

How do you create a communication of WEB with an Industrial Thin Client SIMATIC ITC?

Thin Client

FAQ • August 2012



Service & Support

Answers for industry.

SIEMENS

This entry is from the Siemens Industry Online Support. The general terms of use (http://www.siemens.com/terms_of_use) apply.

Clicking the link below directly displays the download page of this document.

<http://support.automation.siemens.com/WW/view/en/63401599>

Caution

The functions and solutions described in this article confine themselves to the realization of the automation task predominantly. Please take into account furthermore that corresponding protective measures have to be taken up in the context of Industrial Security when connecting your equipment to other parts of the plant, the enterprise network or the Internet. Further information can be found under the Content-ID 50203404.

<http://support.automation.siemens.com/WW/view/en/50203404>

Question

How do you create a communication of WEB with an Industrial Thin Client SIMATIC ITC?

Answer

The instructions and notes listed in this document provide a detailed answer to this question.

Table of content

1	Industrial Thin Client SIMATIC ITC – Getting Started	4
1.1	Introduction.....	4
1.2	Setup Assistant	4
1.3	Web (HTTP)	5
1.3.1	Preparations on the target computer (server computer)	5
1.3.2	Settings for the Industrial Thin Client SIMATIC ITC.....	13
1.3.3	Additional setting for a Web connection.....	16
1.3.4	Create a new Web connection	18

1 Industrial Thin Client SIMATIC ITC – Getting Started

1.1 Introduction

With the new Industrial Thin Client SIMATIC ITC you have a powerful Thin Client solution in your hands. This device offers a wide range of connection protocols which are rounded up with other useful features.

these features are:

- Media Mapping
- PDF Reader
- Web Browser

This document helps you do the first steps with the device in order to establish a first connection to a remote computer.

1.2 Setup Assistant

To set up a first connection only a few steps are necessary. Right after the first power up or after a factory reset the setup assistant appears. The assistant helps you do the initial settings. The Setup Assistant is identical for the most part for all available connection types. These connection types are:

- RDP (Remote Desktop Protocol)
- VNC (Virtual Network Computing)
- Sm@rtServer
- Web (HTTP)

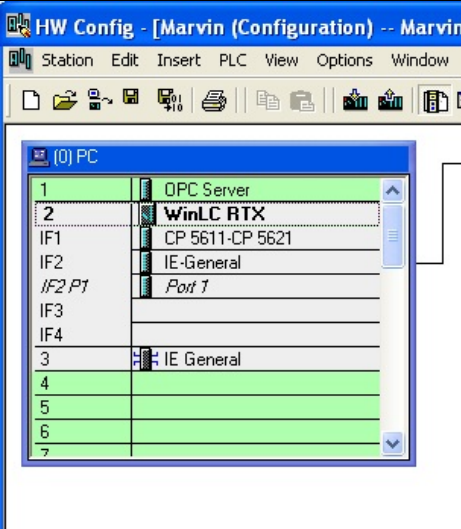
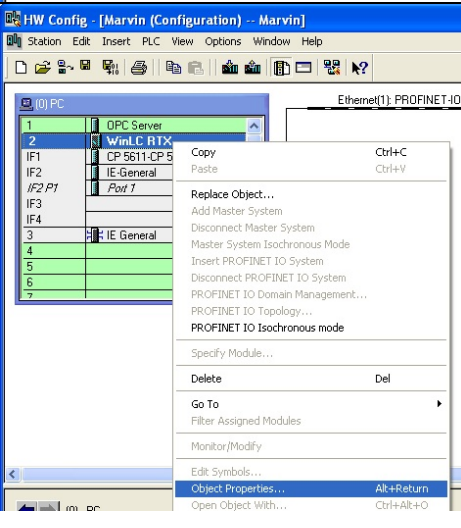
Before you can use any of these connections some prerequisites are necessary.

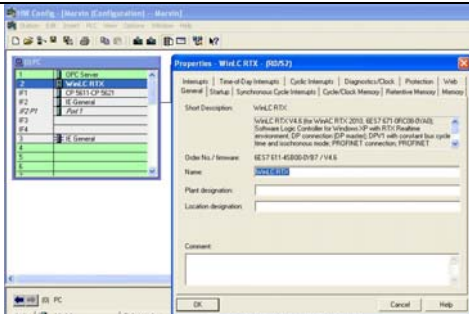
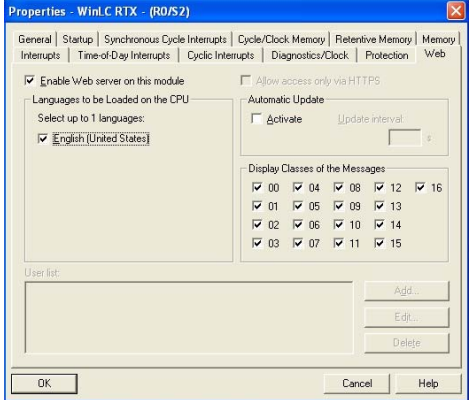
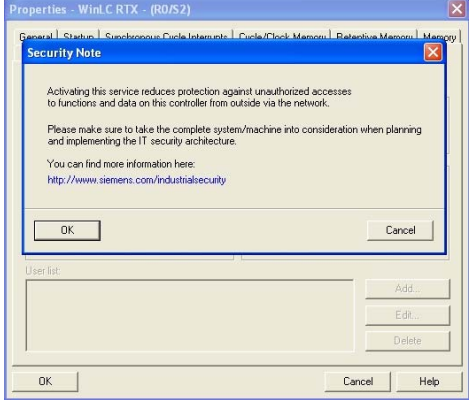
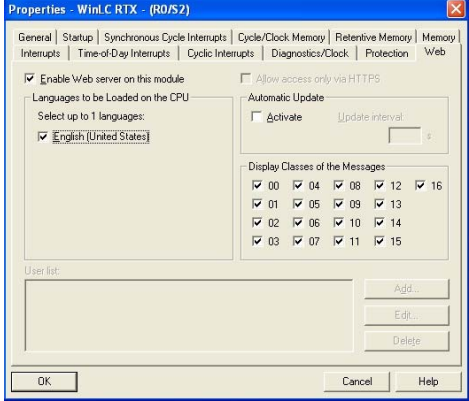
1.3 Web (HTTP)

