SIEMENS

SIMATIC HMI

WinCC V7.0 SP1
MDM - WinCC/WebNavigator

System Manual

Print of the Online Help

11/2008

Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

> ⚠ **DANGER**
>
> indicates that death or severe personal injury **will** result if proper precautions are not taken.

> ⚠ **WARNING**
>
> indicates that death or severe personal injury **may** result if proper precautions are not taken.

> ⚠ **CAUTION**
>
> with a safety alert symbol, indicates that minor personal injury can result if proper precautions are not taken.

> **CAUTION**
>
> without a safety alert symbol, indicates that property damage can result if proper precautions are not taken.

> **NOTICE**
>
> indicates that an unintended result or situation can occur if the corresponding information is not taken into account.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation for the specific task, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

> ⚠ **WARNING**
>
> Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be adhered to. The information in the relevant documentation must be observed.

Trademarks

All names identified by ® are registered trademarks of the Siemens AG. The remaining trademarks in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owner.

Disclaimer of Liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

Table of contents

WinCC/WebNavigator Installation Notes

1

1 Resources

1.1 Welcome

Dear WinCC Customer:

With SIMATIC WinCC/WebNavigator , you can run and supervise your WinCC system via the Intranet or Internet. You can use your projects previously created with WinCC.

The WinCC/WebNavigator client is a so-called thin client which, integrated in the Internet Browser on a client PC, enables ongoing WinCC projects to be run and supervised without needing the entire WinCC Basic system to be installed on the PC. Additional configuration of the WebNavigator Client is not required. The project and the associated WinCC application are located on a server computer.

The operating system requirements of the WinCC/WebNavigator server are the same as those of the WinCC server.

When using WinCC/WebNavigator, please note the restrictions mentioned in this document.

We wish you much success and joy when using SIMATIC WinCC.

Regards, Your WinCC/WebNavigator Team

1.2 General information

Software Information Service

If you return the "WinCC Software Information Service" card, you will automatically receive the latest information on all SIMATIC WinCC products free of charge.

Information about licensing terms

Please observe the license conditions which appear during the installation process.

Please contact your Siemens AG representative for further information.

Contents of the WinCC DVD for WinCC/WebNavigator

- WebNavigator Client-side Controls
- WebNavigator Diagnose Client Control
- WebNavigator Server Software
- Documentation
- Release notes
- WinCC Remote Publisher
- WebNavigator Plug-In Builder
- Demo Project

1.3 Requirements

1.3.1 Hardware and Software

Introduction

This chapter describes the hardware and operating system requirements for WinCC/WebNavigator.

Note

A WebNavigator server cannot be operated on a WinCC client without a project of its own.

WinCC WebNavigator Client

Table 1-1   Hardware

	Minimum	Recommended
CPU	Pentium II; 300 MHz	E.g. Intel Core 2 Duo, AMD Athlon64
Working memory	256 MByte	1 GByte

Table 1-2   Software

Operating System:	Windows Vista SP1 Basic, Home, Ultimate, Enterprise, Business Windows XP Professional SP3 Windows Server 2003 SP2 or Server 2003 R2 SP2 Other operating systems such as WinCE or Win95 via MS Terminal Services
	Embedded XP in connection with Panel PC 477
Software:	Internet Explorer V6.0 SP1, V6.0 SP2 or V7.0 If you wish to use .NET and XAML controls, you must install .NET Framework 3.0.
Other:	Access to the intranet/Internet or TCP/IP connection to the Web server

WinCC/WebNavigator Server on a WinCC Single-User System

Table 1-3   Hardware

	Minimum	Recommended
CPU	Pentium III; 1 GHz	E.g. Intel Core 2 Duo, AMD Athlon64
Working memory	1 GByte	2 GByte

Table 1-4   Software

Operating System:	Windows Vista SP1 Enterprise, Ultimate, Business Windows XP Professional SP3 (max. 3 clients) Windows Server 2003 SP2 or Server 2003 R2 SP2
Software:	Internet Explorer V6.0 SP1, V6.0 SP2 or V7.0 WinCC Basic System V7.0 SP1
Other:	Access to the intranet/Internet or TCP/IP connection to the Web client

WinCC/WebNavigator Server on WinCC Server or WinCC Client with its own Project

Table 1-5   Hardware

	Minimum	Recommended
CPU	Pentium III; 1 GHz	E.g. Intel Core 2 Duo, AMD Athlon64
Working memory	1 GByte	>1 GByte

Table 1-6   Software

Operating System:	Windows Server 2003 SP2 or Server 2003 R2 SP2
Software:	Internet Explorer V6.0 SP1, V6.0 SP2 or V7.0 WinCC Basic System V7.0 SP1
Other:	If you want to publish **intranet** information, the following is required:
	A network-capable computer as well as a LAN connection (LAN = Local Area Network).
	A system that breaks up computer names into IP addresses (IP = Internet Protocol). This is not a mandatory step, but it allows users to use "alias names" instead of IP addresses when connecting to your server.
	If you want to publish **Internet** information, the following is required:
	An Internet connection and an IP address from your Internet service provider (ISP). You can only publish information in the Internet, if you have a connection to the Internet (provided by the ISP).
	A high-performance network card that is suitable for connecting to the Internet.
	A DNS registration (DNS = Domain Name System) for your IP address. This is not a mandatory step, but it allows users to use "alias names" instead of IP addresses when connecting to your server.

1.3.2   Licensing

WinCC/WebNavigator client

No license is required for the PC on which the WebNavigator Client is running, as server licenses are available on the Web server.

WinCC/WebNavigator Server

As a prerequisite for the WinCC basic system, the WinCC RT basic license is required. No WinCC server license is required, if no local WinCC clients are operated. Even when operating a WinCC client as a dedicated web server, no WinCC server license is required for the WinCC client.

The WinCC/WebNavigator Server runs without a license in Demo mode for 30 days.
A license is required, however, if you want to use the WinCC/WebNavigator Server in the long term. Licenses are available for 3, 10, 25 or 50 clients that can simultaneously access the web server.

If the number of licensed clients is exceeded during a login attempt by a web client, a message is displayed and no further logins be permitted.

WinCC/WebNavigator Diagnostics Client

Other licenses are required in order for the WebNavigator Diagnostics Client to function. For more information, please refer to the section on the "WebNavigator Diagnostics Client".

Overview of Licenses for WebNavigator Server and Client

Server	Client no License	Client with Diagnose client license
WN server license + WinCC license	WN client To max. number of licenses (server)	Diagnose client One license per Diagnose client
WN Diagnose server license + WinCC license	Demo client Unlimited number	Diagnose client One license per Diagnose client
No WN license or no WinCC license	Demo client Unlimited number	Demo client Unlimited number
WN server license + WinCC license + "Load Balancing" license	WN client To max. number of licenses (server)	Diagnose client One license per Diagnose client
WN server license + WinCC license + WinCC redundancy license + "Load Balancing Step-Up" license	WN client To max. number of licenses (server)	Diagnose client One license per Diagnose client

Restarting the Web Client after License Modification

If the WebNavigator licenses on the web server are modified, e.g. to a different number of clients, Internet Explorer must be restarted on each connected web client, and the web client must log in again. If this is not done, the web client switches to demo mode. This also applies to automatic reconnect of the web client.

See also

Diagnose Client Licensing (Page 27)

1.3.3   Requirements for the Diagnostics Client

This chapter describes the hardware and software requirements for the use of the WebNavigator Diagnostics Client.

Operating System:	Windows XP Professional SP3 Windows Server 2003 SP2 or Server 2003 R2 SP2 Windows Vista SP1
Software:	Internet Explorer V6.0 SP1, V6.0 SP2 or V7.0
Other:	Access to Intranet / Internet.

Note

You need to have "Administrator" rights to install the Clients Diagnosis.

1.3.4   Requirements for the Use of Terminal Services

This chapter outlines the hardware, software and operating system requirements for using terminal services and WinCC/Web Navigator.

Terminal Server

Table 1-7   Hardware

	Minimum	Recommended
CPU	Pentium III; 1 GHz	E.g. Intel Core 2 Duo, AMD Athlon64
Working memory	1 GByte	>1 GByte

Note

It needs to be noted that each client terminal increases the memory requirements and the processor load. It therefore needs to be ensured that the terminal server has adequate memory and processor load reserves.

Table 1-8   Software

Operating system	Windows Server 2003 SP2 or Server 2003 R2 SP2: It must be possible to call up and execute applications that are to be executed on the clients multiple times.
Other:	If many users want to access the server, then you need to use a high performance network card.

Terminal Server Clients

Minimum Client Requirements:	Network card with TCP/IP Terminal client RDP 5.0 Display or screen Pointing device

The device recommended for use as a client is: SIMATIC Mobile Panel PC 12".

Note

WebNavigator Client is released for Windows Terminal Services. A maximum of 25 sessions per terminal server are permitted.

Please note when running Windows Server 2003: As is the case with Windows Server 2003 CALs there are two different terminal service CALs: TS devices CAL and TS users CAL.
The TS Device CAL enables a device to run user-independent Windows sessions on a Windows Server 2003. The TS User CAL enables a user to run device-independent Windows sessions on a Windows Server 2003.

A Windows Server 2003 Terminal Server CAL "TS CAL" is required for every user or every device.

Please go to "http://www.microsoft.com/resources/sam/lic_cal.mspx" for more information.

See also

http://www.microsoft.com/resources/sam/lic_cal.mspx (http://www.microsoft.com/resources/sam/lic_cal.mspx)

1.3.5   Mixture and compatibility of versions

Mixing WebNavigator Versions

If you wish to install a WebNavigator client on a WebNavigator server, the two must both have the same version.

Versions of WinCC/WebNavigator and WinCC Basic System

WebNavigator Version 7.0 SP1 is released only on the basis of WinCC V7.0 SP1.

The WebNavigator Server/Client version V7.0 SP1 must not be installed on a PC with a version of WinCC older than V7.0 SP1.

Likewise, a version of WebNavigator Server/Client older than V7.0 SP1 must not be installed on a PC with WinCC version 7.0 SP1.

Connecting a Web Client to an Older Version WebNavigator Server

If you wish to connect a WebNavigator Client V7.0 SP1 to an older version of a WebNavigator Server, e.g. V6.0, the Web Client must previously have successfully logged on to a Web Server of the same version. The Web Client can then be subsequently logged in error-free on an older version of a Web Server.

If the web client was connected first of all to the older web server version, delete the "CheckInstallation Class" file in "Internet Options / Temporary Internet Files / Settings / Display Objects" in the Internet Explorer of the web client.

1.4 Installation of the WinCC/Web Navigator Server

1.4.1 Procedure

Introduction

This chapter describes the installation of the WebNavigator Server.

Requirements

The following requirements must be met for installation:

- A released Windows operating system has been installed.
- WinCC Basic is installed.

You can find further information about released operating systems for WebNavigator in the section "Requirements > Hardware and Software".

Details of the WinCC installation may be found in the WinCC documentation.

Installation Overview

1. Installation of the Internet Information Server (IIS).
2. Installation of the WinCC/WebNavigator Server.

Note

Requires administrator rights

In order to install the server components of the WinCC/WebNavigator under Windows, you will need write access for the registration database. To do this, you must have administrator rights.

WinCC options previously installed

If you have already installed other WinCC options prior to the installation of WinCC/WebNavigator, such as WinCC/DowntimeMonitor or WinCC/ProcessMonitor, you may have to retro-install these options.

Using WinCC/DataMonitor: Installation Order for Windows XP

When installing a Web server on a computer with Windows XP, adhere to the following installation order:

1. Install the Internet Information Service (IIS).

2. Install the SQL server.

Error messages may occur if the installation order is not maintained when opening DataMonitor Reports in WinCC/DataMonitor.

In this happens, correct the problem as follows:

1. Start the "Web Configurator" in the Windows Start menu by selecting "SIMATIC > WinCC > Web Configurator" and configure the Web server.

2. Start the SIMATIC Security Control in the Windows start menu by selecting "SIMATIC > Simatic Security Control" and configure the security settings.

See also

Installation of the Internet Information Service (IIS) (Page 15)

Installation of the WinCC/Web Navigator Server (Page 16)

1.4.2 Installation of the Internet Information Service (IIS)

Settings

Under Windows Vista you will first have to install the Internet Information Service (IIS) before you install the WinCC/WebNavigator server. You will specify the settings for the WebNavigator server during installation.

