

# How do you create a communication of Sm@rtServer with an Industrial Thin Client SIMATIC ITC?

Thin Client

FAQ • August 2012



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### **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.

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## Question

How do you create a communication of Sm@rtServer with an Industrial Thin Client SIMATIC ITC?

## Answer

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

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# 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.

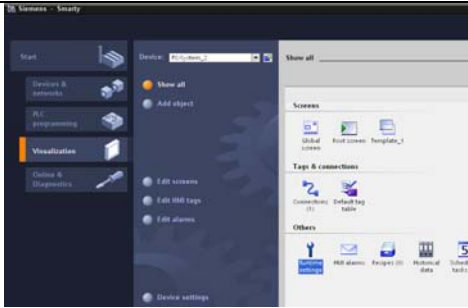
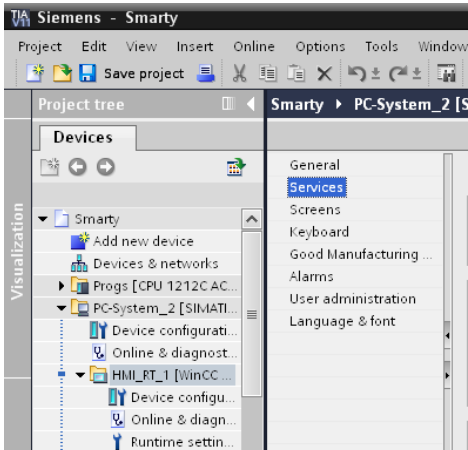
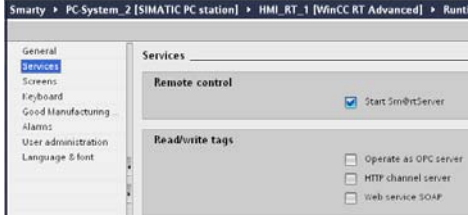
## 1.3 Sm@rtAccess


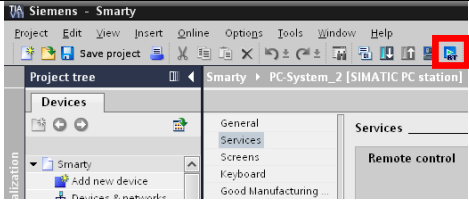
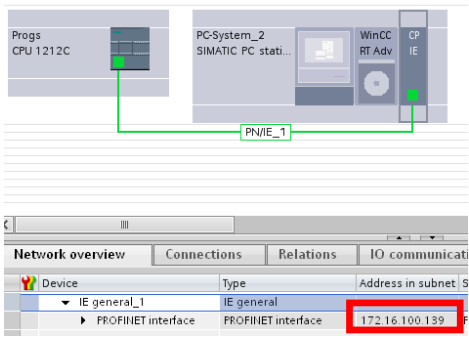

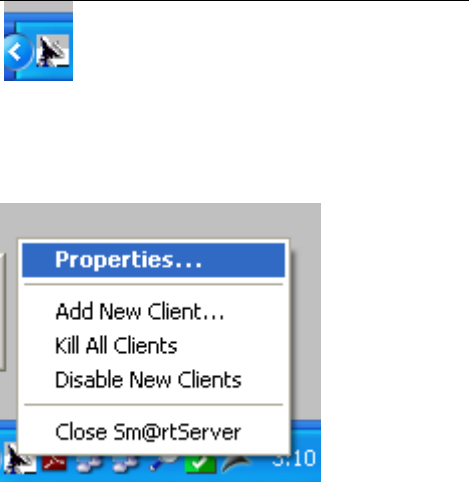
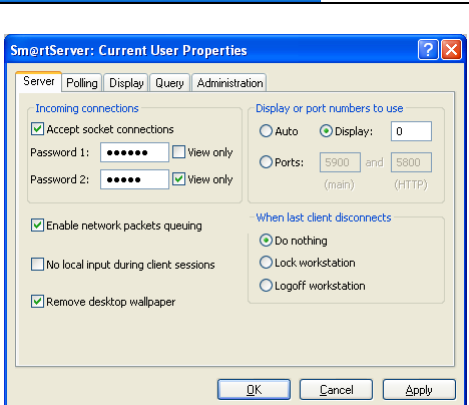
### 1.3.1 Preparations on the target computer (server computer)

A Sm@rtAccess connection uses a Siemens proprietary protocol and can only be used with Siemens Visualizationsystems. The server functionality will be provided by a Computer running a WinCC Advanced Runtime or WinCC flexible Runtime system. A SIMATIC Panel also provides this functionality. The Client functionality is realized by an Industrial Thin Client SIMATIC ITC. This type of connection can be used in an installation of multiple independent operating SIMATIC visualization systems.