1.3.1 Preparations on the target computer (server computer)

A Web connection is based on the Hypertext Transfer Protocol, which is an operating system independent interface between a server computer and a client computer. The server functionality can be provided at a computer running almost any operating system. The client functions are available on almost any operating system as well.

In this case a client program (typically a web browser) requests information from the server computer and displays them on a screen. Since this is a universal protocol it is used in a system with a diverse set of operating systems. Many of the SIMATIC products also host a web server providing basic information about the system. The next few steps will show you how to activate the server.

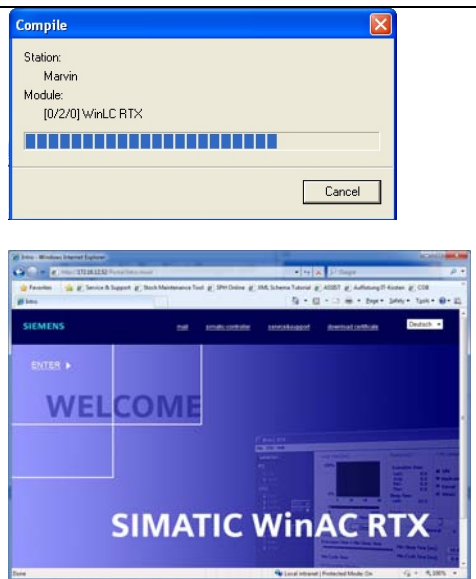
<p>Open the SIMATIC Manager and create a hardware configuration.</p>	
<ul style="list-style-type: none"> • A right click on the CPU (here WinLC RTX) opens a context menu as shown in the Screenshot. • Select the entry „Object Properties“ 	

<p>Choose the tab named „Web“.</p>	
<p>The now displayed view allows you to enable the integrated web server.</p>	
<p>The security warning needs to be acknowledged with „OK“</p>	
<ul style="list-style-type: none"> • Choose a maximum of 2 out of 5 default languages.. • Click „OK“ 	

- Save and compile the changes in the hardware configuration.
- Load the changes into the target system.

Note

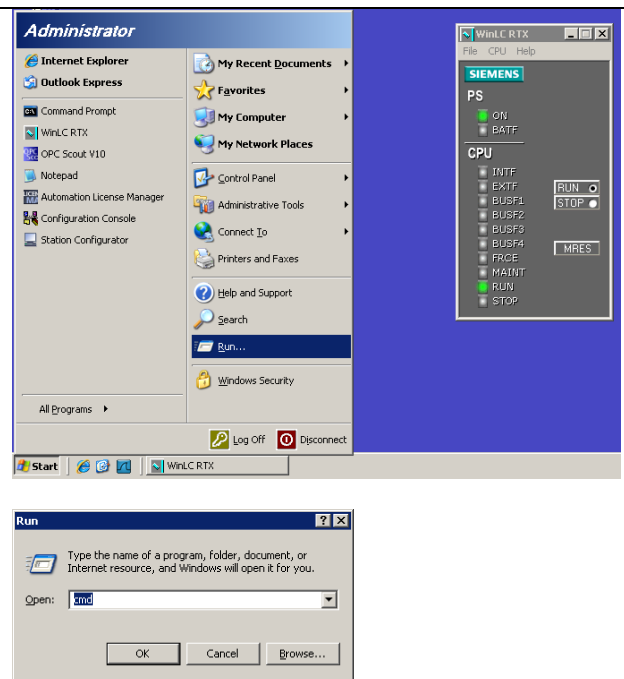
As a test you may now open your web browser and type the IP address of the CPU integrated Ethernet Interface into the address bar.

