

TH SCOPE

Monitoring and Diagnostics of PROFINET, PROFIBUS, EtherNet/IP and Modbus TCP Networks



Version: EN-201409-1.00

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Softing Industrial Automation GmbH

Richard-Reitzner-Allee 6
85540 Haar / Germany
Tel: + 49 89 4 56 56-0
Fax: + 49 89 4 56 56-488
Internet: <http://industrial.softing.com>
Email: info.automation@softing.com
Support: support.automation@softing.com

The latest version of this manual is available in the Softing download area at: <http://industrial.softing.com>.

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1 Introduction

1.1 About TH SCOPE

What is TH SCOPE?

- Software for central monitoring and documentation of networks using TH LINK components available in the plant network
- Web-based application for standard PC/notebook or panel in the plant
- Information on the state of the entire network via remote access
- Cross-protocol monitoring for PROFIBUS, PROFINET, Ether-Net/IP, Modbus TCP, standard Ethernet TCP/IP

What are the benefits of TH SCOPE?

- Combines the diagnostics for various fieldbus protocols in one unified application
- Flexibly scalable according to the number of networks and type of protocol used
- Allows the assessment of the current network state and network history
- Provides standard interfaces for the integration of the network data in existing systems

Which functions does TH SCOPE provide?

- Central access to diagnostics data from decentrally installed TH LINK components
- Extensive functions for long-term monitoring:
- GSD file support for PROFIBUS, reference comparison, trend display, data export, OPC server DA, SNMP agent
- After download and installation, full functionality available for 30 days free of charge

1.2 Conventions

The following conventions are used throughout Softing customer documentation:

Keys, buttons, menu items, commands and other elements involving user interaction are set in bold font and menu sequences are separated by an arrow

Open **Start** → **Control Panel** → **Programs**

Buttons from the user interface are enclosed in brackets and set to bold typeface

Press **[Start]** to start the application

Coding samples, file extracts and screen output is set in Courier font type

MaxDlsapAddressSupported=23

Filenames and directories are written in italic

Device description files are located in C:
\StarterKit\delivery\software\Device Description files



Note

This symbol is used to call attention to notable information that should be followed during installation, use, or servicing of this device.



Hint

This symbol is used when providing you with helpful user hints.

2 Before you start



Read this manual before starting

Before you start with the installation read this Installation Manual. It will help you with your system setup and provides essential information. The Installation Manual leads you step by step through the installation.

For damages due to improper connection, implementation or operation Softing refuses any liability according to our existing warranty obligations.

Proceed as follows:

1. Make sure the system requirements are met (see [System Requirements](#))
2. Install if necessary the Internet Information Services (see
3. Install the TH SCOPE (see [Installation of Microsoft Internet Information Services \(IIS\)](#))
4. License the TH SCOPE (see [Licensing](#))
5. Start TH SCOPE (see [Start TH SCOPE](#))

3 Scope of delivery

TH SCOPE includes

- TH SCOPE installation
- Installation Manual
- User Manual
- Release Note

For software and documentation visit the download area on our web site at <http://industrial.softing.com/en/downloads.html>.

4 System Requirements

4.1 Operating systems

The following operating systems are supported in German and in English in 32 and 64 bit versions:

- Windows Vista
- Windows 7
- Windows 8
- Windows Server 2008
- Windows Server 2012

4.2 Software

The following software is required:

- Microsoft Internet Information Services (IIS) 5.1 or higher (available on Microsoft Windows installation CD or via download from the internet <http://www.iis.net>)
- Microsoft .NET Framework 4.0 (included in TH SCOPE installation)
- Microsoft Visual C++ 2010 Redistributable Package (included in TH SCOPE installation)
- Java Runtime Environment 5.0 (included in TH SCOPE installation)
- OPC Core Components 2.00 Redistributable 2.20 (included in TH SCOPE installation)
- Web browser with Adobe Flash Player 10.0 or higher
- Spread sheet program (e.g. Microsoft Excel, OpenOffice, LibreOffice, etc.) to open and edit the export data
- Adobe Reader 8 or higher

4.3 Communication processor

For access to the fieldbus system at least one of the following communication processors is required:

- TH LINK PROFIBUS
- TH LINK PROFINET
- TH LINK EtherNet/IP
- TH LINK Modbus TCP
- TH LINK Industrial Ethernet
- TH LINK PC Industrial Ethernet
- xEPI 2
- PB-XEPI

4.4 Network settings

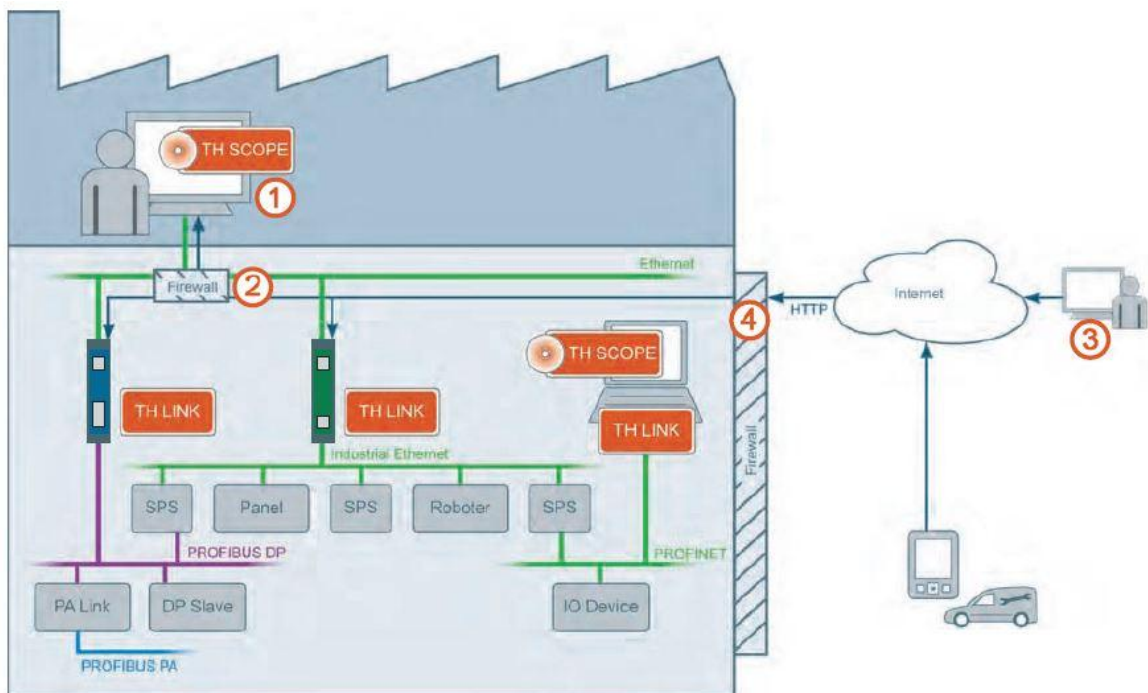


Figure 1: Network settings

The following network settings are required for the PC, on which the TH SCOPE is installed.

① PC with TH SCOPE installation

Either:

- Enabling of TH SCOPE.exe application

or

- Enabling of HTTP port 80 inbound and outbound
- Enabling of SNMP port 161 inbound or if another SNMP Agent uses this port already, then port 2367
- Enabling of IP 224.0.5.128 port 2364 UDP outbound
- Enabling of UDP ports 2365 outbound and 2366 inbound



Note

The required firewall rules are installed during TH SCOPE installation.

② Firewall between the PC, on which the TH SCOPE is installed and the TH LINK

- Enabling of HTTP port 80
- Enabling of IP 224.0.5.128 port 2364 UDP
- Enabling of UDP ports 2365 and 2366

③ PC from which TH SCOPE is accessed

- Enabling of HTTP port 80 outbound

④ Firewall between the PCs, on which the TH SCOPE is installed and the PC, from which TH SCOPE is accessed

- Enabling of HTTP port 80

5 Installation of Microsoft Internet Information Services (IIS)

Depending on your operating system the way to the installation of the Microsoft Internet Information Services (IIS) is different



Note

You need administrator rights on your PC and if necessary the Microsoft Windows operating system installation CD.