Activate the following settings under Windows Vista:

- Web management tools:
    - IIS management service
    - IIS management console
    - IIS management scripts and tools
    - Compatibility with IIS Metabasis and IIS 6 configuration
    - Compatibility with WMI for IIS 6
- WWW services > General HTTP features:
    - Standard document
    - Static content
- WWW services > Application development features:
    - ASP
    - ISAPI extensions
    - ISAPI filters
- WWW services > Security:
    - Requirement filtering
    - Standard authentication

> **Note**
>
> If the logging functions are active with IIS, the log files must be monitored and deleted, if necessary. The event views should be configured so that the log files do not become too large.

Requirements

- Administrator rights
- Write access for the registration database

Procedure

1. Insert the Windows CD-ROM into the drive.
2. From the Windows start menu, select the entry "Settings" > "Control Panel."
3. Click the "Software" icon.
4. Open the "Add or Remove Programs" dialog and click "Add or Remove Windows Components".
5. Activate the settings listed above under Windows Vista.
   You can also use the command line "Start > Run > cmd" to install the IIS components located on the installation CD:
   pkgmgr.exe /iu:IIS-WebServerRole;IIS-WebServer;IIS-CommonHttpFeatures;IIS-StaticContent;IIS-DefaultDocument;IIS-HttpErrors;IIS-ASPNET;IIS-ASP;IIS-ISAPIExtensions;IIS-ISAPIFilter;IIS-BasicAuthentication;IIS-WindowsAuthentication;IIS-ManagementConsole;IIS-ManagementService;IIS-IIS6ManagementCompatibility;IIS-Metabase;IIS-WMICompatibility
6. Close the dialog with the "OK" button. The required data is transferred and the IIS is configured accordingly.

1.4.3   Installation of the WinCC/Web Navigator Server

Requirements

- To do this, you must have administrator rights.

Proceed as follows

1. Insert the WinCC DVD in the drive.
   The DVD starts automatically if Autorun is enabled in the operating system. If the autorun function is disabled, start the Setup.exe program on the DVD.
2. In the "Installation Type" dialog, select "Package Installation".

3. Select the "WebNavigator Server" installation.

4. Restart the installation.
   You can track the status of the installation in the displayed dialog. Select "Cancel" to cancel the installation.

5. You can transfer the license key for the product after installation of the WinCC/ WebNavigator server. To do so, click on "Transfer License Key." Select "Next" if you have already transferred the license key or want to install it at a later time.

   ### Note

   License keys will not be transferred automatically. You will have to transfer missing license keys during or after installation with Automation License Manager .

6. At the end of the installation process, the security settings that are adapted for WinCC are displayed in the "SIMATIC Security Control" dialog. The firewall is configured automatically. Confirm the changes with "Accept" and "Finish".

7. Restart the computer when prompted to do so by setup.
   The WinCC/WebNavigator server is installed and has been added as a function in the navigation window of the WinCC Explorer.

   ### Note

   ### WinCC/WebNavigator is already installed

   If an older WinCC/WebNavigator server has already been installed, it is recognized by the setup and installation is not possible. Uninstall the older version using the Windows Control Panel and restart the installation.

1.4.4   Upgrading the WebNavigator Server

Introduction

If a WebNavigator Server is already installed on the PC, this is detected by Setup if an attempt is made to install it again.

Upgrading WebNavigator Server and WinCC Basic

It is only possible to upgrade a WebNavigator Server with a changed Service Pack number or version number if WinCC Basic is upgraded at the same time.

During installation, the WebNavigator Server Setup carries out a check for older versions of WinCC Basic, and vice versa. Upon presence of an older version of the respective other software, setup displays a message to this fact.
This is why the upgrade has to be performed in the order described below.

Basic procedure

1. First of all, the installed WebNavigator Server software must be uninstalled in the Control Panel via "Software / Change or Remove Programs".

2. Install the new version of WinCC Basis as update without previous manual uninstallation.

3. The new version of WebNavigator Server is now installed.

1.5 Installation of the WinCC/Web Navigator Client

1.5.1 Installation of the WinCC/Web Navigator Client

Introduction

The following possibilities exist for installing the WinCC/WebNavigator Client (client-side controls).

- Installation from the WinCC product DVD.
  In this case, certain Windows user authorizations are necessary, depending on the operating system.

- Installation via the intranet/Internet
  In this case, certain Windows user authorizations are necessary, depending on the operating system.

- Optional installation options.
  Installation is also possible without user interaction where software distribution is possible based on group guidelines under Windows user rights of the current user or in networks.

You can also install the WebNavigator Client additionally on your web server. This is for example useful, if you want to check your WinCC configuration locally on the server in the Internet Explorer.

Basic procedure

The installation consists of the following steps:

1. Entry and check of the settings of the client computer in Internet Explorer.

2. Installation of the WebNavigator Client.

Note

When carrying out installation from the DVD or as software distribution based on group guidelines, an old version of the WebNavigator Client can be directly upgraded without having to uninstall the older web client first.
If a WebNavigator Server is installed after the WebNavigator Client on a PC, then the client will have to be installed again.

NOTICE

Plug-in reinstallation
With the installation of WebNavigatorClient V7.0, the plug-ins "User Archive Control", "Function Trend Control", "Hardcopy" and "Web Client" are already integrated in the WebNavigatorClient V7.0. If the WebNavigator Client V7.0 is connected to a web server older than V7.0, you will be offered these plug-ins in the Download area of the Web Navigation user interface, even though these plug-ins are already installed. Do not reinstall these plug-ins.

Information on the Setup and Installation of the WebNavigator Client:

- Before installing a newer version on the Web client via a download, check the languages installed on the Web client and connected Web server. After installing the web client via download, only the languages of the linked web server are available on the client computer.

- The WebNavigator Client Setup is interrupted with the error message "WinCC Active" if the local WinCC project is open or has been opened since the PC was last restarted. In this case, restart the computer.
  Also check whether WinCC has been included in the Autostart directory. Remove the entry, if required and then restart to run the web client installation.

- To install the web client, you need minimum 70 MB free disk space on the hard disk, otherwise the MSI setup will cancel the installation with a corresponding error message.

- When installing the web client by downloading it from the Intranet/Internet, it is possible to select between "Open" and "Save" for the Setup file. The method selected for the initial installation of the Web client must also be selected a subsequent installation of Plug-Ins or ActiveX Controls, such as "User Archive Control", otherwise error message "Error 1316" appears in respect of the "MSI Installer" service.

- In Windows XP, installation of the WebNavigator Client can be accelerated if you deactivate the setting "Search Automatically for Network Files and Printers" before you commence installation. To do so, open the "Folder Options" dialog using the menu item "Tools > Folder Options" in Windows Explorer. On the "View" tab register under "Files and Folders", deactivate this option and subsequently click on the "Apply to All Folders" button.

- In the download area of the Web Navigation user interface, the Plug-Ins which can be installed are displayed. For installation of this plug-in, at least the same minimum user authorizations are required as for installation of the web client.
If you select a plug-in in the Web Navigation user interface, the WebNavigator Client Setup starts. The Plug-In selection must be confirmed again.

Upgrading a Web Client from a previous version

The current version of the Web Client may be downloaded and installed from the website "www.wincc.de" on page "WinCC/WebNavigator" using the "Web Navigator Demo Project" link.

Installing the Web Client under Windows Server

Installation of the web client under Windows Server with a lower user authorization than "Administrator" is not possible in the default setting of group policies.
You can release the web client installation in the group policy by assigning and making this software public or by activating the "Always install with higher rights" setting under "Administrative Templates / Windows Components / Windows Installer". You must activate "Never" for the "Deactivate Windows Installer" option.

1.5.2   User rights, user groups and optional installation possibilities

User rights, user groups and optional installation possibilities

This subject describes the following points in connection with the installation of the web client.

- Windows User Authorizations Required for Installation and First Registration of the Web Client

- Installing the Web Client with Limited Windows User Authorizations

- Installation for a configured group of users or computers

- Group policy based software distribution

- Installation without user interaction

Windows User Authorizations Required for Installation and First Registration of the Web Client

To install the Web Client via Intranet/Internet or using the product DVD, "Administrator" rights are required. The initial registration of the web client on the web server must take place with the same name as used during installation on the web server and must log on with the same or higher Windows user authorization. The connections must be established successfully. The

subsequent logins can then be performed under a different Windows user authorization with possibly limited rights.

Installing the Web Client with Limited Windows User Authorizations

By using Microsoft Windows Installer technology (MSI), Web clients from Version V6.0 SP1 can also be installed with limited Windows user authorizations i.e. without possessing the "Power user" or "Administrator" authorizations.

This procedure can be set during the installation using the group policy based software distribution in networks.

The add-ins and plug-ins belonging to the Web Navigator client can also be installed this way. For plug-ins that were created with the WinCC Plug-In Builder, "Administrator" rights are required.

By using MSI technology, it is also possible to install the Web client for a configured group of users or computers.

Installation for a configured group of users or computers

Using the Microsoft Systems Management server or group policy on a Domain Controller, it is possible to install a group of users or computers configured by the Administrator.

● To do this, the "WinCCWebNavigatorClient.msi" MSI file is published in the Domain Controller and released for a user group. The installation is then performed according to the configuration of the group policy based software distribution either during login of the defined users or when the computer is started.

● When using a Microsoft Systems Management Server, the installation is configured by the administrator, triggered and executed when the relevant computer boots. Additional information on Microsoft Systems Management server is available in the Internet on the Microsoft home page.

Group policy based software distribution

The software installation is normally executed with the access rights of the current Windows user. When using MSI technology, the installation is performed by an operating system service with a higher level of rights. This enables installations to be performed for which the Windows user has no permission. Applications which require installations with a higher permission are referred to as "privileged installations" in MSI technology. Installation of these applications is possible when a Windows user is assigned the "Always install with elevated privileges" permission.

In order to use the group policy-based software distribution, a group policy is created on the domain controller and assigned to the distributing software or published using Active Directory.

● Assignment: The software distribution can be assigned to a user or a computer. In this case, the software to be distributed is automatically installed when the user logs in or the computer is started.

● Publication: The software distribution can be published for single users. In this case, when the user logs onto the client computer, the software to be distributed appears in a dialog and can be selected for installation.

Installation without user interaction

During installation of the Web client, the user is normally prompted to enter information, such as the target directory, agreement to the software license conditions or components to be installed. By implementing a configuration file, installation is possible without user interaction. The required path specification and user information are provided in the "options.ini" configuration file. The file must be in the same folder as the web client setup.
This installation procedure is advantageous when using the group policy-based software distribution.

Installation from the product DVD occurs with user interaction.

The settings predefined in the table are used under the following conditions:

- The "options.ini" configuration file is missing and there is no corresponding entry available in the client registry, e.g. due to another SIMATIC HMI product installed.

- Alternatively, the installation is performed via the group policy based software distribution with assignment to the computer.

Information	Parameters
Target directory for the Web Navigator client	INSTALLDIR=" <syspath1>\Siemens\WinCC"
Target directory for common components	COMMONDIR=" <syspath2>\Siemens "
User information / user name	USER
User information / organization	COMPANYNAME

The "<syspath?>" parameters result from the settings in the registry under the key "HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion" :

 - "<syspath1>" corresponds to the key "ProgramFilesDir" e.g. "C:\\Program Files"

 - "<syspath2>" corresponds to the key "CommonFilesDir", e.g. "C:\\Program Files\\Common Files"

Example of a "options.ini" configuration file

```
[USERINFO]

USER=Integration

COMPANYNAME=Siemens AG


[INSTALLPATH]

COMMONDIR=" C:\Programs\Common files\Siemens "

INSTALLDIR=" C:\Programs\Siemens\WinCC "


[FEATURES]

FUNCTIONTRENDCONTROL=0

HARDCOPY=0
```

```
WINCCUSERARCHIVES=0
DEU=0
FRA=0
ITA=0
ESP=0
```

1.5.3   Internet Explorer Settings

Introduction

In order to have the full functionality available on the Web Navigator Client, the security settings must be adapted in the Internet Explorer.

Procedure

- Click "Tools" > "Internet Options" in the Internet Explorer.
- Select the "Security" tab. Select the corresponding zone, e.g. "Local Intranet" or "Internet".

- Click "Custom Level".