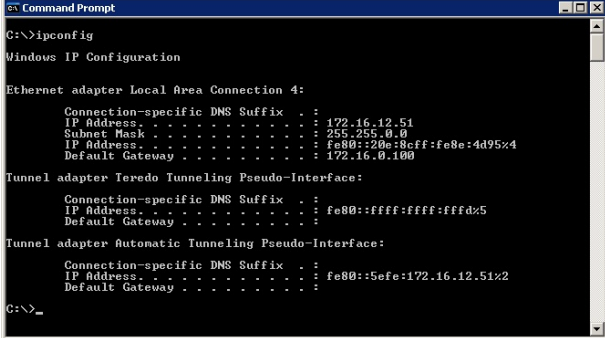
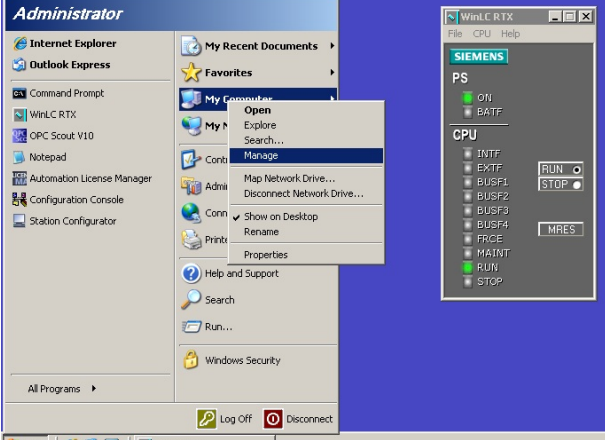
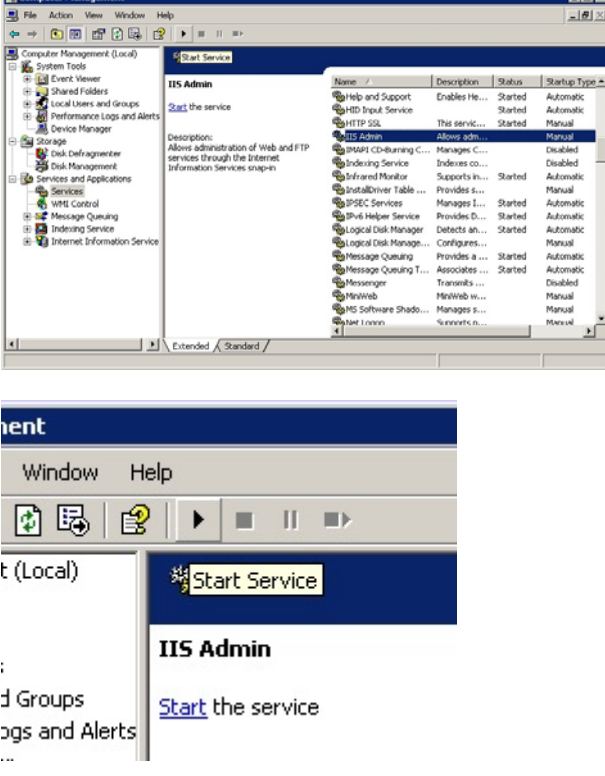


With these settings the prerequisites are made at the controller to display the default web pages of the CPU on the Industrial Thin Client SIMATIC ITC.

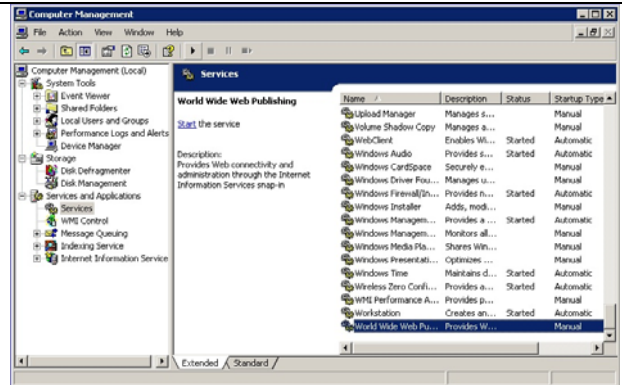
To activate the Web Server integrated into Windows Embedded Standard 2009 (WES2009) follow the next steps.

- Click on the Windows „Start“ button.
- Select the entry „Run“
- Enter the command „cmd“ into the textbox and click on „OK“