Note concerning Windows Server 2008

Make sure in dialog **Role Services** you have activated the components **ASP.NET** and **.NET Extensibility**.

5.1 Windows 7

1. Go to Start **Start** → **Control Panel** → **Programs** → **Programs and Features** and click on **Turn Windows features on or off**.



Figure 2: Turn Windows features on or off

2. Click on the red marked checkbox to activate the Internet Information Services.

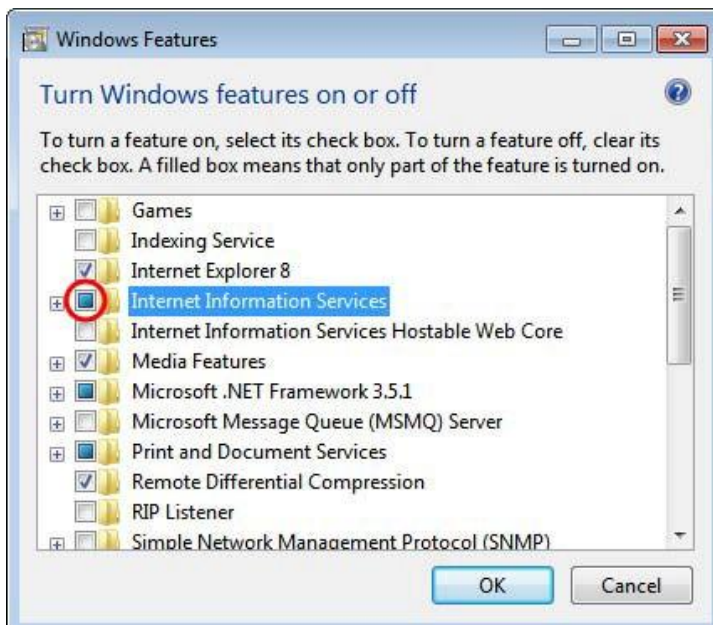


