunderbird address book import (2)

6. Select the address book and click "Open".

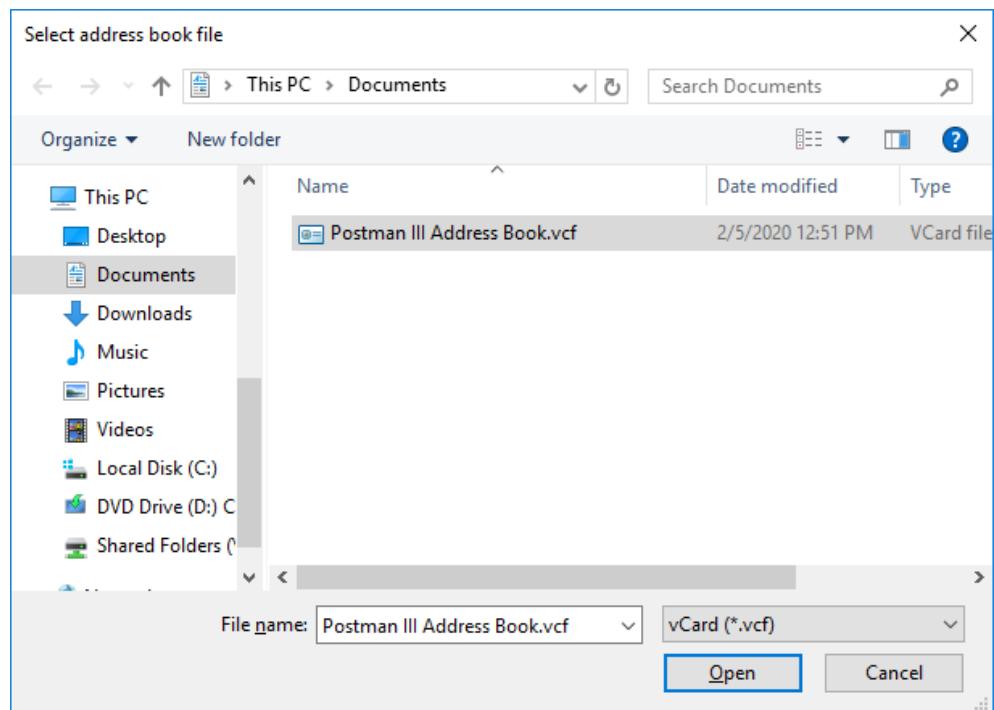


Figure 8-11: Thunderbird address book import (3)