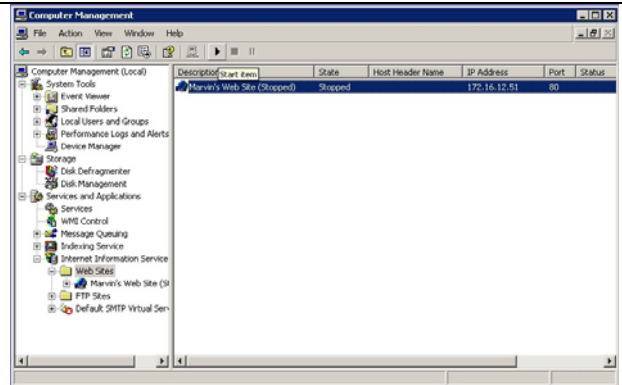


<p>Write down the IP address of the server computer. Type the command „ipconfig“ and hit return. e.g.: 172.16.12.51/ 16</p>	 <pre> C:\>ipconfig Windows IP Configuration Ethernet adapter Local Area Connection 4: Connection-specific DNS Suffix . : IP Address. : 172.16.12.51 Subnet Mask : 255.255.0.0 IP Address. : fe80::20e:8cff:fe0e:4d95%4 Default Gateway : 172.16.0.100 Tunnel adapter Teredo Tunneling Pseudo-Interface: Connection-specific DNS Suffix . : IP Address. : fe80::ffff:ffff:ffff:5 Default Gateway : Tunnel adapter Automatic Tunneling Pseudo-Interface: Connection-specific DNS Suffix . : IP Address. : fe80::5efe:172.16.12.51%2 Default Gateway : </pre>																																																																												
<ul style="list-style-type: none"> • Click at the Windows „Start“ button. • Right click on „Computer“ opens a context menu as shown in the Screenshot. • Select the entry „Manage“. 																																																																													
<ul style="list-style-type: none"> • This opens the „Computer Management“ Console. • Select the entry „Services and Applications“ – „Services“. • This displays a list of services. • Choose the entry „IIS Admin“ • Start this service by click onto the „Start“ Symbol at the upper end of the “Computer Management” console. 	 <p>The screenshot shows the 'Start Service' dialog box for the 'IIS Admin' service. The dialog has a title bar 'Start Service' and a menu bar with 'Window' and 'Help'. It contains a list of services with columns for Name, Description, Status, and Startup Type. The 'IIS Admin' service is selected, and its status is 'Stopped'. The 'Start' button is highlighted.</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Description</th> <th>Status</th> <th>Startup Type</th> </tr> </thead> <tbody> <tr> <td>Help and Support</td> <td>Enables He...</td> <td>Started</td> <td>Automatic</td> </tr> <tr> <td>HTTP Input Service</td> <td>This servic...</td> <td>Started</td> <td>Automatic</td> </tr> <tr> <td>HTTP.sys</td> <td>This servic...</td> <td>Started</td> <td>Manual</td> </tr> <tr> <td>IIS Admin</td> <td>Allows adm...</td> <td>Stopped</td> <td>Manual</td> </tr> <tr> <td>ISMAP CD-Burning C...</td> <td>Manages C...</td> <td>Disabled</td> <td>Disabled</td> </tr> <tr> <td>Indexing Service</td> <td>Indexes co...</td> <td>Stopped</td> <td>Automatic</td> </tr> <tr> <td>Infrared Monitor</td> <td>Supports in...</td> <td>Started</td> <td>Automatic</td> </tr> <tr> <td>Installation Table ...</td> <td>Provides s...</td> <td>Stopped</td> <td>Manual</td> </tr> <tr> <td>IPSEC Services</td> <td>Manages I...</td> <td>Started</td> <td>Automatic</td> </tr> <tr> <td>IPv6 Helper Service</td> <td>Provides D...</td> <td>Started</td> <td>Automatic</td> </tr> <tr> <td>Logical Disk Manager</td> <td>Detects an...</td> <td>Started</td> <td>Automatic</td> </tr> <tr> <td>Logical Disk Manage...</td> <td>Configures...</td> <td>Stopped</td> <td>Manual</td> </tr> <tr> <td>Message Queuing</td> <td>Provides a ...</td> <td>Started</td> <td>Automatic</td> </tr> <tr> <td>Message Queuing T...</td> <td>Associates ...</td> <td>Started</td> <td>Automatic</td> </tr> <tr> <td>Messenger</td> <td>Transmits ...</td> <td>Stopped</td> <td>Disabled</td> </tr> <tr> <td>MinWeb</td> <td>MinWeb in...</td> <td>Stopped</td> <td>Manual</td> </tr> <tr> <td>MS Software Shado...</td> <td>Manages s...</td> <td>Stopped</td> <td>Manual</td> </tr> <tr> <td>Start IIS Admin</td> <td>Starts the ...</td> <td>Stopped</td> <td>Manual</td> </tr> </tbody> </table>	Name	Description	Status	Startup Type	Help and Support	Enables He...	Started	Automatic	HTTP Input Service	This servic...	Started	Automatic	HTTP.sys	This servic...	Started	Manual	IIS Admin	Allows adm...	Stopped	Manual	ISMAP CD-Burning C...	Manages C...	Disabled	Disabled	Indexing Service	Indexes co...	Stopped	Automatic	Infrared Monitor	Supports in...	Started	Automatic	Installation Table ...	Provides s...	Stopped	Manual	IPSEC Services	Manages I...	Started	Automatic	IPv6 Helper Service	Provides D...	Started	Automatic	Logical Disk Manager	Detects an...	Started	Automatic	Logical Disk Manage...	Configures...	Stopped	Manual	Message Queuing	Provides a ...	Started	Automatic	Message Queuing T...	Associates ...	Started	Automatic	Messenger	Transmits ...	Stopped	Disabled	MinWeb	MinWeb in...	Stopped	Manual	MS Software Shado...	Manages s...	Stopped	Manual	Start IIS Admin	Starts the ...	Stopped	Manual
Name	Description	Status	Startup Type																																																																										
Help and Support	Enables He...	Started	Automatic																																																																										
HTTP Input Service	This servic...	Started	Automatic																																																																										
HTTP.sys	This servic...	Started	Manual																																																																										
IIS Admin	Allows adm...	Stopped	Manual																																																																										
ISMAP CD-Burning C...	Manages C...	Disabled	Disabled																																																																										
Indexing Service	Indexes co...	Stopped	Automatic																																																																										
Infrared Monitor	Supports in...	Started	Automatic																																																																										
Installation Table ...	Provides s...	Stopped	Manual																																																																										
IPSEC Services	Manages I...	Started	Automatic																																																																										
IPv6 Helper Service	Provides D...	Started	Automatic																																																																										
Logical Disk Manager	Detects an...	Started	Automatic																																																																										
Logical Disk Manage...	Configures...	Stopped	Manual																																																																										
Message Queuing	Provides a ...	Started	Automatic																																																																										
Message Queuing T...	Associates ...	Started	Automatic																																																																										
Messenger	Transmits ...	Stopped	Disabled																																																																										
MinWeb	MinWeb in...	Stopped	Manual																																																																										
MS Software Shado...	Manages s...	Stopped	Manual																																																																										
Start IIS Admin	Starts the ...	Stopped	Manual																																																																										