Figure 3: Windows Features - Internet Information Services

3. Open the **Internet Information Services** by clicking the **[+]** symbol.

4. Additionally select the yellow highlighted features:

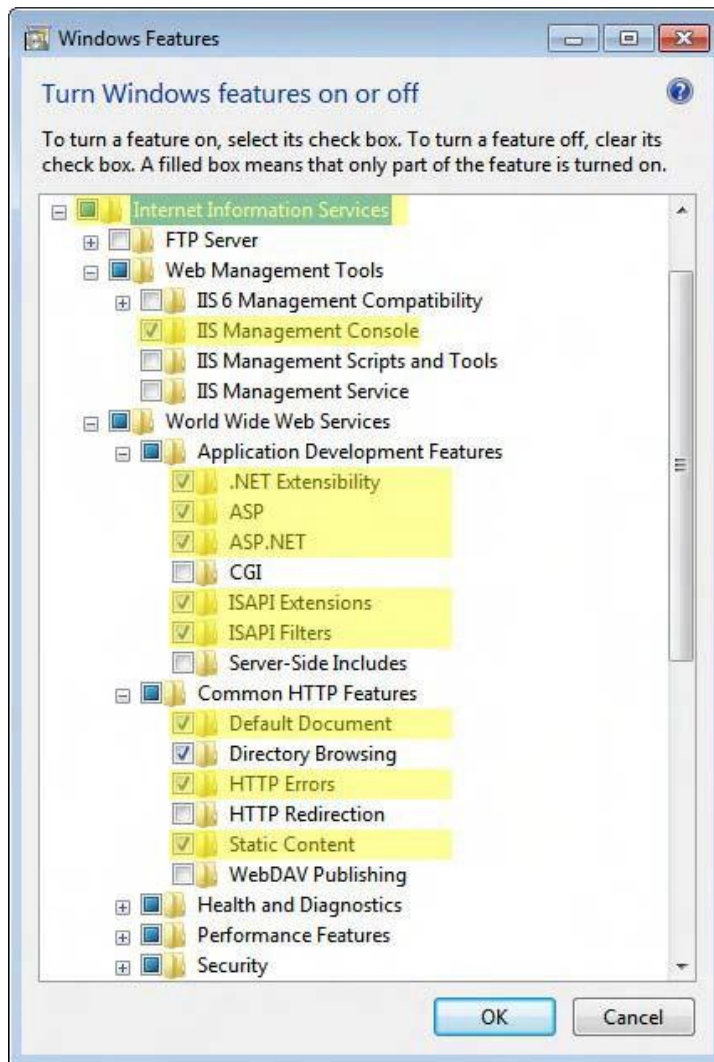


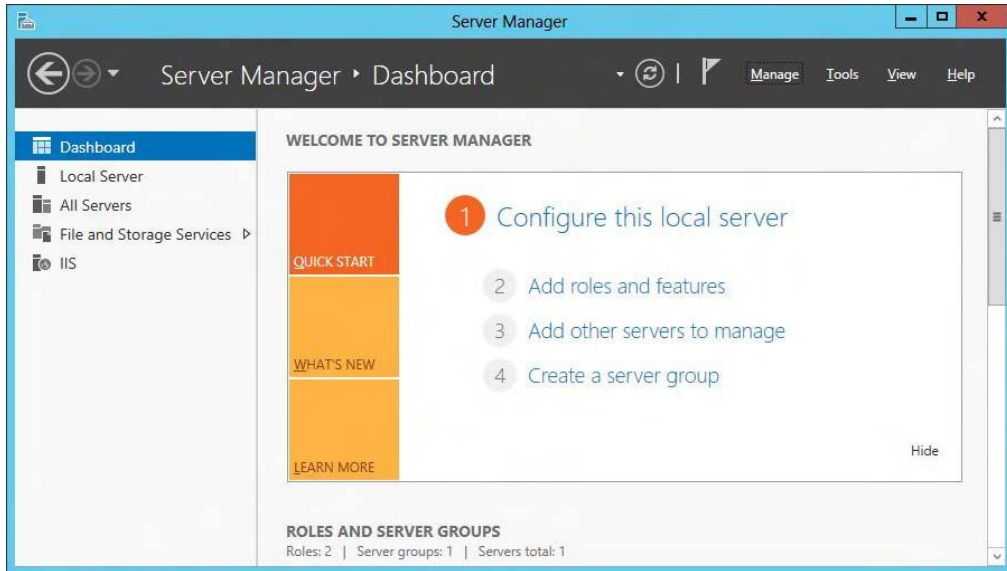
Figure 4: Select Internet Information Services

5. Click **[OK]** to complete the settings.

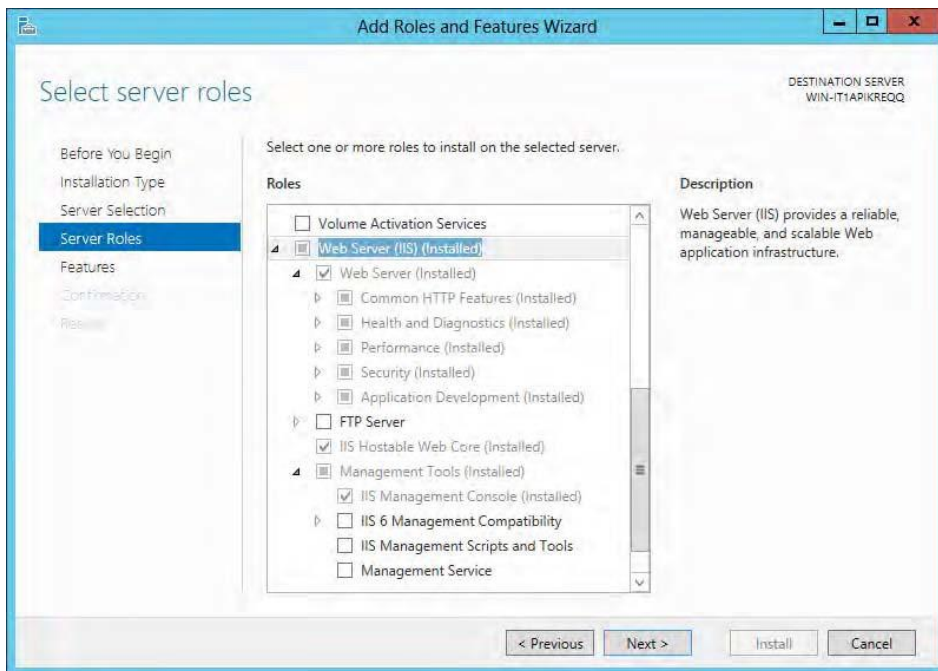
5.2 Windows Server 2012

Change the local server setting as followed.