7. Click "Finish" to finish the import.

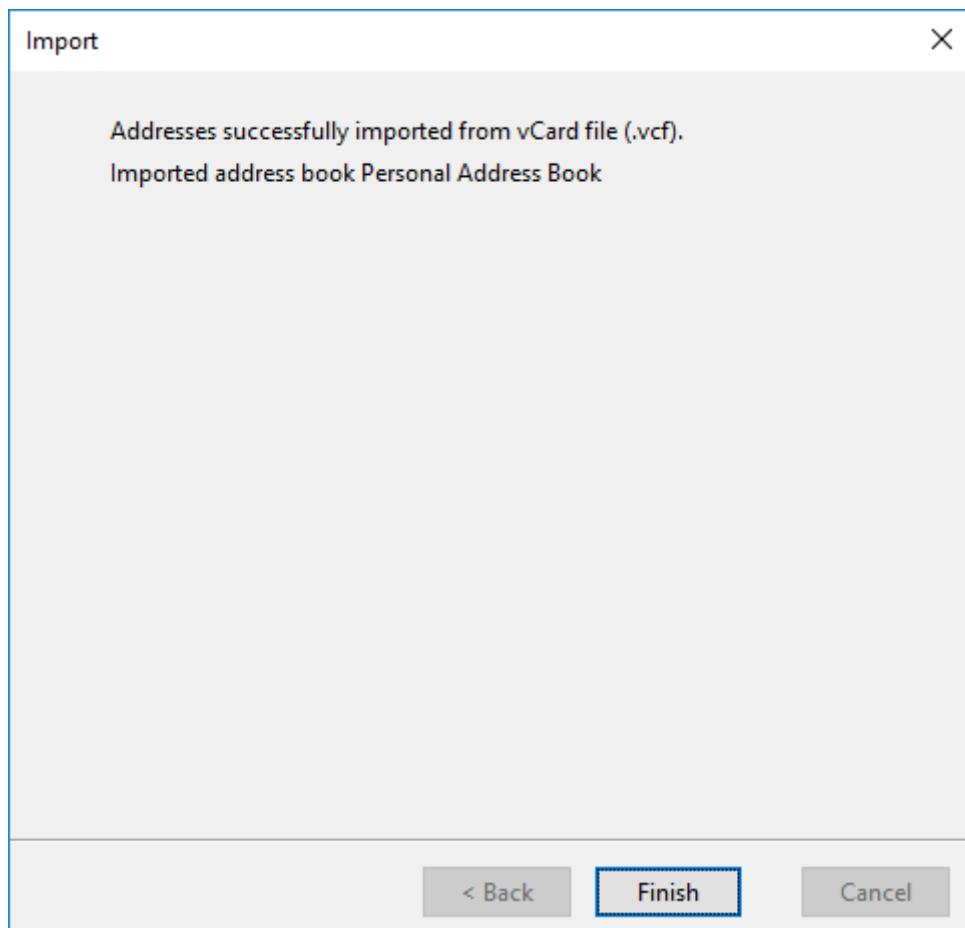


Figure 8-12: Thunderbird address book import (4)

8.8 Configuration of Firewalls

The product requires TCP/IP communication between the server, the client machines and the IPoA radios. During the installation, the Windows firewall is configured to allow the necessary traffic.

If external firewalls are used or the Windows firewall rules are centrally provided, ensure that the TCP communication passes firewalls.

The following tables list the ports that must be allowed by firewalls.

Table 8-3: Postman III server incoming connections

Port numbers	Purpose	Source
TCP ports 80, 8080	Used for communication with the HTTP server	Postman III clients
TCP ports 5098, 5066	Used for communication with the CORBA services	Postman III clients

Port numbers	Purpose	Source
TCP ports 5100 to 5113 UDP port 4712	Device Control services	Device Control clients
TCP ports 2345, 5200 - 5222, 5661 - 5669, 8732, 20203, 29529, 29531, Dynamic TCP ports (49152 to 65535) UDP port 10161	Postman III services	Postman III clients
UDP ports 2751-2754 UDP port 9	Postman III services	Postman III server
UDP port 21337	Postman III services	IPoA radios
TCP ports 389,1389	AL LDS service	Postman III clients
TCP ports 25,110,143,587	Email service	Postman III clients
TCP port 8750	R&S MapTrack services	R&S MapTrack clients
UDP port for UDP import	R&S MapTrack services	GPS over UDP data source

Table 8-4: Postman III client incoming connections

Port numbers	Purpose	Source
TCP ports 5400-5500	Device Control clients	Postman III services
Dynamic TCP ports (49152 to 65535)	Postman III clients	Postman III services

8.9 Troubleshooting

Enabling Window Java Update Needed

In some Java versions, the window "Java Update Needed" is opened when a user starts the first Java application (e.g. DEVCON, UMAN, R&S Postman III Tactical Console, R&S Postman III Management Console).

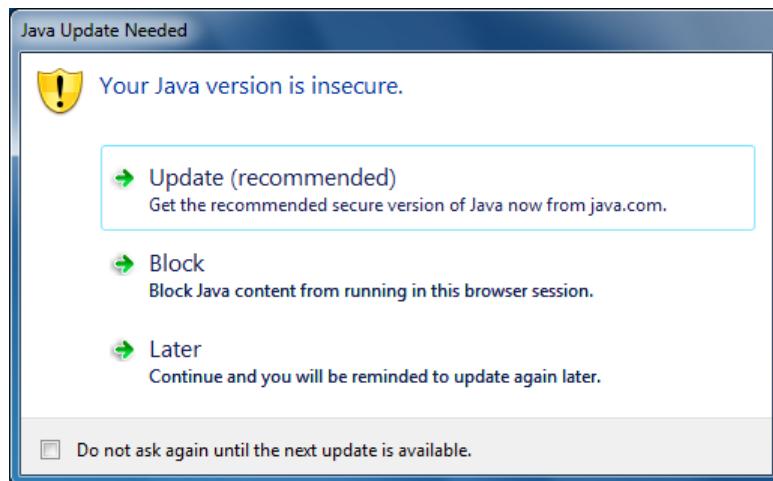


Figure 8-13: Java update needed

If the user checks the field "Do not ask again..." and then selects the option "Update" or "Block" by mistake, the Java application does not start. It is not possible to easily correct this decision as the window does not appear again.

Solutions to enable the window again:

- Delete the whole user profile.
- Delete this registry key:
HKEY_CURRENT_USER\Software\AppDataLow\Software\JavaSoft\DeploymentProperties.