Security Settings

Settings:

- Run ActiveX controls and plug-ins
  - ○ Administrator approved
  - ○ Disable
  - ● Enable
  - ○ Prompt
- Script ActiveX controls marked safe for scripting
  - ○ Disable
  - ● Enable
  - ○ Prompt
- Downloads
  - File download
    - ○ Disable
    - ● Enable
  - Font download

Reset custom settings

Reset to: Medium-low   Reset

OK   Cancel
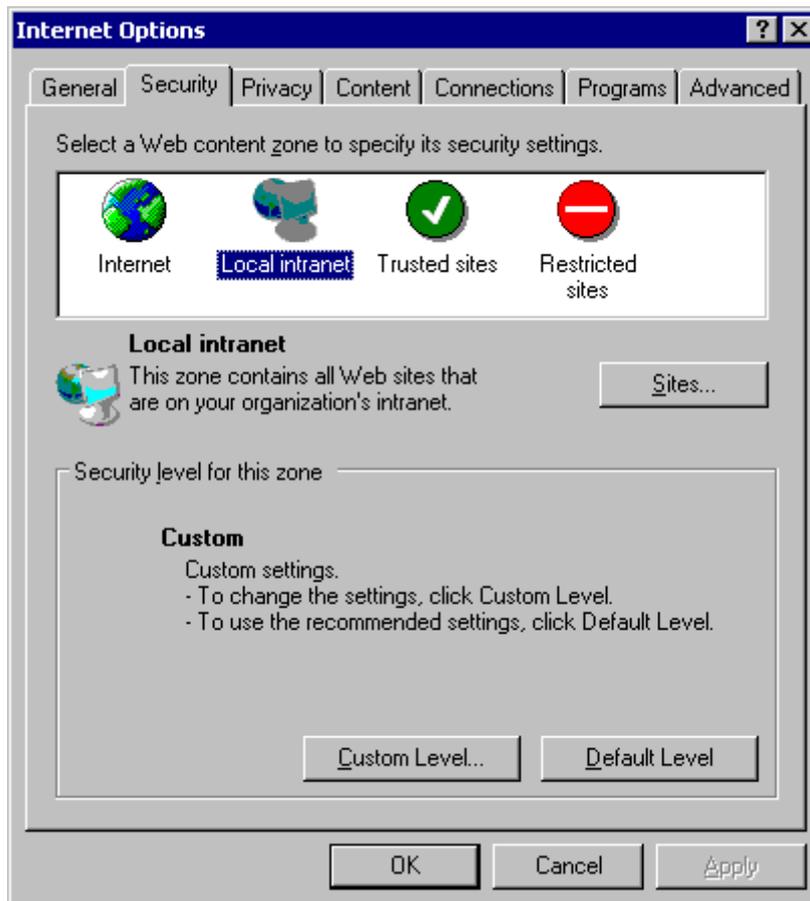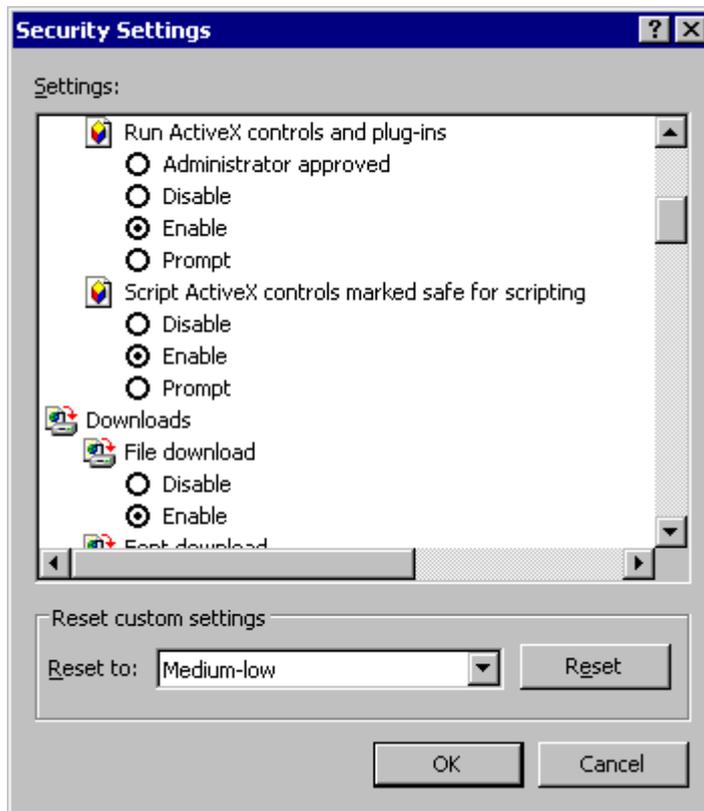
- Click the "Enable" radio buttons for "Script ActiveX controls marked safe for scripting" and "Download signed ActiveX controls".

- Select the "Activate" option under "Scripting/Active Scripting".

- Click "OK". Carry out the modifications in the subsequent dialog.

- Select the "Trusted Sites" icon and click the "Sites" button to open the "Trusted Sites" dialog.

- Enter the address of the web server in the "Add this Website to the zone" field. Possible formats and wildcards include "*://157.54.100 - 200", "ftp://157.54.23.41", or "http://*.microsoft.com". Deactivate the "Require server verification (https:) for all sites in this zone" check box. check box. Click "Add". Confirm the entry by clicking "OK".

- Select the "Trusted Sites" icon. Click the "Standard level" button and then the "Custom Level" button. Activate the "Activate" option in the "Security settings" dialog under "Initialize and script ActiveX controls not marked as safe". Confirm the entry by clicking "OK".

- Click on the "General" tab. Click in the "Settings" area on the "Temporary Internet Files" button. Enable the "Automatic" option under "Check for newer versions of stored pages". Confirm the entry by clicking "OK".

- Close the "Internet Options" dialog by clicking "OK".

This completes all necessary settings in the Internet Explorer.

1.5.4 Installation from the DVD

Requirements

- For the installation and use of the WinCC/WebNavigator client, see the settings described in "Settings in Internet Explorer."

- Depending on the operating system, certain minimum user rights are required for the installation of the Web client as described in the section "Installation of the WinCC/ WebNavigator Client."

Proceed as follows

1. Insert the WinCC DVD in the drive.
   The DVD starts automatically if Autorun is enabled in the operating system. If the Autorun function is not activated, start the program Setup.exe on the DVD.

2. In the "Installation Type" dialog, select "Package Installation".

3. Select the "WebNavigator Client" program package.

4. Restart the installation.
   You can track the status of the installation in the displayed dialog. Select "Cancel" to cancel the installation.

5. At the end of the installation process, the security settings that are adapted for WinCC are displayed in the "SIMATIC Security Control" dialog. The firewall is configured automatically. Confirm the changes with "Accept" and "Finish".

6. Restart the computer when prompted to do so by setup.
   The WinCC/WebNavigator client is installed and has been added as a function in the navigation window of the WinCC Explorer.

1.5.5 Installation via the Intranet/Internet

Requirements

- For the installation and use of the WebNavigator Client, the settings described in "Settings in Internet Explorer" apply.

- Depending on your operating system, certain minimum user rights may be required to install and initially register the web client, as described in the section "Installation of the WebNavigator Client".

- For installation via the Intranet/Internet, you must have fully installed your WinCC/ WebNavigator Server, configured the Internet information with the WinCC Web Configurator and be registered as a user in the WinCC User Administrator.

- A WinCC project must be in runtime on the desired WebNavigator Server.

Installing WebNavigator Client via the Intranet/Internet

- Access the Internet via your Internet Service Provider.

- Enter the address of the WinCC/WebNavigator Server, e.g. "http://www.server_name.de", in the address line. When installing in a virtual directory, the address can be as follows: "http://www.server_name.de/WebNavigator/".

- Log on to the WinCC/WebNavigator Server with your user name and password.

- If you are accessing the WinCC/WebNavigator Server for the first time, you will be prompted to install the WinCC/WebNavigator Client. Click the "Click here to install" link. Click the "Save" button in the "File Download" dialog to store the client setup on the target computer. It is recommended to save the Setup file because, in the event of a restart of the client computer being necessary, the Setup need not be downloaded again.

Note

If you have already installed the WebNavigator Client and wish to install a current version of the client via the Intranet/Internet, open the Client Setup straight away without saving the installation file on the target computer. If you want to save the new installation file, uninstall the old installation file first or save the new version of the file in different directory than the older version of the file.

- Leave the Internet Explorer open and open Windows Explorer. Navigate to the folder in which the Setup file was saved and start the Setup file by double-clicking it.

- Follow the instructions on the screen and enter the information and settings necessary. The client-side controls of the Web Navigator is installed. Close the Setup dialog.

When the installation is completed successfully, the client switches to the WinCC project currently in Runtime.

1.6 WinCC/WebNavigator Diagnostics Client

1.6.1 WinCC/WebNavigator Diagnostics Client

Introduction

With the WebNavigator Diagnostics Client from WinCC, you can obtain low-cost access to many WebNavigator Servers. Multiple Diagnose Clients and regular clients can be run at the same time. During this process, no WebNavigator Server licenses are required, for licensing takes place on the Diagnostics Client.

Possible applications:

- Remote maintenance: With the Diagnose Client, different WinCC systems are accessed for service and maintenance purposes.

- Central Control Room: With the Diagnose Client, multiple servers can be accessed simultaneously.
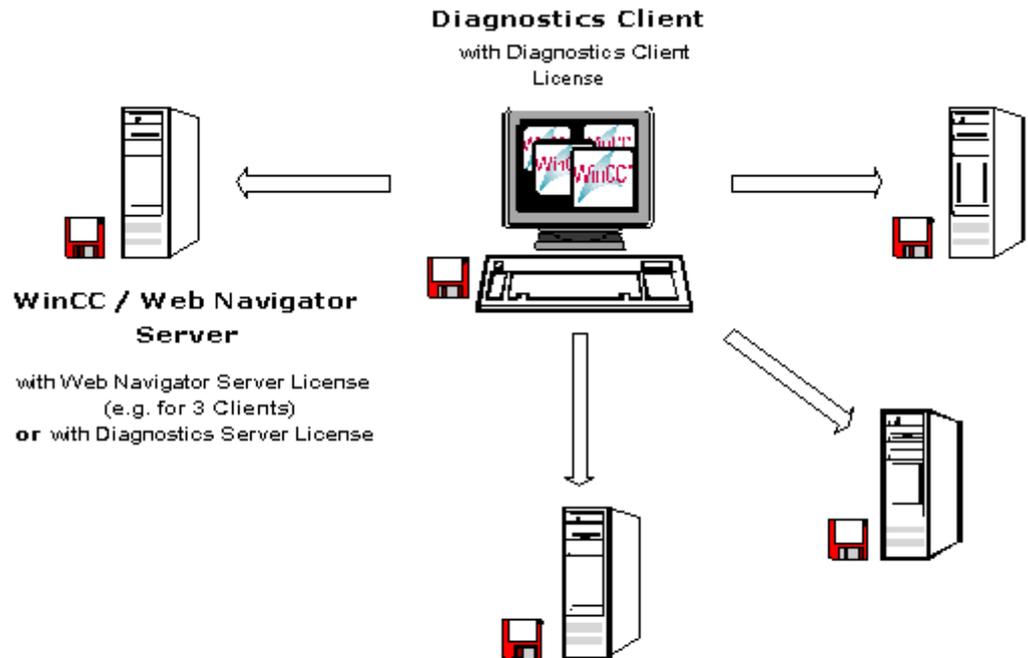
1.6.2   Diagnose Client Licensing

WinCC/WebNavigator Diagnostics Client

A "Diagnostics Client" license is required on the client computer.

The Diagnose Client can access up to 12 web servers simultaneously.

If a license for WebNavigator Server or for WebNavigator Diagnostics Server is installed on the server, the Diagnostics Client also has access if the maximum number of clients is exceeded (guaranteed access).

WinCC/WebNavigator Diagnostics Server

This license allows a WebNavigator Diagnostics Client access to the web server. This license is required if no web server license for "regular" web clients is installed on the web server, but access via Diagnose Clients still is to be possible.

In total, the simultaneous access of up to 50 Diagnose Clients per server is permitted.

Note

If one of the required licenses is missing on the participating computers or a "regular" web client instead of a Diagnose Client is installed on the client computer, a message is displayed and the web Client runs in demo mode.

If the Diagnose Client is installed without the respective license, a message concerning the missing license appears about one hour after each start of the computer. To eliminate this message, you can install a Diagnose Client license or definitely deinstall the Diagnose Client software.

Note

When a Diagnose Client must be installed on a computer with the WinCC basis system, the Diagnose Client must be reinstalled after uninstallation of WinCC.

You can find further information about licenses for WebNavigator Server and Client in the section "Requirements > Licenses".

See also

Licensing (Page 10)

1.6.3   Installation of the WinCC/WebNavigator Diagnostics Client

Introduction

The software for the WebNavigator Diagnostics Client is installed from the DVD on the client computer.

Requirements

- To do this, you must have administrator rights.

Proceed as follows

1. Insert the WinCC DVD in the drive.
   The DVD starts automatically if Autorun is enabled in the operating system. If the Autorun function is not activated, start the program Setup.exe on the DVD.