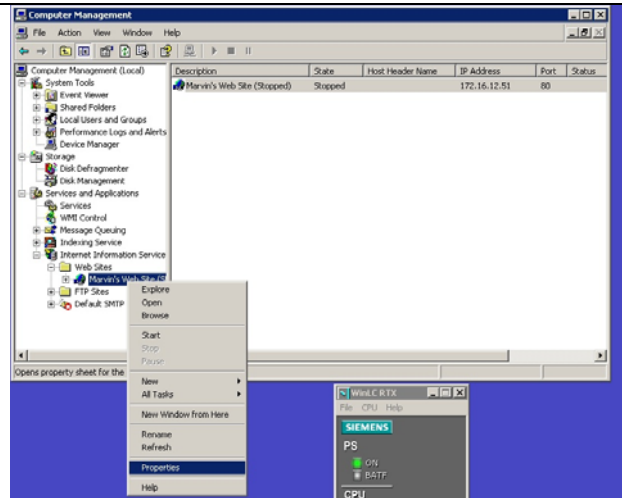
To the same thing for the service called „World Wide Web Publishing“.

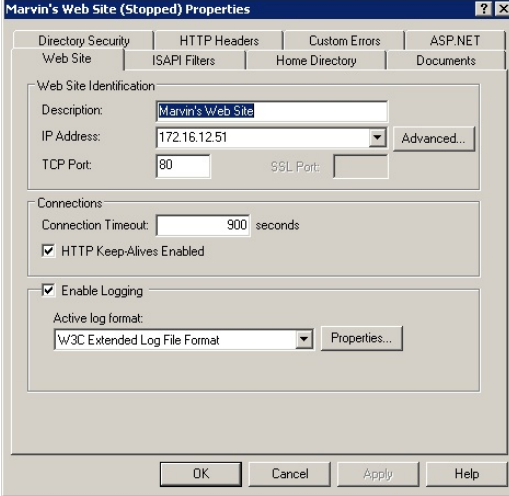
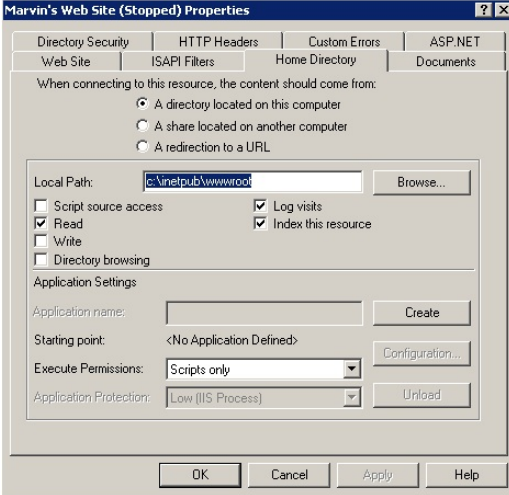
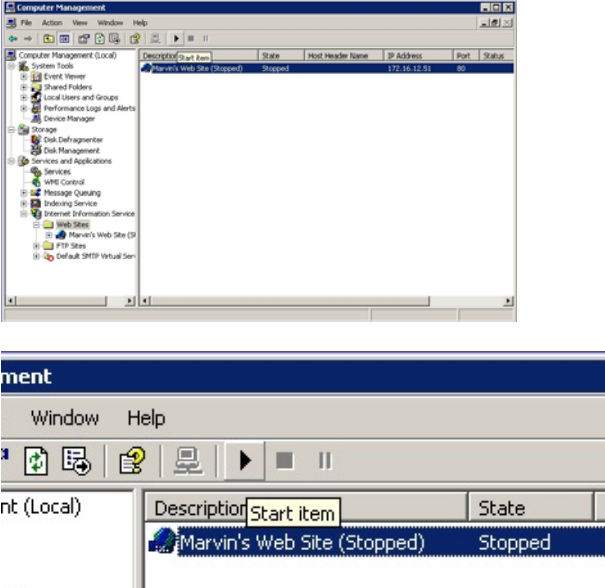


- Select as the next step the entry „Internet Information Service“ below the „Services and Applications“ in the left tree view.
- Go further down in the hierarchy to the entry „web sites“.