The next few steps will show you how to activate the server.

#### Setup a Sm@rtServers with WinCC Advanced RT

<ul style="list-style-type: none"> <li>• Open the TIA Portal</li> <li>• Open your project and select the tab „Visualizations“.</li> <li>• A Double click onto „Runtime Settings“ opens a setup window for the visualization system.</li> </ul>	 
<p>Select the entry „Services“ and set the checkbox „Start Sm@rtServer“</p>	

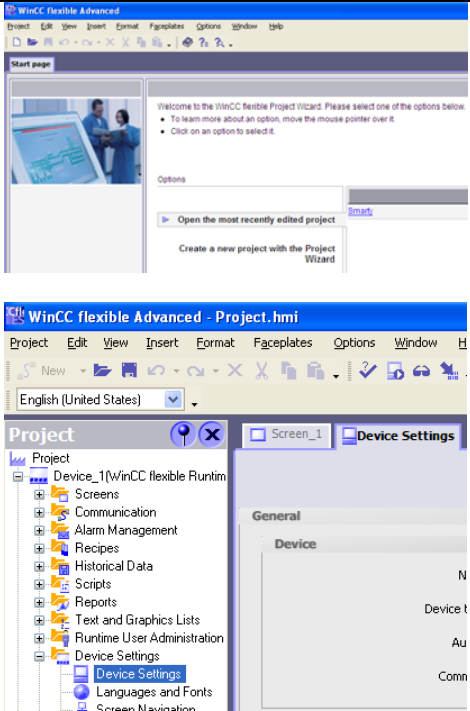

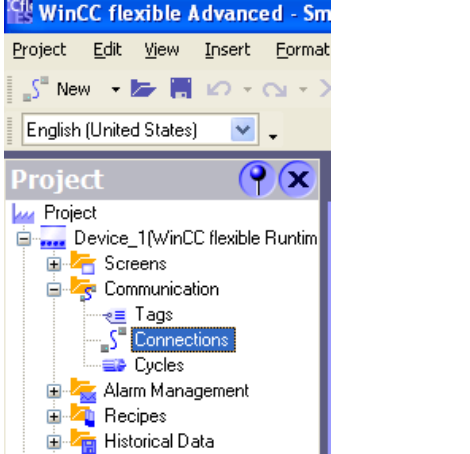
<p>Start the Runtime by clicking onto the  button. When using a Panel you need to download the modified settings.</p>										
<p>As next step open the network view and make a note of the server computers IP address. e.g.: 172.16.100.139</p>	 <table border="1"> <thead> <tr> <th>Device</th> <th>Type</th> <th>Address in subnet S</th> </tr> </thead> <tbody> <tr> <td>IE general_1</td> <td>IE general</td> <td></td> </tr> <tr> <td>  PROFINET interface</td> <td>PROFINET interface</td> <td>172.16.100.139</td> </tr> </tbody> </table>	Device	Type	Address in subnet S	IE general_1	IE general		PROFINET interface	PROFINET interface	172.16.100.139
Device	Type	Address in subnet S								
IE general_1	IE general									
PROFINET interface	PROFINET interface	172.16.100.139								
<ul style="list-style-type: none"> <li>With the RT started a new icon  appears in the notification area of the Windows Task.</li> </ul> <p><b>Note</b> In case you are operating in Full Screen Mode, hit the „Ctrl+Esc“ keys to get to the Windows Task Bar.</p> <ul style="list-style-type: none"> <li>Right Click on the icon. Select the „Properties“ entry from the now open context menu.</li> </ul>										
<p>Assign Passwords to authenticate users trying to establish a connection. You may assign two different passwords. The checkbox next to the password limits the functionality to „View only“ when set.</p> <p><b>Note</b> The Sm@rtAccess Server is now ready to accept connections from the Industrial Thin Client SIMATIC ITC.</p>										