2. In the "Installation Type" dialog, select "Custom Installation".

3. Select the "Diagnose Client" program in the Web Navigator" program group.

4. Restart the installation.
   You can track the status of the installation in the displayed dialog. Select "Cancel" to cancel the installation.

5. At the end of the installation process, the security settings that are adapted for WinCC are displayed in the "SIMATIC Security Control" dialog. The firewall is configured automatically. Confirm the changes with "Accept" and "Finish".

6. Restart the computer when prompted to do so by setup.
   WinCC/WebNavigator Diagnostics Client is installed.

1.7   WebNavigator Demo Project

Introduction

The WinCC DVD contains a WinCC Demo project as a self-extracting ZIP file "Web_Demo_Projekt.exe" in the "Samples\WebNavigator" directory. To install the project, copy the file in a local target directory and start the decompressing process by double-clicking the file.

The following logins are already configured in the demo project:

WinCC	Login	Password
WebNavigator German	winccd	winccpass
WebNavigator English	wincce	winccpass
WebNavigator French	winccf	winccpass
WebNavigator Italian	wincci	winccpass
WebNavigator Spanish	winccs	winccpass
Terminal PocketPC	PocketPC	winccpass
Terminal Mobic	Mobic	winccpass
Terminal MP370	MP370	winccpass

1.8   Uninstallation

You can uninstall the WinCC/WebNavigator Server and WinCC/WebNavigator Client in the usual way, as in Windows.

● Open the "Control Panel" and double-click the "Add or Remove Programs" symbol.

● Click the "Change or Remove Programs" icon.

● Select the WebNavigator Server or Client and click "Remove". Follow the instructions on the screen.

The WinCC/WebNavigator Server/Client has now been removed from your system.

Note

If you uninstall the WinCC/WebNavigator Server, you should also uninstall the associated authorization with the "Automation License Manager" program. This authorization may be reactivated later on. Additional information on the topic of authorization may be found in WinCC Software Protection.

WinCC/WebNavigator Release Notes

2

2   Resources

2.1   Release notes

Contents

These release notes contain important instructions.

The statements in these release notes are more binding than the instructions in the manuals and in the online help.

Please read these release notes carefully as they contain useful information.

2.2   Installation of software

Installation and Configuration

CAUTION
WinCC WebNavigator Version 7.0 SP1 is released only on the basis of WinCC V7.0 SP1.
The WebNavigator-Server/-Client Version V7.0 SP1 is not to be installed on a computer with WinCC versions lower than V7.0 SP1. Likewise, a version of WebNavigator Server/Client older than V7.0 SP1 must not be installed on a PC with WinCC Version 7.0 SP1.
Note that mixed use of European and Asian versions of WinCC and WebNavigator is not permitted in the configuration either.

2.3   Information about WebNavigator

Communication Using Proxy Server

For communication using a proxy server, the following items should be observed.

- In a proxy server operation, the Web client should be a member of the server domain.

- Login process on proxy server with NTLM authentication: If the user logged onto the Web client has no access to this proxy server, there will first appear a login dialog window for the proxy server, then the login dialog for the WinCC user, and then again a login dialog for the proxy server.

WebNavigator Client Security Limitations

CAUTION
When using the WebNavigator client, Internet-specific security limitations must be observed. The WebNavigator client may take significantly longer (>20 seconds) than a regular WinCC client to recognize that the Web server is down or that the communication is faulty.

Internet Explorer Security Settings

In order to have the full functionality available on the WebNavigator Client, the security settings must be adapted in the Internet Explorer. Please refer to the chapter "WinCC/WebNavigator Installation Notes > Installing the WinCC/WebNavigator Client > Internet Explorer Settings."

Internet Explorer Security Settings: Installation via SSL connection

If you want to download the WebNavigator from an ASP portal via an SSL connection, note that the download is not possible under certain conditions. You can correct this with one of the following settings:

- Deactivate the "Do not save encrypted pages to disk" option in the "Advanced" tab for the Internet options of the Internet Explorer.

- Deactivate the "Internet Explorer Enhanced Security Configuration" option in the "Control Panel/Add/Remove Programs/Windows Components".

WebNavigator server on Windows Vista: Behavior at restart

The standard website will be activated after restart in case of a WebNavigator server on Windows Vista. The connection from Web client to WebNavigator server will no longer be possible.

Solution: Restart the WebNavigator site in the Internet Information Service (IIS).

WinCC uninstallation: WebNavigator Client must be installed at a later time

If you uninstall WinCC, you need to retro-install the WebNavigator client.

Deactivation of WinCC and WebNavigator Runtime

If you have deactivated WinCC Runtime, you must take into consideration during reactivation of WinCC Runtime that WebNavigator Runtime has already been terminated.

Project Change

Following a change of projects, a sporadic inoperable period of the Internet Information Services (IIS) may occur. The computer must then be restarted.

WebNavigator client: Operation via Wireless LAN

Operation of the WebNavigator client via Wireless LAN has been approved with SIMATIC Mobile Panel PC 12" only.

WebNavigator client: Picture Window on the Web Client

If the picture name is changed in a picture window, the event "Object Change" of this picture window is executed several times on the Web client while it occurs only once in the WinCC Basic System. This feature of the Web client is system related because the asynchronous procedure of the Internet connection may trigger a multiple update of the picture window object. However, this does not have any effect on functionality.

WebNavigator client: WinCC Alarm Control on a WebNavigator Server in WinCC ServiceMode

Initial Situation

The WebNavigator client is connected with a WeNavigator server operated in WinCC ServiceMode.

Behavior

If you are using WinCC Alarm Control prior to WinCC V7 that is connected via a server prefix, you will not be able to open the selection dialog.

Solution

Use the WinCC AlarmControl that is offered as of WinCC V7.

WebNavigator client: WinCC Web Browser-OCX on the Web Client

- The "Allow ActiveX Controls" check box has to be activated in the "Security" tab in the Internet options of the Internet Explorer.

- If a process picture is displayed on the Web client by using ActiveX Control "WinCC Web Browser", and a link is selected in same, the "Back" button will not work during the initial display of the linked page. Only upon the second call to this page will the function work properly. After a switch of the process picture, the original behavior is back.

- WinCC Web browser OCX serves to display static Web content or CHM documents in process pictures. Contents with scripting functionality are not supported.

WebNavigator client: Diagnostics file "WebNavReconnnect.log"

After installation of the Web client, the diagnostics file "WebNavReconnnect.log" will be saved in the "<User>\Application Data\Siemens\SIMATIC.WinCC\WebNavigator\Client" directory. The diagnostics file will be saved into the respective user profile so that this user no longer requires administrator rights. Under Windows Vista the directory will be available under "LocalLow".

WebNavigator Client V7.0 SP1: Connection with WebNavigator Server V6.2 SP2 or earlier under Windows Vista SP1

To connect a Web Navigator client V7.0 SP1 with a Web Navigator server V6.2 SP2 or later under Windows Vista SP1, you need to disable the "UAC - User Account Control" for the Web Navigator Client V7.0 SP1 or disable "Protected Mode" in the Internet Explorer.

WebNavigator client: Contents of Address Bar

During operation of the Web Client, character strings appear in the address bar of Internet Explorer that are neither relevant nor interpretable for the operator. For example, the entry "loadbalancing=no" may appear which does not represent any status display for servers involved in load balancing.
Only when logging in the Web client, characters must be entered and checked there, e.g. server name and port.

WebNavigator client: Client with multiple power users

When a power user installs a new WebNavigator client version on a computer, then all other power users of this computer must upgrade to the new version.

There can be problems if other power users use different versions. This is also applicable when the power users on one server connect to an older WebNavigator version.

WebNavigator client: Login Using Direct Entry into Address List

The use of Microsoft security patches for Internet Explorer V6 no longer permits registration of Web clients by entering user name and password in the address list.

WebNavigator client: "AutoComplete" Entries and Links in Progress Bar

In Internet Explorer, the entries in the address bar are displayed as a link in the progress bar, or suggested as "AutoComplete" entries for subsequent entries in the address bar. Upon registration of Web clients on Web servers with load balancing, these assists of Internet Explorer are not applicable without checking.

If the Web client was initially registered on a Web server with load balancing and forwarded to a second Web server, the progress bar or "AutoComplete" entry of Internet Explorer will not display the address of the first Web server but instead the address of the second Web server to which the client was forwarded. If during subsequent registration attempts of the Web client, the link of the progress bar or the "AutoComplete" entry are accepted unchecked, this Web client will be registered on the second Web server.

WebNavigator client: Uninstallation of the Software ProTool/Pro

If the ProTool/Pro software is uninstalled on a WebNavigator client, the HMI Symbol Library controls are deregistered.

Reinstall the WinCC WebNavigator client to regain access to these controls.

WebNavigator client: Automatic Reconnect not Successful

If the connection between Web client and Web server is established through a firewall or a proxy server, it may happen that while normal registration of the Web client is successful, the automatic reconnect is not. The cause may be that the Web client uses the ICMP ping during reconnect which may be blocked by the firewall or proxy server. In case of this type of error, the use of the ICMP ping during reconnect can be deactivated on the Web client.

You can find the "Deactivate ICMP ping" option at the client ASP end under "Settings/ Properties Web Client / Reconnect".

WebNavigator client: WinCC Computer with "Basic Process Control"

When using the WebNavigator client with a WinCC computer with WinCC Basic Process Control, the plug-in "WinCC Basic Process Control" must be installed on the Web client. Without plug-in, the functionality of WinCC Basic Process Control is not available on the Web client, for example, the respective ActiveX Controls as well as group display are missing.

The plug-in is located in the directory "<wincc_installation_path>\WebNavigator\Server\Web \Install\Custom" on the Web server and can be downloaded in the WebNavigator interface in the download area under "Download Plug-Ins".

A description of supported and non-supported functions may be found in WinCC Information System under "Options > Options for Process Control > System Overview Process Control System Options > Configuration in PCS7 Environment > Web Client" as well as under "Release Notes > Process Control System Options".

If the WebNavigator client is to be installed on a dedicated Web server with WinCC Basic Process Control, the plug-in "WinCC Basic Process Control" must be installed immediately after installation of the Web client. The download page for the plug-in will be displayed and can be exited only upon installation of plug-ins for process picture display.

For more information on supported functionalities of the WebNavigator client during a connection to a PCS7 OS, refer to the PCS7 documentation.

WebNavigator client: "FLAG_COMMENT_DIALOG" of the "GCreateMyOperationMsg" function

The Web Client does not support parameter "FLAG_COMMENT_DIALOG" for the "GCreateMyOperationMsg" function.

Custom ActiveX controls (Industrial X)

With custom ActiveX controls (Industrial X), compatibility with WinCC Basic System, Web Navigator Server and Web Navigator Client must be ensured. This applies to both a direct installation of ActiveX Control on the computer with WinCC, Web server or Web client and the installation using a plug-in, such as on a Web client.

- With a direct installation, the ActiveX Control should therefore be installed prior to WinCC Basic System, Web Server or Web Client. If the custom ActiveX Controls do not function without error after this step, there is no compatibility.

- If the custom ActiveX Control was packaged in a plug-in and installed via download, an upgrade of WinCC Basic System, Web Server or Web Client will also require generation of a new plug-in using this ActiveX Control. When creating the plug-in, care should be taken to use compatible binaries (DLL, OCX, etc.).

WebNavigator Web page under Windows XP

Under Windows XP Professional it is not possible to delete a stand-alone Web page containing "Internet Information Service" (IIS) functions. If a stand-alone Web page was created on the Web server using the Web Configurator, it cannot be deleted in order to create the WebNavigator Web page as a virtual directory instead.
Also, only one Web page can be active under Windows XP Professional, even if a different port has been assigned to every Web page. If the default Web page is needed, the stand-alone WebNavigator Web page cannot be active at the same time.

With the following command line call you may, however, delete the stand-alone WebNavigator Web page. Exit the console of IIS prior to calling this command line.

"<wincc_installation_path>\WebNavigator\Server\bin\WinCCWebConfigurator.exe" deinstall="yes"

Afterwards, in the IIS console, start the desired Web page, such as the default Web page.

Access of Web Client to a WinCC flexible Sm@rt Service Server

If a WebNavigator client is supposed to access a WinCC flexible Sm@rt Service server, this may be facilitated in the Web Navigation interface using the "Change Server" function, as with any other WinCC WebNavigator server.

SIMATIC Logon

WebNavigator V7.0 SP1 supports SIMATIC Logon V1.4 SP1.

The following restrictions apply.

- If the operator is a member of multiple user groups, a random group that has a start picture configured is chosen. You cannot configure which group is chosen. The authorizations of all groups in which the operator is a member are summarized.

- The domain must be placed before the user name in the login dialog: Syntax "<domain>\<username>".