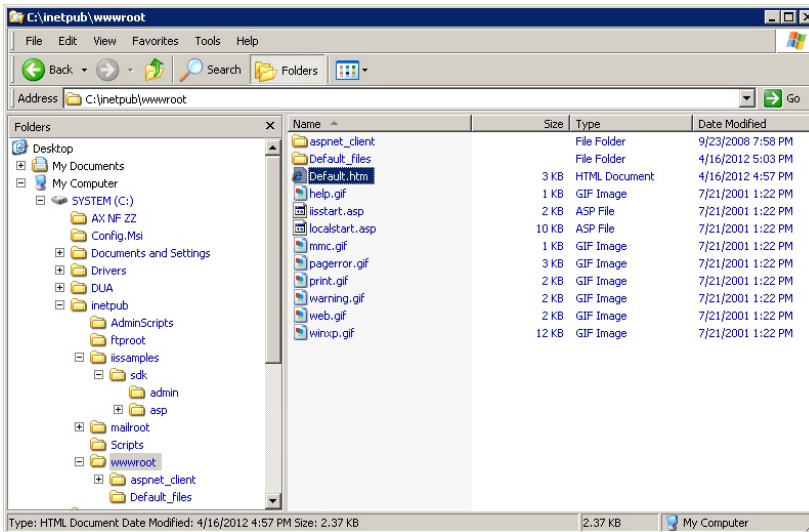


Right click opens a context menu. Select the entry „Properties“.



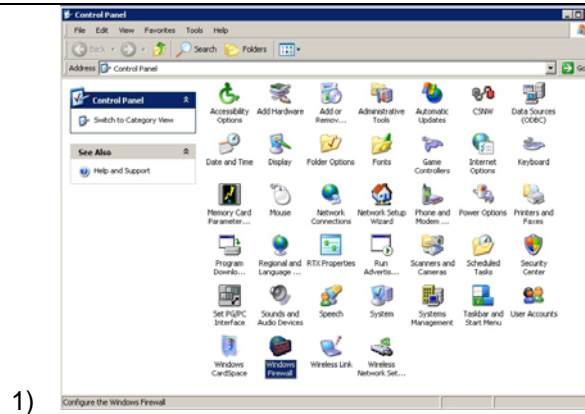
<p>Bind server to the IP address of the Windows PC and define the Port to be used. e.g.: 172.16.12.51:80</p>	
<ul style="list-style-type: none"> • Assign the default directory for all the web pages. • Apply the changes with „OK“ 	
<p>Start the server in a similar way the services have been started..</p>	

This concludes the essential settings on the Windows PC. The only thing missing is your webpage in the default directory (previously configured).

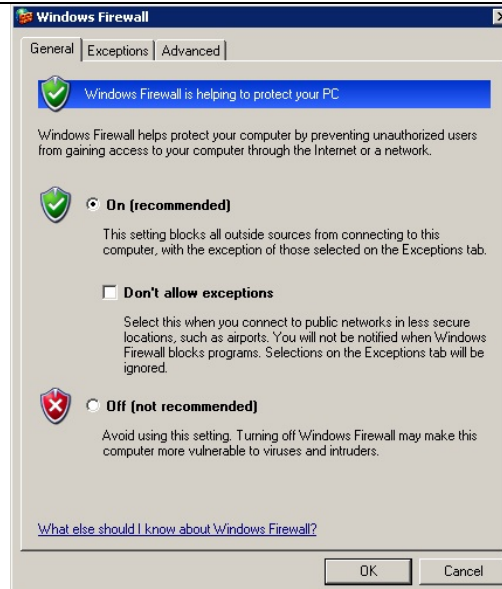


It may be necessary to unblock the incoming requests on the configured port in the Windows Firewall. Add an exception rule as described as follows.

Open the control Panel and Double click on the „Windows Firewall“



- Make sure the Firewall is activated.
- Select the tab „Exceptions“.



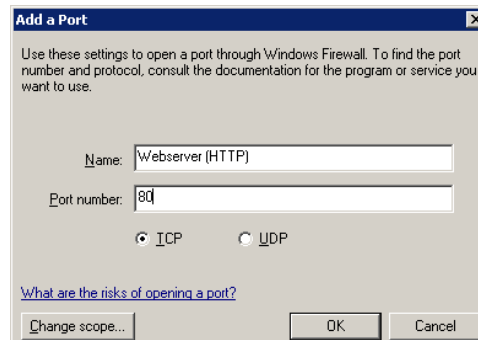
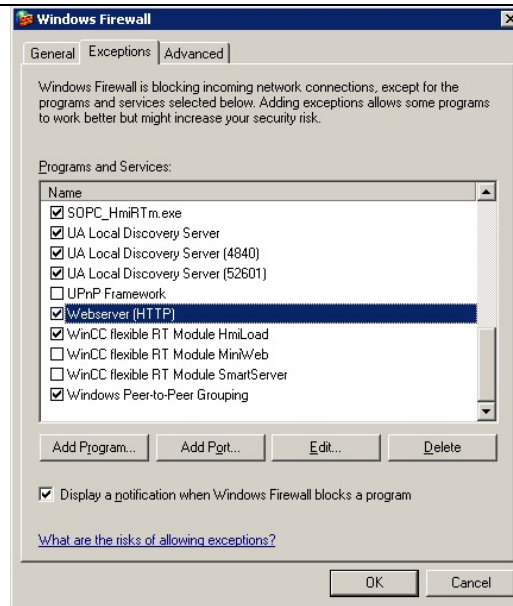
- Look for an entry „Webserver (HTTP)“.
- Check this exception.

Note

In case there is no such entry, create a new exception by clicking on “Add Port ...”

“

- Assign a name for the port (here: Webserver (HTTP) and Port 80) and select TCP as protocol.



1.3.2 Settings for the Industrial Thin Client SIMATIC ITC

The Setup Assistant appears either at the first power on or after a reset to factory defaults.