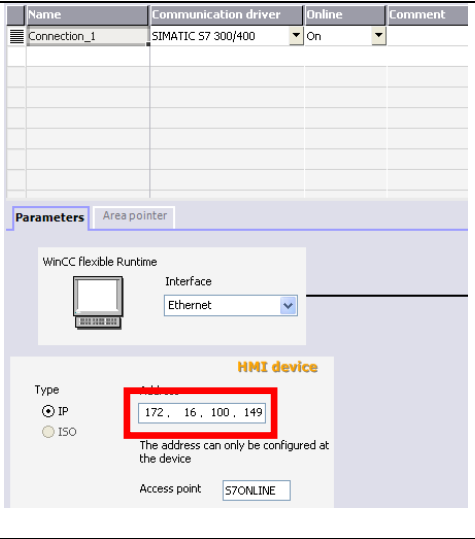

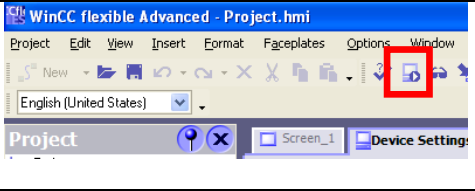

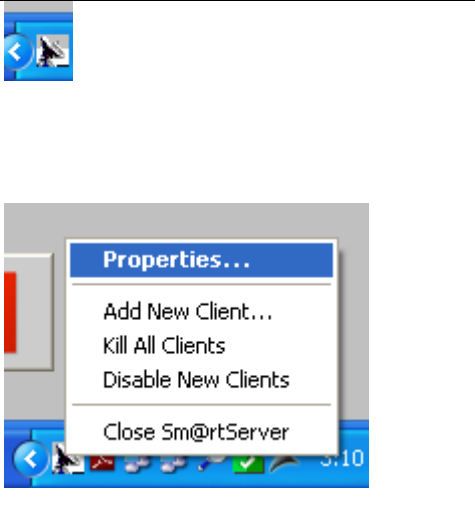
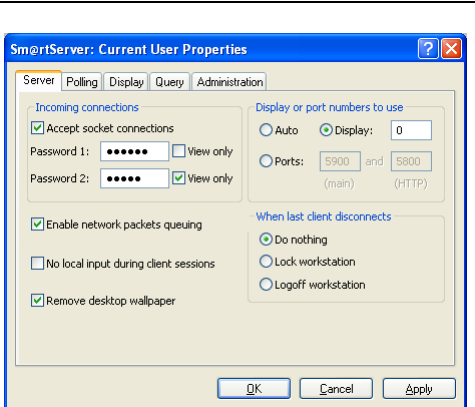
**Note**

At a ComfortPanel the password assignment is located in the ControlPanel of that device. The applet can be reached via WinCC Runtime Settings. You must load the Panel at least once with the modified settings before you will be able to set the passwords.

### Setup a Sm@rtServers with WinCC flexible RT

The settings to activate the Sm@rtAccess Server in WinCC flexible are very similar to those in a TIA Portal



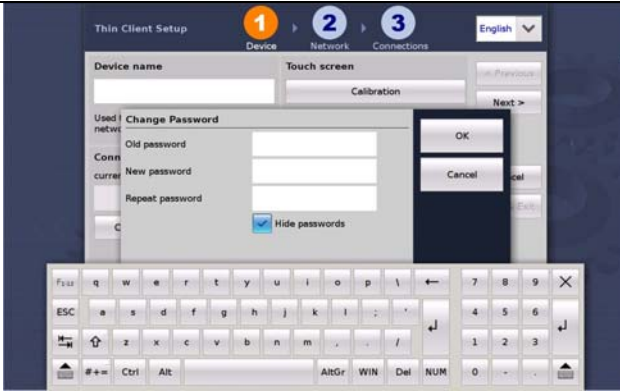
<ul style="list-style-type: none"> <li>• Open your WinCC flexible</li> <li>• Select your project and select your Visualizationsystem.</li>   <li>• Navigate to the entry „Device Settings“ in the project tree on the left side</li> <li>• Double click onto „Device Settings“ opens a settings window for the selected Visualizationsystem.</li> </ul>	 <p>The top screenshot shows the 'WinCC flexible Advanced' Project Wizard with a 'Start page' and 'Options' section. The bottom screenshot shows the 'WinCC flexible Advanced - Project.hmi' interface with the 'Project' tree on the left and the 'Device Settings' window on the right. The 'Device Settings' window has a 'General' tab and a 'Device' section.</p>
<p>Set the checkbox „Start up Sm@rtServer“ in the Runtime Services</p>	 <p>The 'Runtime services' window shows several checkboxes: 'Sm@rtAccess or Service: Start up Sm@rtServer' (checked), 'Sm@rtService: HTML pages', 'Sm@rtAccess: Web service (SOAP)', 'Sm@rtAccess: SIMATIC HMI HTTP Server', and 'Act as OPC server'.</p>
<ul style="list-style-type: none"> <li>• Navigate now to the „Connections“ under the „Communication“ entry in the project tree and open the „Connections“ via double click.</li>   <li>• Make a note of the server computers IP address e.g.: 172.16.100.149</li> </ul>	 <p>The screenshot shows the 'WinCC flexible Advanced - Sm' interface with the 'Project' tree on the left. The 'Communication' folder is expanded, and the 'Connections' entry is highlighted with a double-click action.</p>