- If the password expires during a client session, this does not affect the operatability of the Web client.

- The password can only be modified on the Web server. It is not possible to change the password on a Web client.

- Scripts and ODK functions are not supported for SIMATIC Logon.

2.4 Service and Support

2.4.1 Warnings

Safety notes

This manual contains information that must be observed to ensure your personal safety and to prevent property damage. Notices referring to your personal safety are highlighted in the manual by a safety alert symbol; notices referring to property damage only have no safety alert symbol. Depending on the hazard level, warnings are displayed in a descending order as follows:

> ⚠ **DANGER**
>
> means that there can be severe physical injury or even death if the corresponding safety measures are not followed.

> ⚠ **WARNING**
>
> means that there can be severe physical injury or even death if the corresponding safety measures are not followed.

> ⚠ **CAUTION**
>
> means that there can be slight physical injury if the corresponding safety measures are not followed.

CAUTION
means that there can be damage to property if the corresponding safety measures are not followed.

NOTICE
means an undesirable result or state can occur if the corresponding instruction is not followed.

Note
is an important information about the product, the way to handle the product or the respective part of the documentation and we wish to especially bring this to your notice.

If multiple levels of hazards can occur, the warning is always displayed with the highest possible level. If a warning with a warning triangle is to be indicate physical injury, the same warning may also contain information about damage to property.

Qualified Personnel

The corresponding machine/ system may only be set up and operated with the help of this documentation. A device/system must only be commissioned and operated by qualified personnel. Qualified persons in the sense of safety instructions in this documentation stand for persons who are authorized to operate, earth and mark machines, system and electrical circuits according to safety standards.

Proper use

Please observe the following:

⚠ WARNING
The machine may only be used for the application instances that have been described in the technical description and only in combination with third-party devices and components recommended and/or approved by Siemens. Smooth and safe operations demand proper transport, proper storage, installation and assembling as well as careful operations and maintenance.

Brands

All designations with the trademark symbol ® are registered trademarks of Siemens AG. Other designations in this documentation may be trademarks whose use by third parties for their own purposes can violate the rights of the owner.

Disclaimer of liability

We have checked the contents of the description to ensure that it matches with the hardware and the software it describes. Nevertheless, we cannot assume responsibility for any deviations that may arise. The details outlined in this description are checked regularly and the required corrections are done in the subsequent editions. Suggestions for improvement are welcomed.

The statements in the online documentation are more binding than the statements in the manuals and PDF files.

Please follow the Release Notes and Installation Notes. The information in these Release Notes and Installation Notes has priority over that in the manuals and online help with regard to legal validity.

Copyright © Siemens AG 2008

2.4.2   Customer Support

Customer Support and Technical Support

Accessible from anywhere in the world - at any time! The languages used by the SIMATIC hotlines are German and English. Authorization hotline support is also available in French, Italian and Spanish.

Technical support

Nuremberg	(GMT +1:00)	
Service Hours	Monday - Friday, 7:00 to 17:00 (Local Time)	
Phone	+49 (180) 5050-222	(0.14 €/min from German landlines), cell phone prices vary.

Fax	+49 (180) 5050-223	
E-mail	http://www.siemens.com/automation/support-request (http://www.siemens.com/automation/support-request)	

SIMATIC Customer Support Online Services

SIMATIC Products

Go to the following URL for additional information about SIMATIC products:

- http://www.siemens.de/simatic (http://www.siemens.com/simatic)

Product Information and Downloads

You can get the latest product information and downloads useful for your application on the Internet at the following URL or on the Bulletin Board System:

- http://www.siemens.de/automation/service&support (http://support.automation.siemens.com/WW/llisapi.dll?func=cslib.csinfo2&aktprim=99&lang=en)

Contact person database

To contact your local agent, search our contact database at the following URL:

- http://www.automation.siemens.com/partner/index.asp (http://www.automation.siemens.com/partner/index.asp?lang=en)

Technical documentation for SIMATIC products

You can find a guide to the technical documentation provided for individual SIMATIC products and systems at the following URL:

- http://www.siemens.de/simatic-tech-doku-portal (http://www.automation.siemens.com/simatic/portal/html_76/techdoku.htm)
- http://www.siemens.com/simatic-tech-doku-portal (http://www.siemens.com/simatic-tech-doku-portal) (in English)

Up-to-Date Information for WinCC

SIMATIC WinCC

Go to the following URL for additional information about WinCC products:

- http://www.siemens.de/wincc (http://www.automation.siemens.com/hmi/html_76/products/software/wincc/index.htm)
- http://www.siemens.com/wincc (http://www.siemens.com/wincc) (in English)

WinCC Online Support and FAQs

WinCC Online Support with information on FAQs (Frequently Asked Questions) and replacement parts as well as Tips & tricks may also be found in the Internet under :

- http://support.automation.siemens.com/WW/view/de/10805548/133000 (http://support.automation.siemens.com/WW/view/en/10805548/133000)

- http://www.siemens.com/automation/csi/faq (http://www.siemens.de/automation/csi/faq)

There, you find for example downloads of firmware updates, service packs and useful utilities.

See also

Technical Support: E-mail (http://www.siemens.com/automation/support-request)

Internet: SIMATIC Products (http://www.siemens.com/simatic)

Internet: Product Information and Downloads (http://support.automation.siemens.com/WW/llisapi.dll?func=cslib.csinfo2&aktprim=99&lang=en)

Internet: Contact person database (http://www.automation.siemens.com/partner/index.asp?lang=en)

Internet: Technical documentation for SIMATIC products (http://www.automation.siemens.com/simatic/portal/html_76/techdoku.htm)

Internet: Information about WinCC (http://www.automation.siemens.com/hmi/html_76/products/software/wincc/index.htm)

Internet: WinCC Online Support (http://support.automation.siemens.com/WW/view/en/10805548/133000)

Internet: WinCC FAQs (http://www.siemens.de/automation/csi/faq)

Internet (English): Technical documentation for SIMATIC products (http://www.siemens.com/simatic-tech-doku-portal)

Internet (English): Information about WinCC (http://www.siemens.com/wincc)

2.4.3   Support Request

Dear customer

In order to provide you with fast and effective support, please complete the error report online on the Internet. Describe the problem in as much detail as possible. We would appreciate if you would provide us with all project data, so that we can reproduce the error situation or shorten the turn-around time.

Before filling out the error report, check whether your configured quantity structure is within the range of tested quantity structures (see topic "Performance Data").

Form for the error report

The error report form is available at URL:

- http://www.siemens.com/automation/support-request (http://www.siemens.com/automation/support-request)

When filling out the report, you will be guided through several steps, which will ask about all required information.

Procedure

1. Open the "Support Request" form using the link on the Internet. Step 1 "Select product" is displayed:

2. Enter the project name in the "Product/Order number" box. Upper/lower case is not relevant. Search for parts of the product name or enter the full product name in the correct order.
   You can e. g. search for the following terms:
   - "WinCC Runtime"
   - "WinCC DataMonitor"
   - "wincc webnavigator"
   - "Connectivity"
   The found products are offered in the "Product selection" field.

3. Select the desired product and click on "Next" to switch to step 2 "Select use case".

4. Select a use case or describe your specific use case in the "Other use case" field.

5. Press "Next" to switch to step 3 "Our solutions".
   Suggested solutions and FAQs for the selected key words are listed. The search terms in the "Your search term" field can be modified in any manner.
   Once you have found a suggested solution for your problem, you can close the form in the browser.
   If you did not find any applicable suggested solutions, press "Next" to switch to step 4 "Describe problem".

6. Describe your problem as exactly as possible in the "Details" field.
   Pay particular attention to the following questions and comments. Please also check the WinCC installation and configuration with regard to the following references.
   If you have any idea what has caused the error, please let us know. No detail should be omitted, even if you consider it unimportant.
   - Was the configuration data created with older WinCC versions?
   - How can the error be reproduced?
   - Are other programs running simultaneously with WinCC?
   - Have you deactivated the screen saver, virus checker and power management function?
   - Search the computer for log files (WinCC\Diagnose*.log, drwatson.log, drwtsn32.log).
   The log files are needed for error analysis. Thus, be sure to send the log files as well.

7. Use the "Search" button to upload your affected project and the log files (e. g. as a Zip file) to the error report.
   Press "Next" to switch to step 5 "Provide contact information".

8. Enter your contact information.
   Read the privacy notice and choose whether your personal data should be permanently saved.
   Press "Next" to switch to step 6 "Summary & Send".

9. Press the "Print" button if you would like to print the error report.
   Close the error report by clicking on the "Send" button.
   Your data will be transmitted to Customer Support and processed there.

Thank you for your cooperation. We hope that we can be of assistance in solving your problems.

Your WinCC Team

See also

Error report (http://www.siemens.com/automation/support-request)

2.4.4   Support

Inquiries on Operation and Problems

In case problems occur during operation, you may contact us directly.

To contact your local agent for Automation & Drives, search our contact database at the following URL:

* http://www.automation.siemens.com/partner/index.asp (http://www.automation.siemens.com/partner/index.asp)

Please have available the Software Identification Number from the supplied software product certificate.

In case of lost or defective authorizations, a telephone "repair" may be performed by our Customer Support.

You can find additional information on contacts under "Customer Support".

Internet / World Wide Web (WWW)

You can find general information on WinCC in the Internet at:

* http://www.siemens.de/wincc

You can find a demo project for the WebNavigator at: http://wincc.de.

You can find additional information for users (FAQs / Tips and Tricks) at:

* http://www.siemens.de/automation/service&support

See also

Internet: Contact person database (http://www.automation.siemens.com/partner/index.asp)

WinCC/WebNavigator Getting Started

3

3 Resources

3.1 WebNavigator - Getting Started

Contents

The WinCC option pack "WinCC Web Navigator" enables you to develop a solution for the topic of "Controlling and Monitoring" via the intranet/Internet. You can therefore use standard means of WinCC to quickly and easily implement the distribution of controlling and monitoring functions of your automation system via the Internet and intranet. The "WinCC Web Navigator" supports current Internet security methods and provides Wizards to assist you in your task.

This section shows you:

● how to install the WinCC Web Navigator

● how to set up the Web Navigator Server

● how to configure and start the first Web project
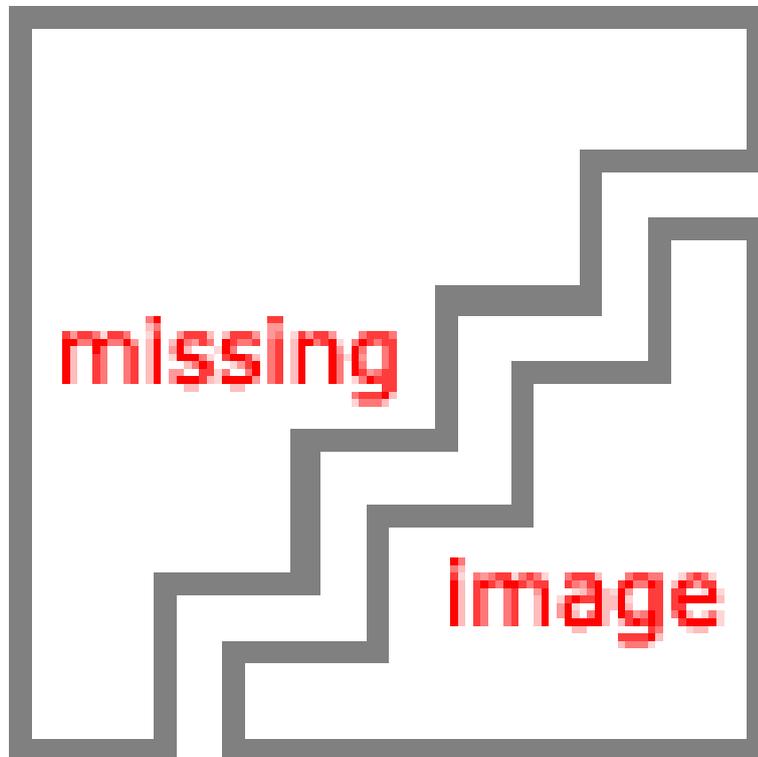
3.2   Introduction

Welcome to the WinCC Web Navigator.

WinCC is the first IHMI (Integrated Human Machine Interface) software on the market that truly integrates your system control software with your automation process. The user-friendly components of WinCC make the integration to new or existing applications trouble-free.

The Web Navigator package consists of special WinCC Web Navigator Server components that are installed on the server computer, and of WinCC Web Navigator Client components that run on the Internet computer.

The pictures displayed on the WinCC Web Navigator Client can be controlled just like in a normal WinCC system. In this way, the project running on the server computer can be controlled from anywhere in the world.