- Choose the desired user interface language in the upper right corner.
- Assign the device name.

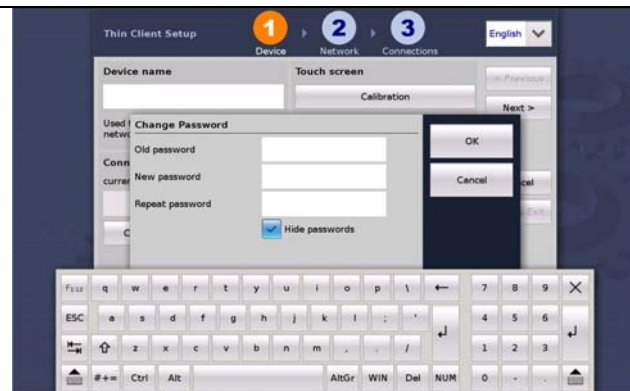


Type the device name into the textbox. Use the OnScreen keyboard, which appears.

Note
As an alternative you may also use an USB Keyboard.



- The next step is to change the standard password from „admin“ into something else. Hit the Button „**Change administrator password**“
- Enter at first the current password (default is „admin“) and assign a new password.
- Repeat the new password by retyping it.
- Activate the new password with a click on the „OK“ Button.



Assign an IP address on the next page. In order to do that hit the „Next” Button at the upper right corner



- Select „Dynamic“, if you have an active DHCP server in the network. If so, select the method the device should use to authenticate itself to the DHCP server. Possible options are:
 - using the MAC address
 - using the Device name
- With „Static“ you manually enter the IP parameter.



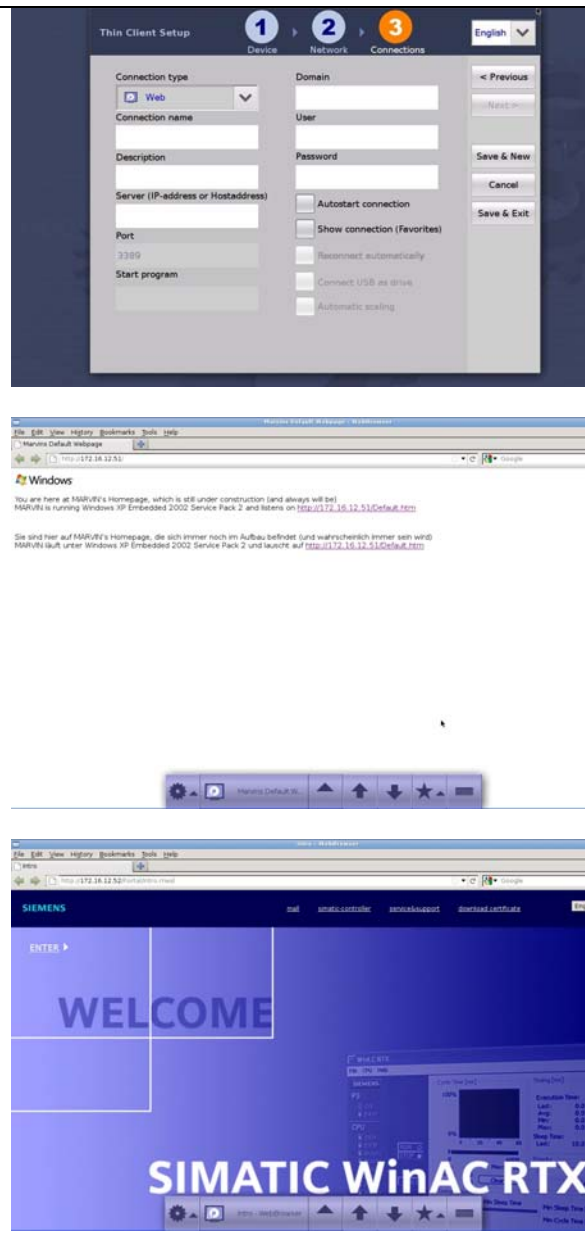
- Assign an IP address from within the same subnet as the target computer is in to the Industrial Thin Client SIMATIC ITC. Here e.g.
 - IP : 172.16.100.240
 - Subnet mask: 255.255.0.0
- Go to the next page by hitting the „Next” button.



- Select „Web“ for the connection type.
- Name the connection for easier identification later on.
- Type the previously noted IP address of your target computer into the „Server“ field here e.g.: 172.16.12.51
- Acknowledge the settings with „Save & Exit“

Note
After a reinitialization your webpage will appear.

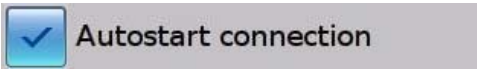



Note
In case you use the CPU integrated IP address as server the standard CPU web pages will appear