	
<p>Start the Runtime by clicking onto the  button. When using a Panel you need to download the modified settings.</p>	
<ul style="list-style-type: none"> <li>With the RT started a new icon  appears in the notification area of the Windows Task.</li> </ul> <p><b>Note</b> In case you are operating in Full Screen Mode, hit the „Ctrl+Esc“ keys to get to the Windows Task Bar.</p> <ul style="list-style-type: none"> <li>Right Click on the icon. Select the „Properties“ entry from the now open context menu.</li> </ul>	
<p>Assign Passwords to authenticate users trying to establish a connection. You may assign two different passwords. The checkbox next to the password limits the functionality to „View only“ when set.</p> <p><b>Note</b> The Sm@rtAccess Server is now ready to accept connections from the Industrial Thin Client SIMATIC ITC.</p>	



### 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.

<ul style="list-style-type: none"> <li>Choose the desired user interface language in the upper right corner.</li> <li>Assign the device name.</li> </ul>	
<ul style="list-style-type: none"> <li>Type the device name into the textbox. Use the OnScreen keyboard, which appears.</li> </ul> <p><b>Note</b> As an alternative you may also use an USB Keyboard.</p>	
<ul style="list-style-type: none"> <li>The next step is to change the standard password from „admin“ into something else. Hit the Button „<b>Change administrator password</b>“</li> <li>Enter at first the current password (default is „admin“) and assign a new password.</li> <li>Repeat the new password by retying it.</li> <li>Activate the new password with a click on the „OK“ Button.</li> </ul>	

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.





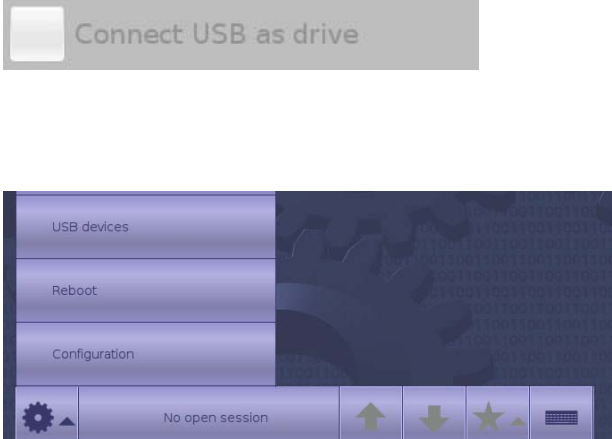
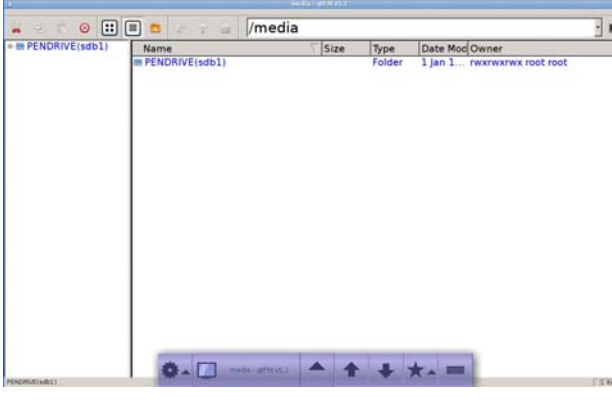
- Select „Sm@rtServer“ for the connection type.
- Name the connection for easier identification later on.
- Type the previously noted IP address of your server computer into the „Server“ field here: 172.16.100.149
- Acknowledge the settings with „Save & Exit“  
After a reinitialization your webpage will appear.