3.3   Installation Overview

Installation Overview

The following requirements must be met for installation:

- A released Windows operating system has been installed.

- WinCC Basic is installed.

More information on Hardware and Software prerequisites for the WebNavigator can be found under the "WinCC Web Navigator - Documentation > Prerequisites > Hardware and Software" topic.

Details of the WinCC installation may be found in the WinCC documentation.

3.4   First Web Project

3.4.1   First Web Project

The chapter is based on the "WebDemoProject" project included on the WinCC DVD.

For this example project, the WinCC WebNavigator Server, WinCC, and WinCC WebNavigator Client are installed on the same computer. When making changes to the WinCC project, you are working with the server component (WinCC and WinCC WebNavigator Server). When accessing the project with Internet Explorer, you are working with the client component (WinCC WebNavigator Client).

The chapter describes the following steps:

- Configuring the WebNavigator Server

- Publishing of process pictures that can run on the WinCC WebNavigator Client

- User Administration

- Internet Explorer Settings

- Installation of the WinCC WebNavigator Client

- Creation of a new process picture

See also

3.4.2 Configuration of the WinCC/Web Navigator Server

3.4.2.1 Step 1: Starting the "WebDemoProject" project.

Copy the WinCC project "WebDemoProject" onto the hard drive of your computer from the WinCC DVD.

Follow the screen prompts.

Start WinCC from the Windows start menu via "SIMATIC" > "WinCC" > "Windows Control Center".

Open the "WebDemoProject".

In the following dialog, click "Start server locally".
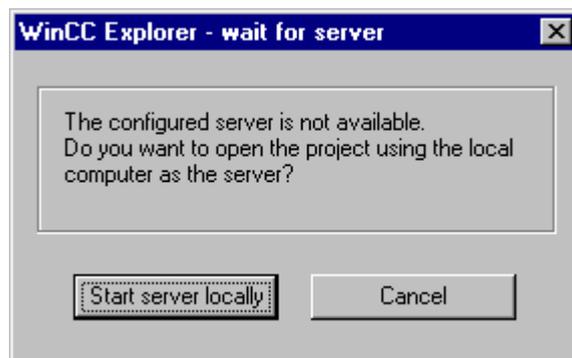
The project can only be activated, if your computer has been entered as an available server in the computer list.

In the project navigation window of the WinCC Explorer, right-click "Computer" and then select the "Properties..." menu command from the displayed shortcut menu.

Click the "Properties" button to edit the properties of the selected computer.

In the "Computer Name" field, enter the name of your computer.

Click "OK."

The changes only take effect after the project is restarted.

Close the "WebDemoProject" via "File" > "Exit".

Reopen the "WebDemoProject".
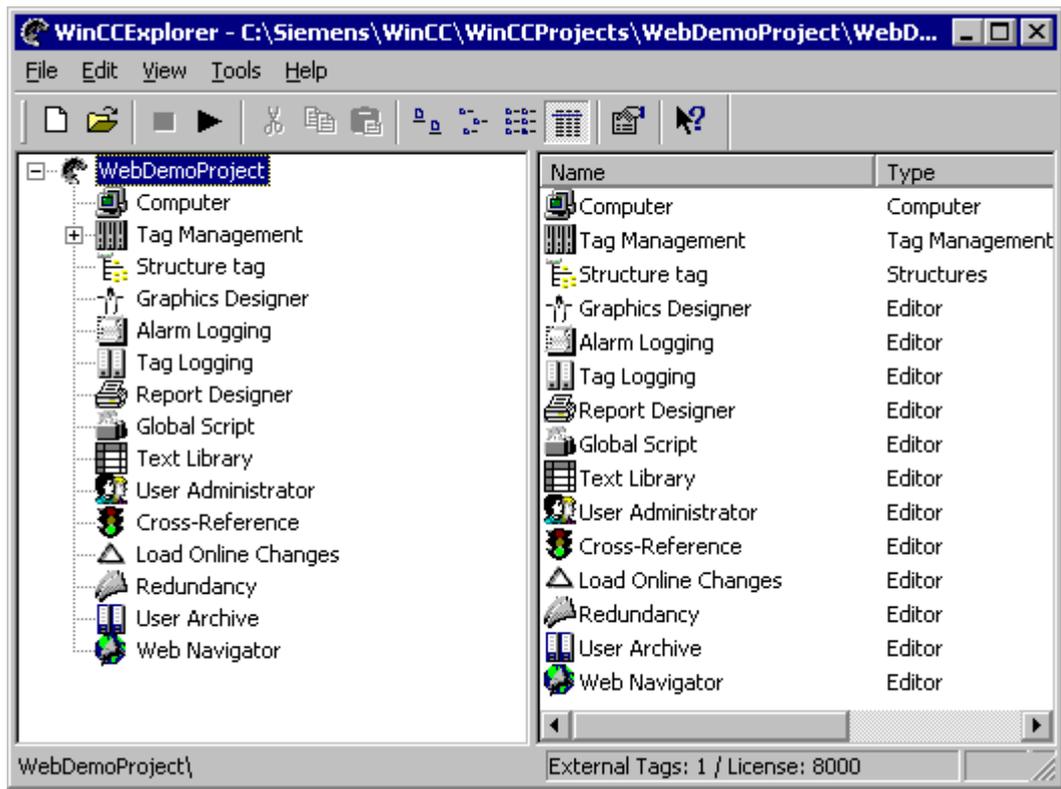
To start Runtime, click "File" > "Activate" in the WinCC Explorer menu bar. A check-mark next to "Activate" indicates that Runtime is active.

Alternatively, you can use the "Activate" button on the toolbar of the WinCC Explorer.

See also

Step 2: WinCC Web Configurator (Page 48)

3.4.2.2 Step 2: WinCC Web Configurator

In the navigation window of the WinCC Explorer, right-click "Web Navigator".

In the shortcut menu, click the "Web Configurator" option.
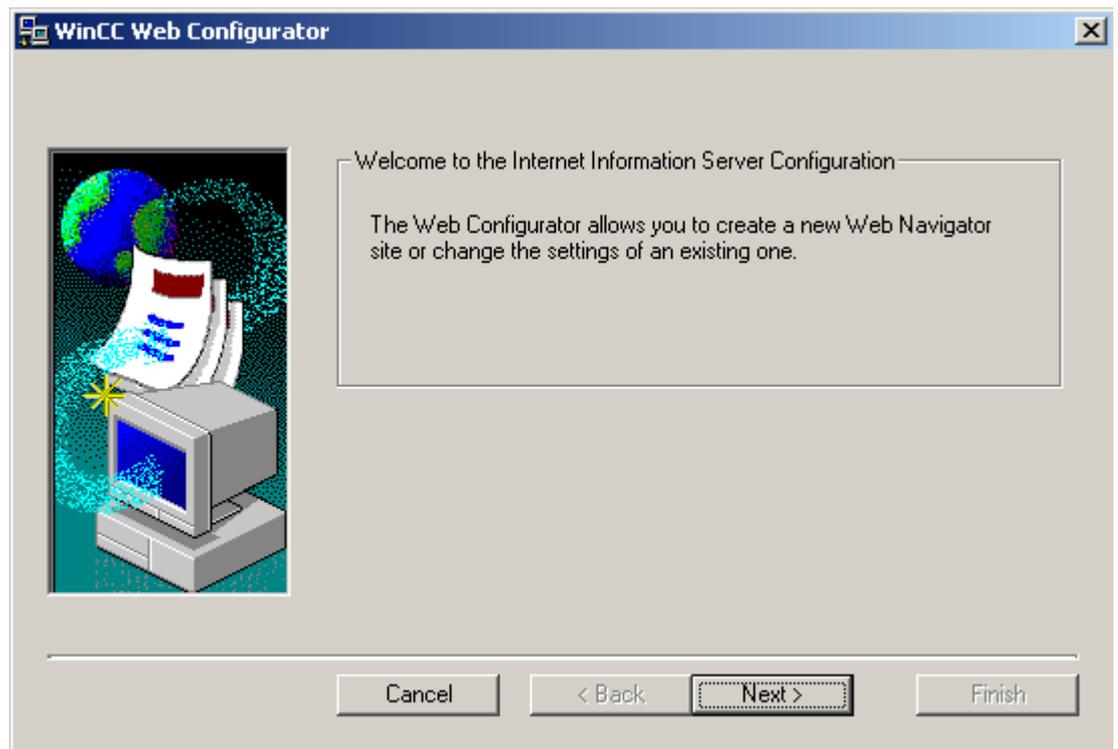
Click "Next".

See also

Step 3: Defining Standard Website (Page 50)

3.4.2.3 Step 3: Defining Standard Website

When starting the WinCC Web Configurator for the first time, a dialog giving you two choices opens:

Select "Create a new standard website (Standalone)". Click "Next".
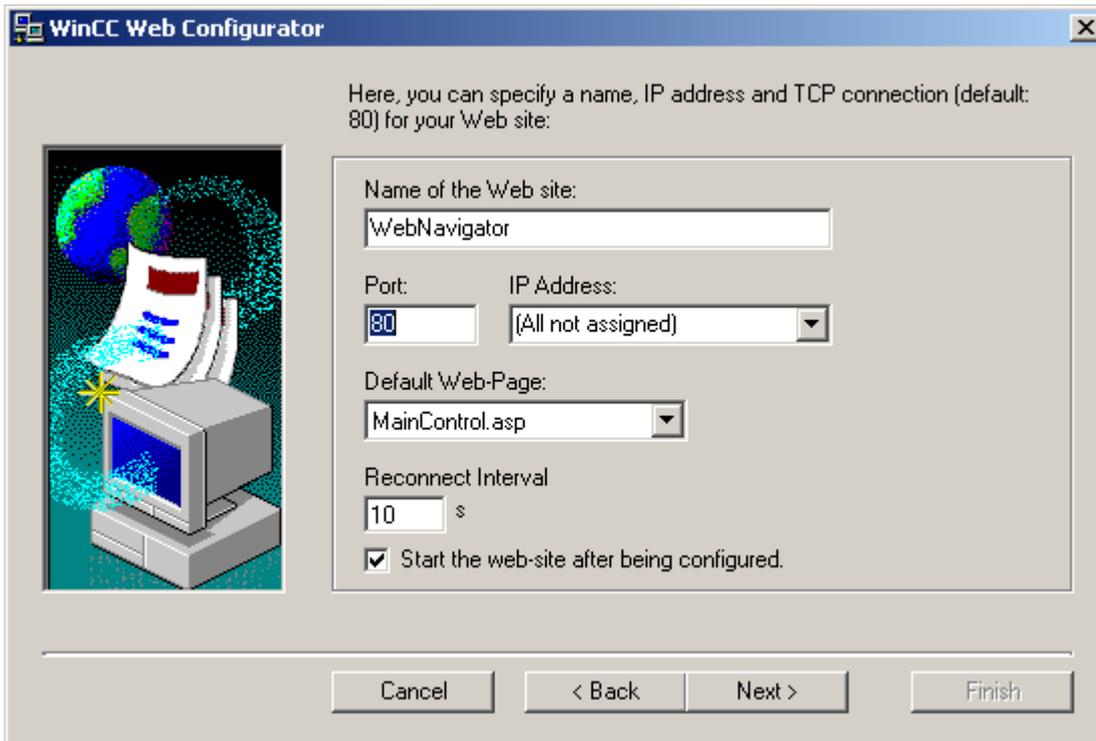
As the name of the Web site, enter "WebNavigator". Select an IP address from the selection field.