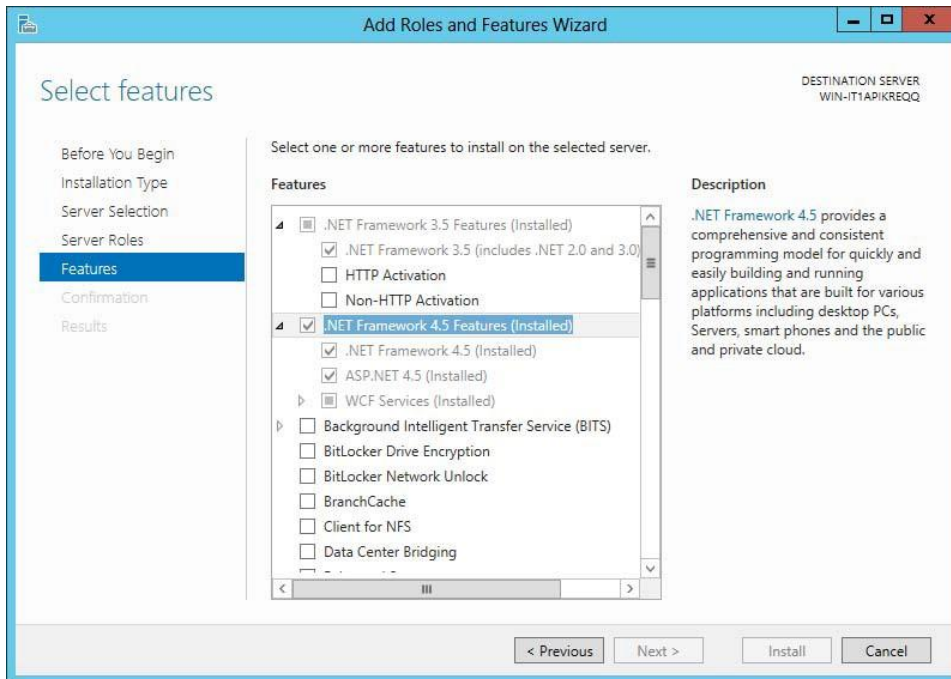
1. Open the **Server Manager** and click on **Add roles and features**:



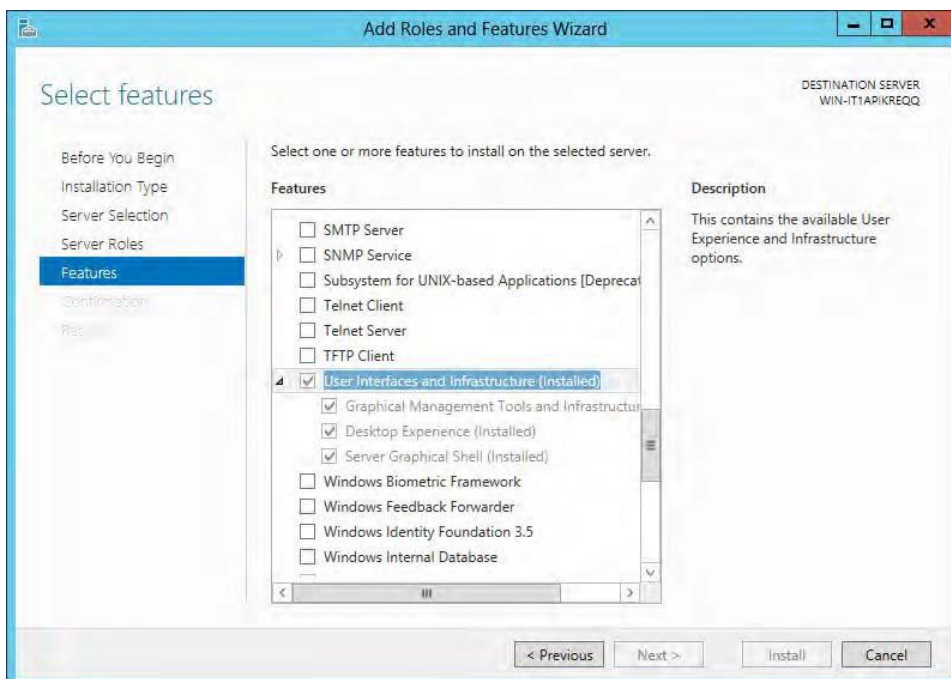
2. In the **Select server roles** dialog activate **Web Server (IIS)** and **IIS Hostable Web Core**:



3. In the **Select features** dialog activate **.Net Framework 4.5** and **ASP.NET 4.5**:



4. As well as the following features **User Interfaces and Infrastructure** (to allow installing the Flash Add on in your browser):



5. If all components are installed successfully, close the Server Manager.

6 Install TH SCOPE

1. Make sure that all [System Requirements](#) are met.
2. Then start the installation program by double-clicking *setup.exe*.
3. The Welcome screen appears:



4. Click **[Next]** to install the TH SCOPE on your system. The license agreement screen appears:



5. Read the information carefully. Click on **I accept the terms in the license agreement**. Then click **[Next]**.

- The **Destination Folder** screen appears:

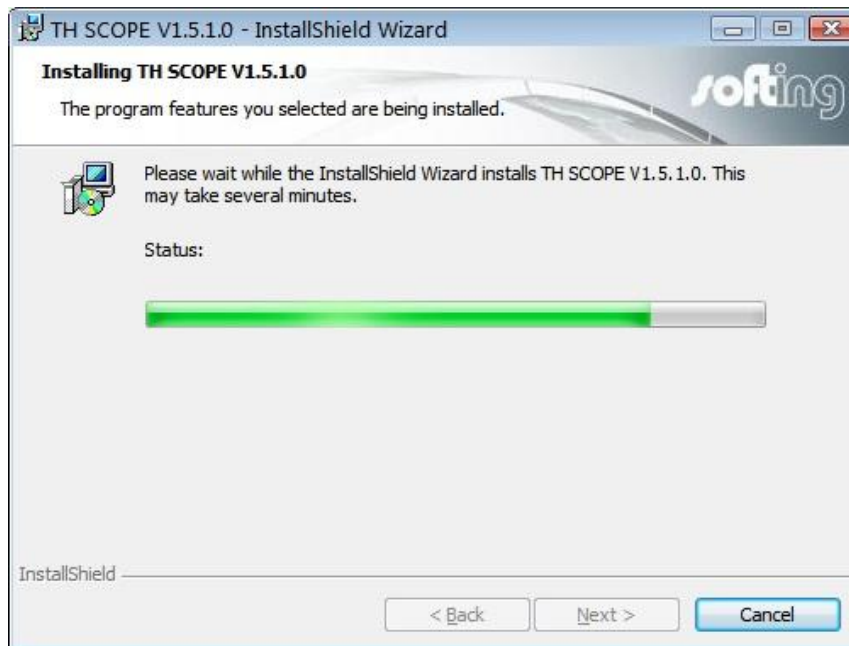


- Click **[Next]** to install in this folder or click **[Change]** to install into different folder.
- The installation screen appears:

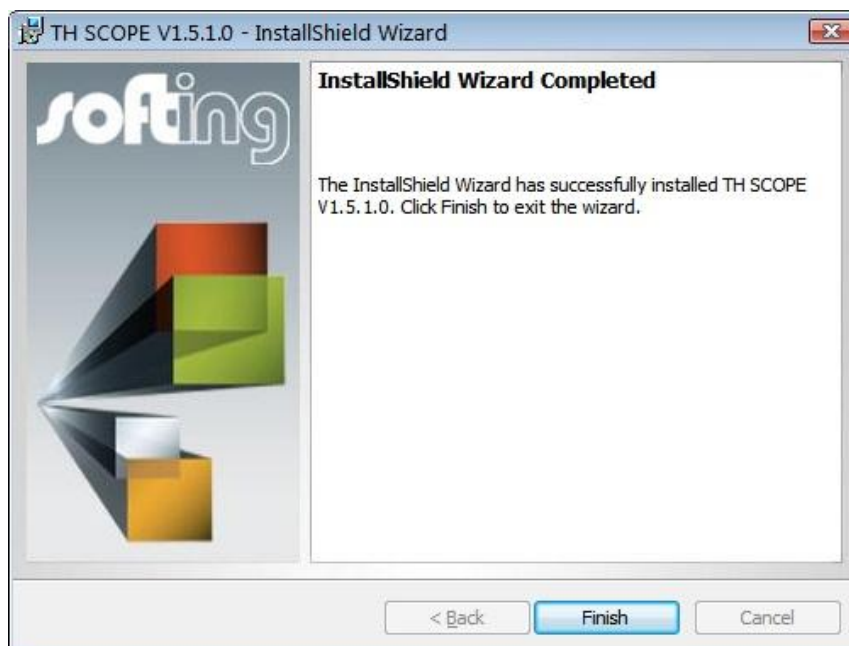


- Click **[Install]** to start the installation. If you want to review or change any of your installation settings, click **[Back]**.

10. The progress of the installation procedure is displayed in a status bar:



11. The completion screen appears:



12. Click **[Finish]** to complete the installation and to exit the wizard.

7 Update TH SCOPE installation

If you update an existing installation, the license file, the GSD files and the bitmaps from the Trebing + Himstedt folder are moved to the new Softing folder.

8 Licensing

After installation you need to license TH SCOPE. Licensing is performed using the License Manager and entering your license key.



Note

License activation is performed via internet. Therefore make sure you have an internet access.



Online help

The License Manager includes an online help, which gives you detailed information about the licensing procedure and helps you to solve possible problems. Click in the left part of the License Manager user interface on [Help] and select the corresponding topic.

8.1 License types

There are two general license types:

- Licensing on PC
- Licensing on USB dongle (Hardlock)

Licensing on PC

The licensing on PC consists of a runtime license which activates the complete software functionality on a PC.

Licensing on USB dongle (Hardlock)

Licensing on USB dongle activates the complete software functionality on that PC where the dongle is connected to. The license is bound to the USB dongle. The dongle can be used alternately with different PC.



30-days demo license

TH SCOPE can be used free of charge and with complete functionality for 30 days. Thereafter the demo license is no longer valid.

8.2 Activate license

Licensing on PC - with internet access

1. Start the License Manager with **Start → All Programs → Softing License Manager → License Manager V4.**
2. Select **Activate for this PC.**
3. Enter your license key in the following format: XXXXX-XXXXX-XXXXX-XXXXX into the field **License Key.**
4. Click **[Activate license].**
5. After a successful activation your license is displayed in the list **Available licenses on this PC.**

Licensing on PC - without internet access

1. Start the License Manager on the PC where you want to use the license. Select **Start → All Program → Softing License Manager → License Manager V4.**
2. Select **Activate for this PC.**
3. Click **Export PC-Is...**
4. Select your PC and click **[OK]** in order to save the file.
5. Transfer this file to a PC with internet access and License Manager installed in the current version.
6. Start the License Manager. Switch to **Generate license file for remote PC.** Enter the license key. Click **Import PC-Id from remote PC....**
7. Select **Generate and export license file... .**
8. Save this file and transfer the file to the original PC.
9. Select **Activate for this PC.**
10. Click **[Import license file]** and import the file.
11. Then click **[Activate license].**
12. After a successful activation your license is displayed in the list **Available licenses on this PC.**

Licensing on USB dongle

1. Connect the dongle to a PC with internet access.
2. Start the License Manager with **Start → All Programs → Softing License Manager → License Manager V4.**
3. Enter your license key in the following format: XXXXX-XXXXX-XXXXX-XXXXX into the field **License Key.**

4. Click **[Activate license]**.
5. After a successful activation your license is displayed in the list **Available licenses on this PC** and is copied to the internal dongle memory.