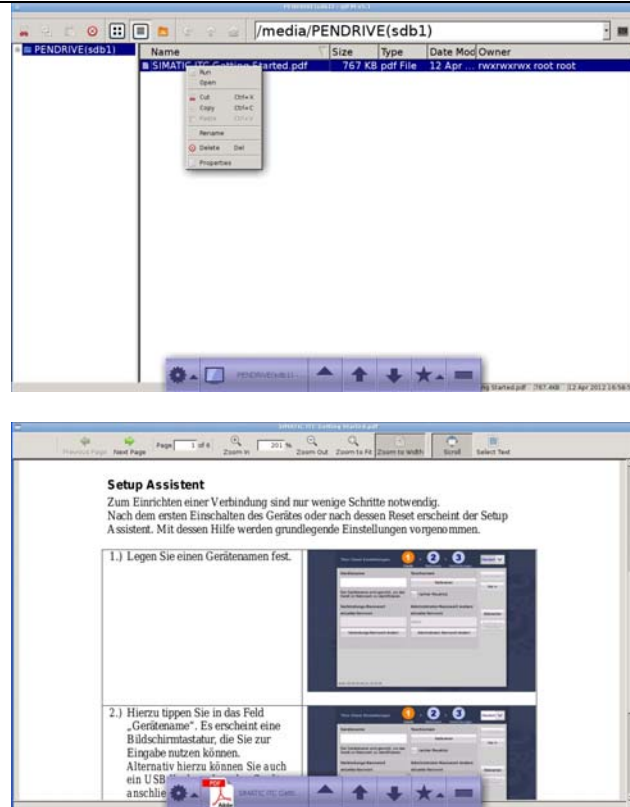
This finalizes the initial settings for the Industrial Thin Client SIMATIC ITC. This enables the device to establish your first connection to the target computer.

### 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 device.</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 <b>can't</b> be enabled in a web based connection. You will <b>not have access</b> 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.</p> <p>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 Sm@rtServer connection

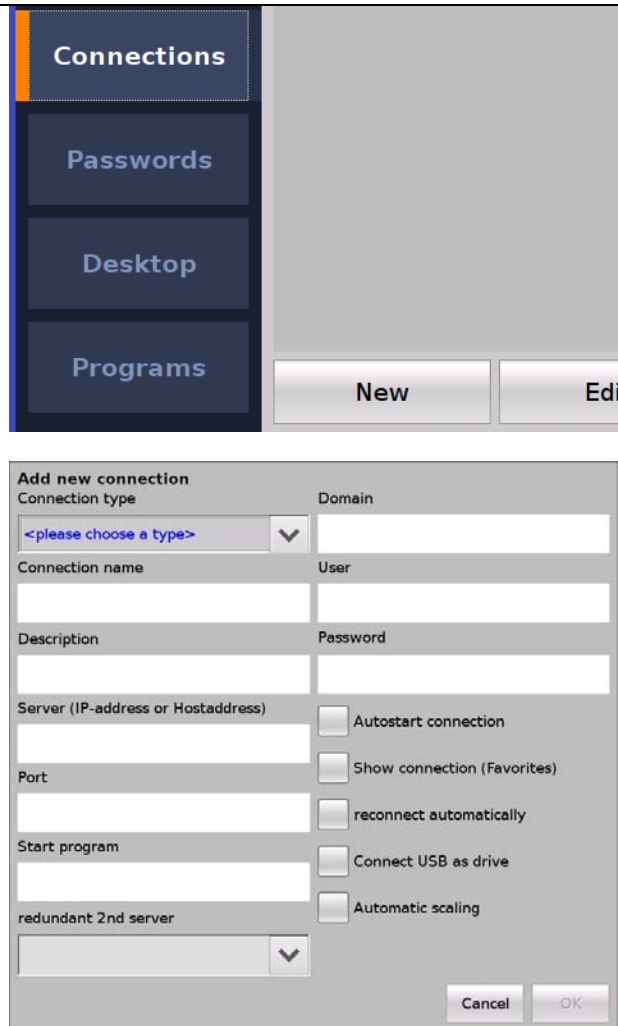
With the Industrial Thin Client SIMATIC ITC it is possible to keep more than one connection operating. For this to work you need to create a new connection. Proceed as described to create a new connection.

<ul style="list-style-type: none"> <li>Click in the Industrial Thin Client SIMATIC ITC Menu onto the settings symbol  A menu will open up</li> <li>Click on the entry „Configuration“</li> </ul>	
<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.