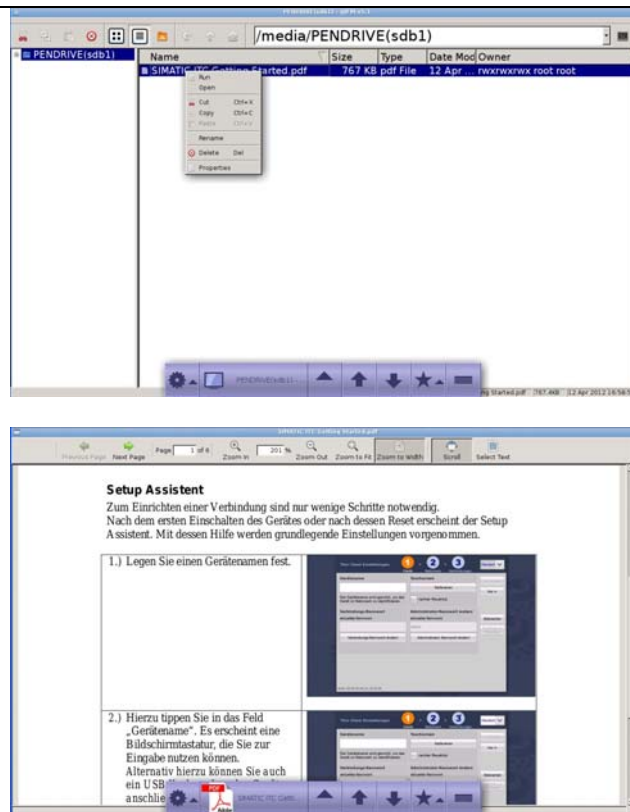
This finalizes the initial settings for the Industrial Thin Client SIMATIC ITC. This enables the device to establish your first connection to the target computer.

1.3.3 Additional setting for a Web connection

There are some more settings you can apply to a connection. They may be useful depending on the situation the Industrial Thin Client SIMATIC ITC is being used.






<p>Enabling the checkbox „Autostart connection“ initiates an automatic connection establishment on startup of the Industrial Thin Client SIMATIC ITC.</p>	
<p>If you enable the „Show connection (Favorites)“ this connection will be listed in your favorites list. This allows for a quick connection change.</p>	
<p>This setting can't be enabled in a web based connection. You will not have access to media (such as USB stick or USB hard drive) connected per USB on the remote computer</p> <p>The connected devices are accessible on the local Industrial Thin Client SIMATIC ITC. For this click on the menu and select the entry „USB devices“.</p> <p>This opens the MediaExplorer</p>	
<p>The MedienExplorer allows access to files and documents on the USB media.</p> <p>Hit the folder on the left side tree view to see the content of that folder.</p>	

You may even read PDF files, since there is a PDF reader integrated into the Industrial Thin Client SIMATIC ITC. This allows you to read Manuals such as this Getting Started. Double click onto the PDF file.



1.3.4 Create a new Web connection

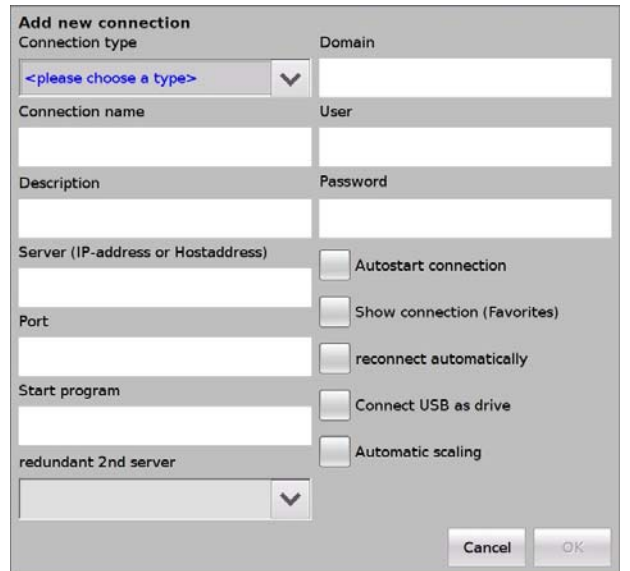
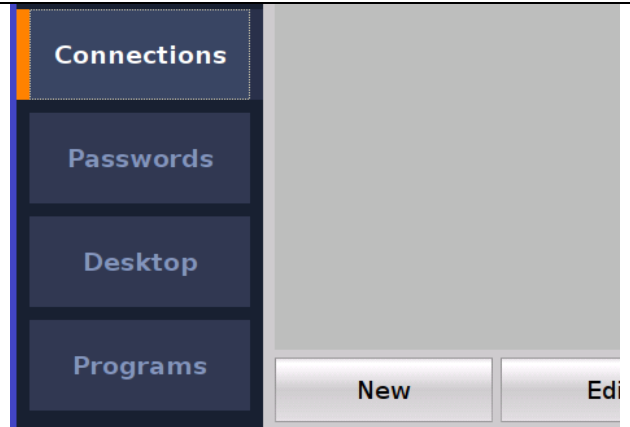
With the Industrial Thin Client SIMATIC ITC it is possible to keep more than one connection operating. For this to work you need to create a new connection. Proceed as described to create a new connection.

<ul style="list-style-type: none">Click in the Industrial Thin Client SIMATIC ITC Menu onto the settings symbol . A menu will open up.Click on the entry „Configuration“	
<p>In the Overview screen choose the left Symbol  to allow changes.</p>	
<p>Type in the Administrator password for the Industrial Thin Client SIMATIC ITC and hit „Logon“</p>	

Select in the left list the entry „Connections“



Click on „New“ to create a new connection. There will be a new dialog allowing for the same settings to be made as the Setup Assistant did.



Click on „Edit“ to adjust connection settings for an existing connection. A dialog will open up to allow all relevant changes to be made for the selected connection.