Select "WebClient.asp" as the standard web site. Click "Next".
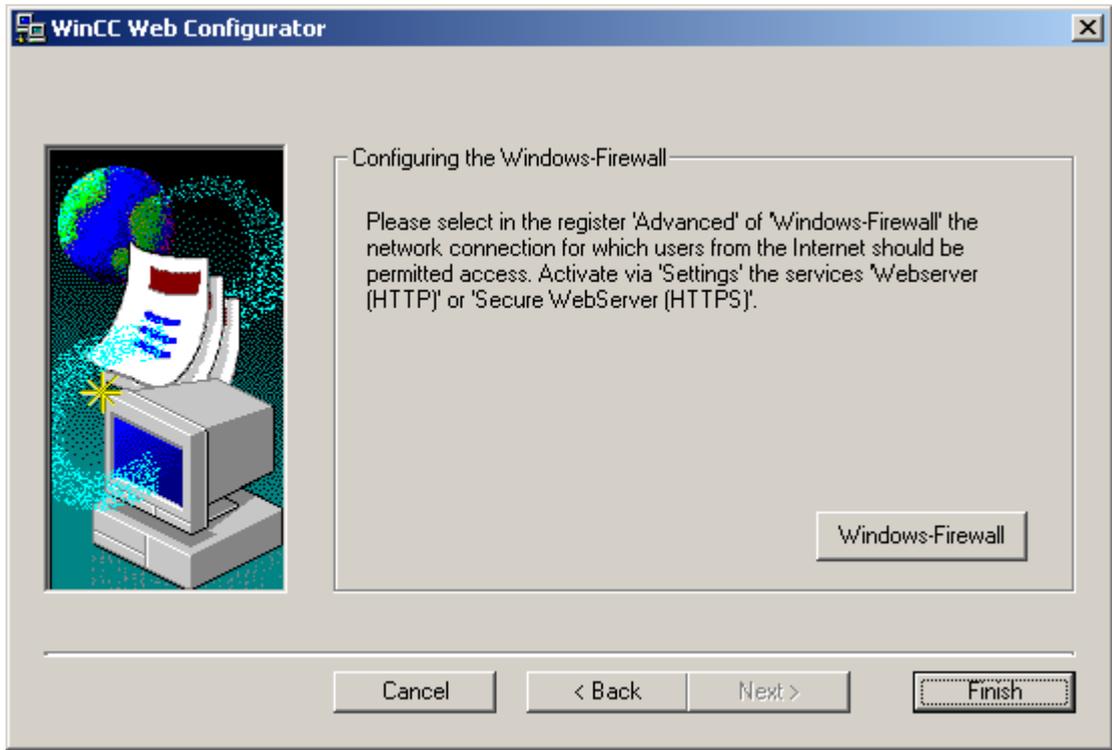
    Click "Windows-Firewall" to configure the firewall.
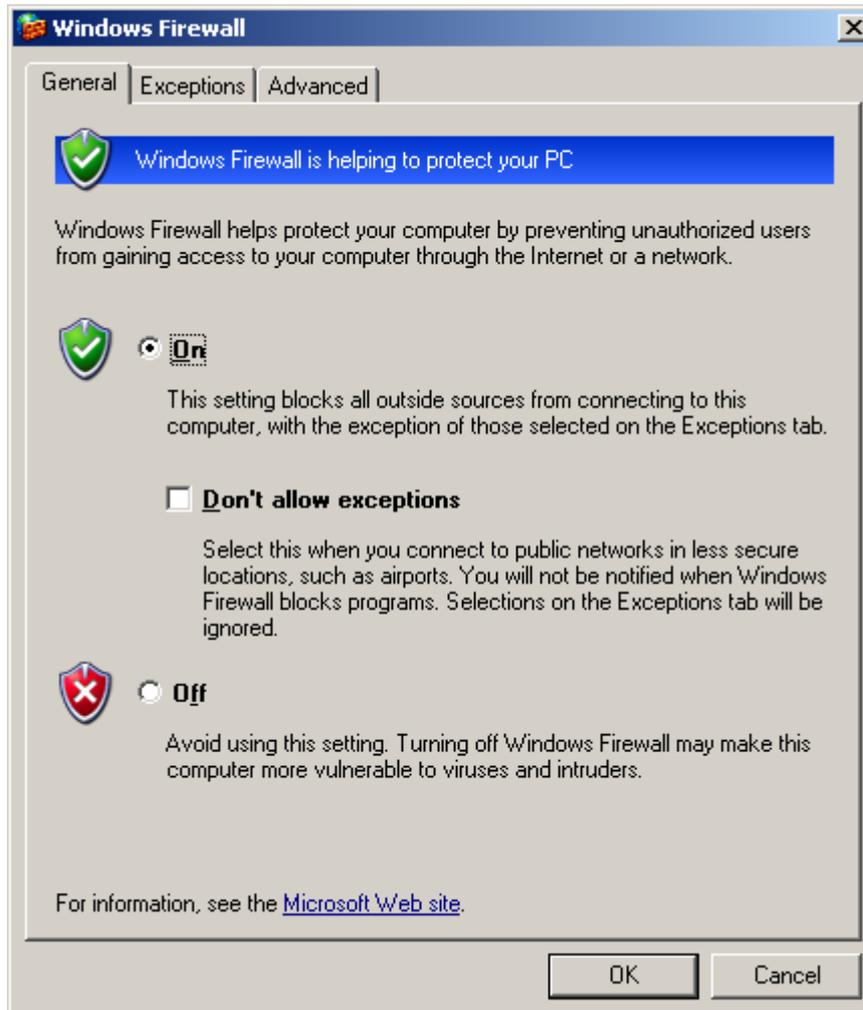
Select "LAN connection" on the "Advanced" tab. Click "Settings".
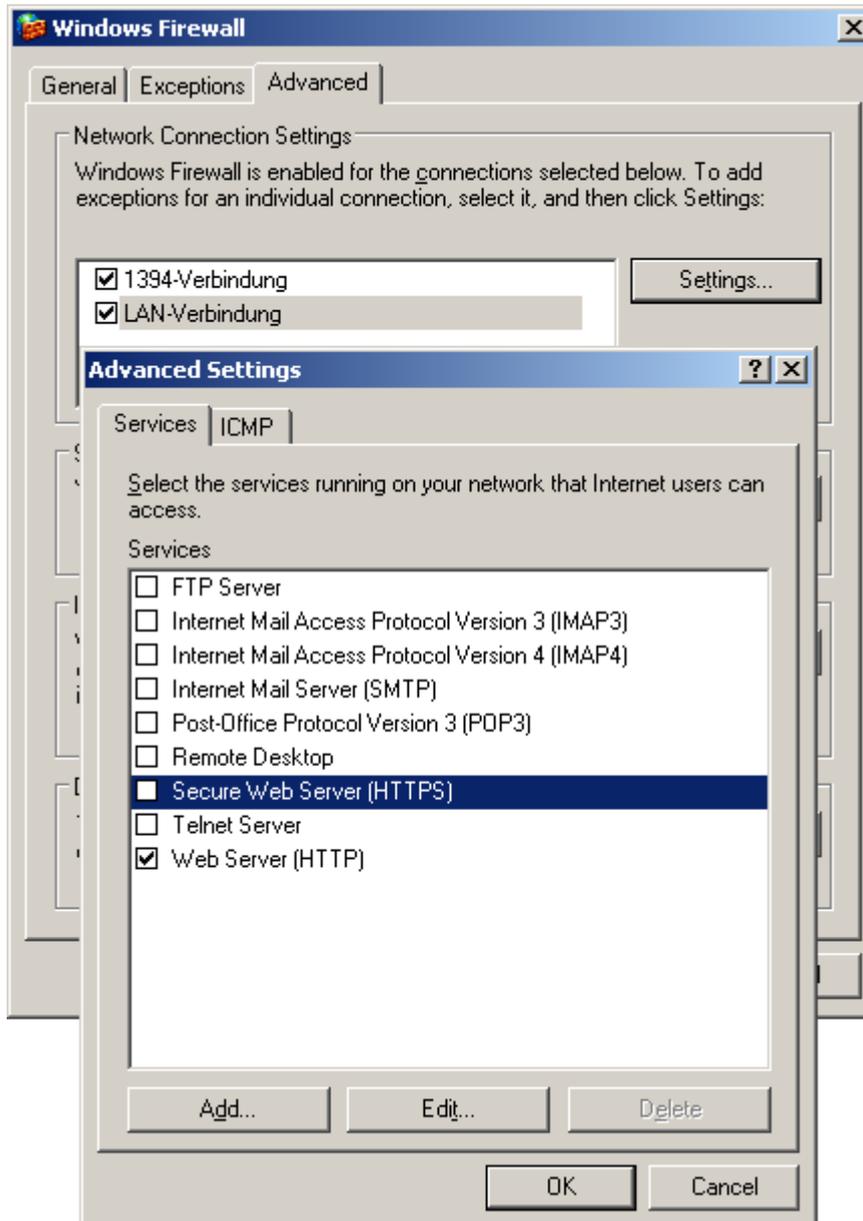
🖐 Activate "Webserver (HTTP)". Click "OK" to close the dialog box. Close the "Windows Firewall" dialog by clicking "OK".

🖐 Click "Finish" to complete the configuration.

See also

3.4.2.4 Step 4: Checking of Activated Website

🖑 Activate the Internet Information Service. To do this, select "Programs" > "Management" > "Internet Information Services".

🖑 In the navigation window, select the computer. In Windows XP, the subfolder "Websites" must also be selected. The data window displays the corresponding websites. Check the information displayed for the websites. If "Stopped" is displayed next to the desired website, e.g. "WebNavigator", the website needs to be started. To do this, right-click the website and select the "Start" menu command from the shortcut menu.

Description	State	Host Header Name	IP Address
Default FTP Site	Running		* All Unass
Default Web Site (Stopped)	Stopped		* All Unass
WebNavigator	Running		* All Unass
Default SMTP Virtual Server	Running		* All Unass
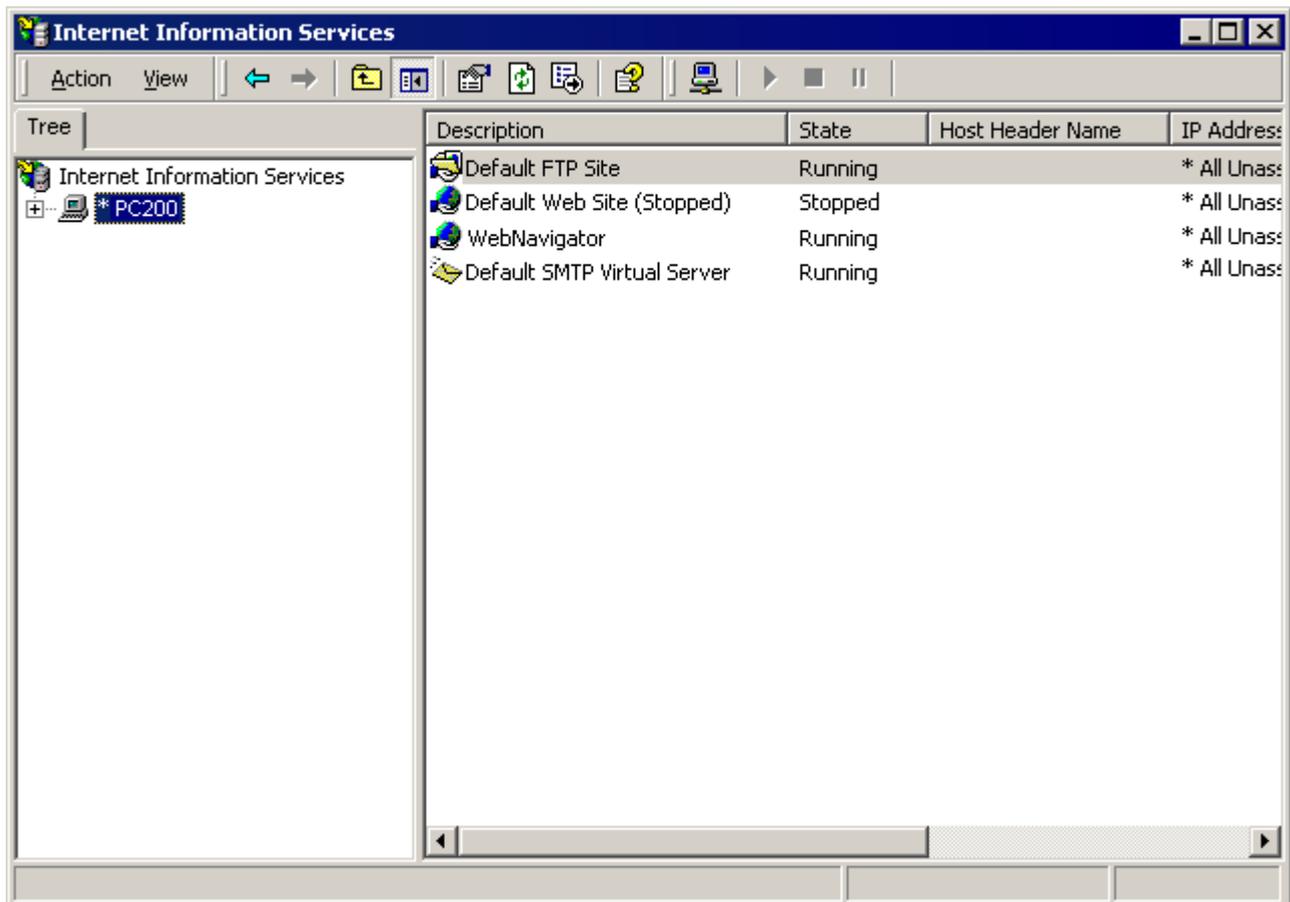
🖑 Close the dialog.

The website is now activated.