9 Start TH SCOPE

To start TH SCOPE proceed as follows:

1. Open the Windows start menu.
2. Select **All Programs → Softing → TH SCOPE**.
3. Then select **TH SCOPE**:

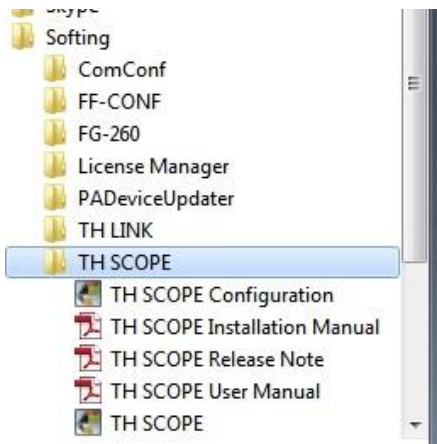


Figure 5: TH SCOPE start menu

4. The default browser on your PC opens with the following website:

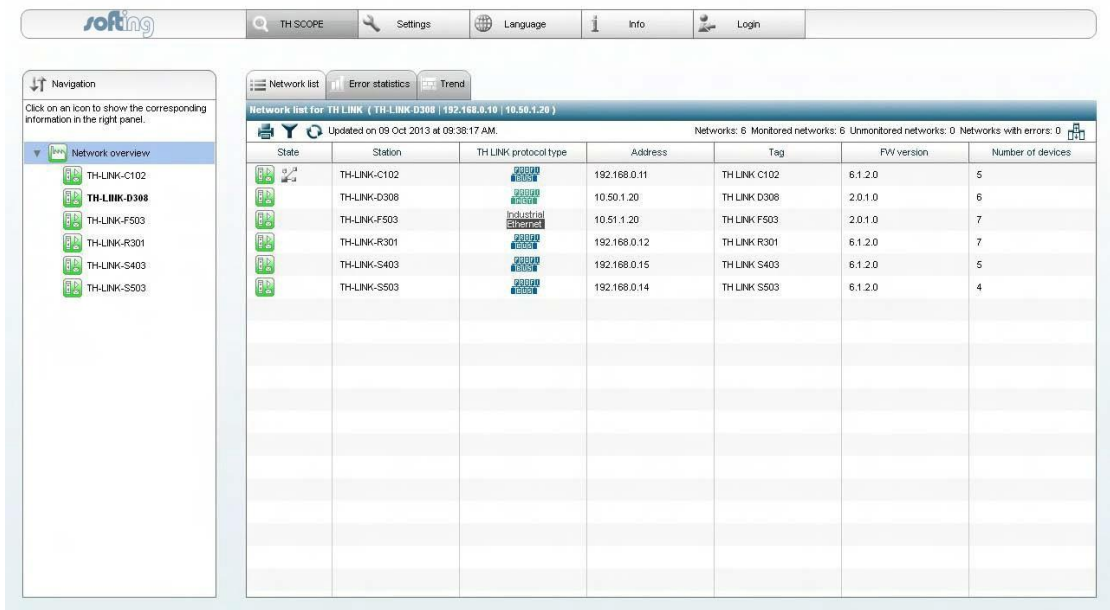


Figure 6: Start page

**Note**

If you want to access from another PC (see point 3 in [Network settings](#)) to the TH SCOPE (see point 1 in [Network settings](#)), enter the following URL into the address bar of your browser:

http://Computer name/THSCOPE

<computer name> is the computer name or IP address of the PC on which the TH SCOPE is installed.

**Note**

If TH SCOPE does not find stations, additional settings may be required. They are described in the User Manual.

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Related Documents

TH SCOPE

- User Manual

Softing Industrial Automation GmbH

Richard-Reitzner-Allee 6
85540 Haar / Germany
Tel: + 49 89 4 56 56-0
Fax: + 49 89 4 56 56-488
Internet: <http://industrial.softing.com>
Email: info.automation@softing.com
Support: support.automation@softing.com