See also

Step 5: Starting the Web View Publisher (Page 56)

3.4.3 Publishing Process Pictures

3.4.3.1 Step 5: Starting the Web View Publisher

     In the navigation window of the WinCC Explorer, right-click "Web Navigator".

     In the shortcut menu, click the "Web View Publisher" option.
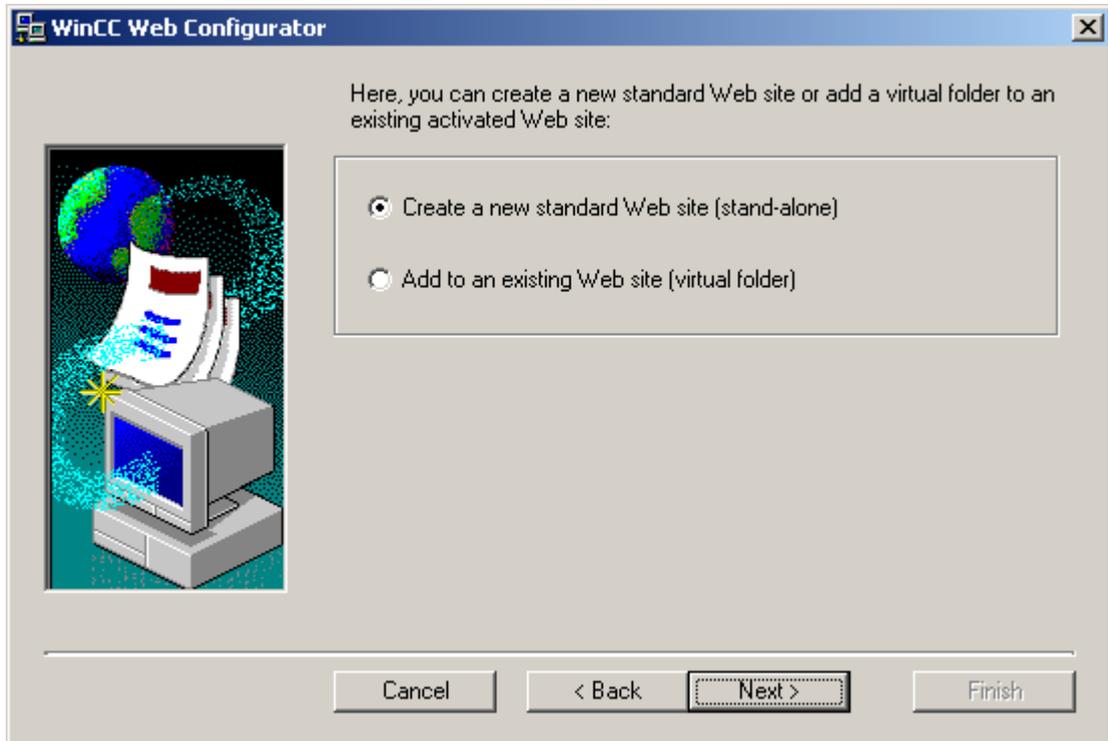

     Click "Next".

See also

3.4.3.2 Step 6: Publishing Pictures
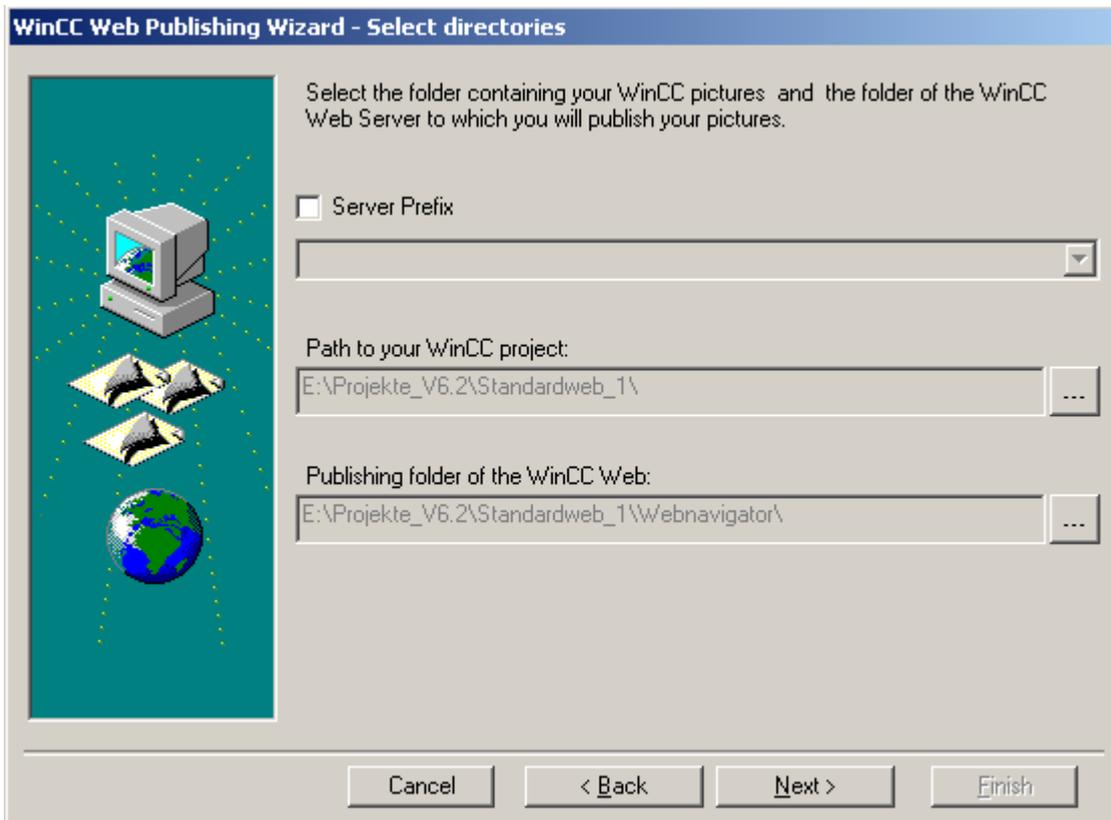
👆 The picture folder in the WinCC project and the folder for the Web access are generally set correctly.

Path to WinCC project folder:	...project path\ project name
Folder for web access:	...project path\ project name\WebNavigator

👆 Click "Next".

Click the ">>" button to select all files.

Click "Next" to go to the next dialog.
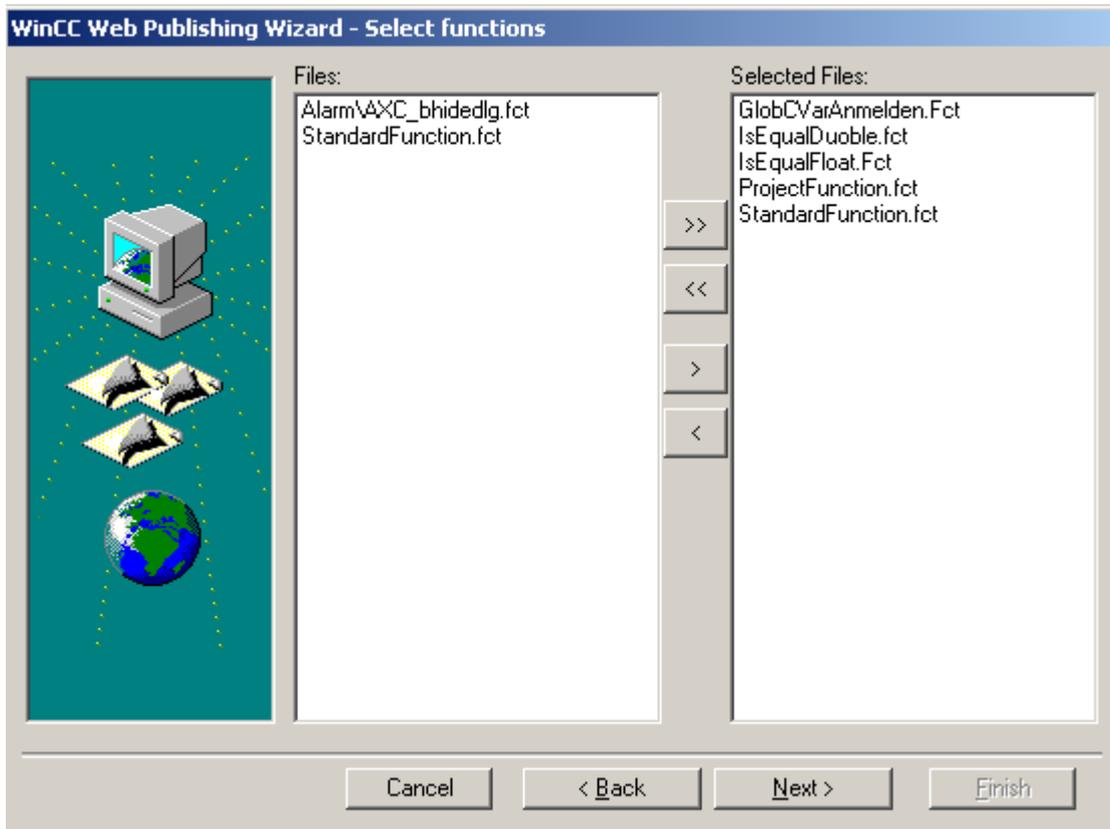
🖱 Via ">", select the C Project Functions that are to be published.

🖱 Click "Next" to go to the next dialog.

In this dialog, select the graphics referenced in the process pictures (*.PDL) that you want to publish (e.g. bitmaps).

Click "Next" to go to the next dialog.

WinCC Web Publishing Wizard - Finish

The WinCC Web Publishing Wizard is finished collecting information.

To publish your pictures, press Finish.

| Cancel | < Back | Next > | Finish |
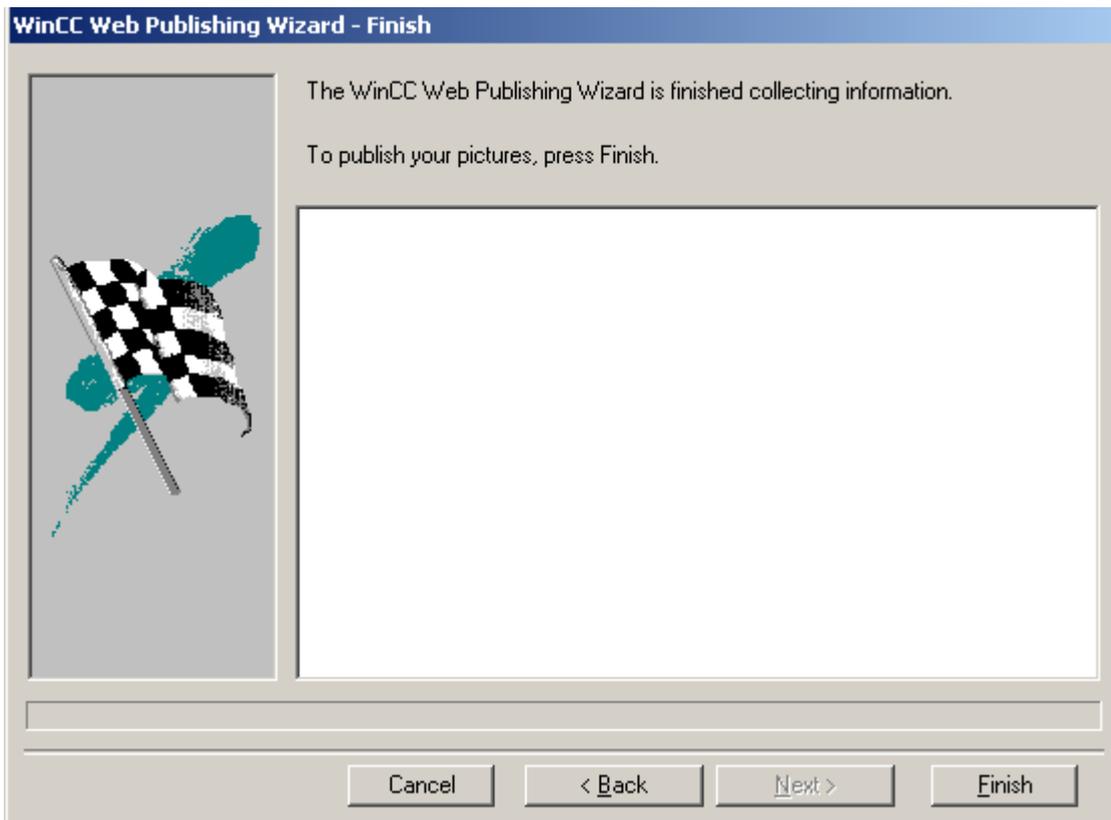
Click "Finish" to publish the pictures on the website.
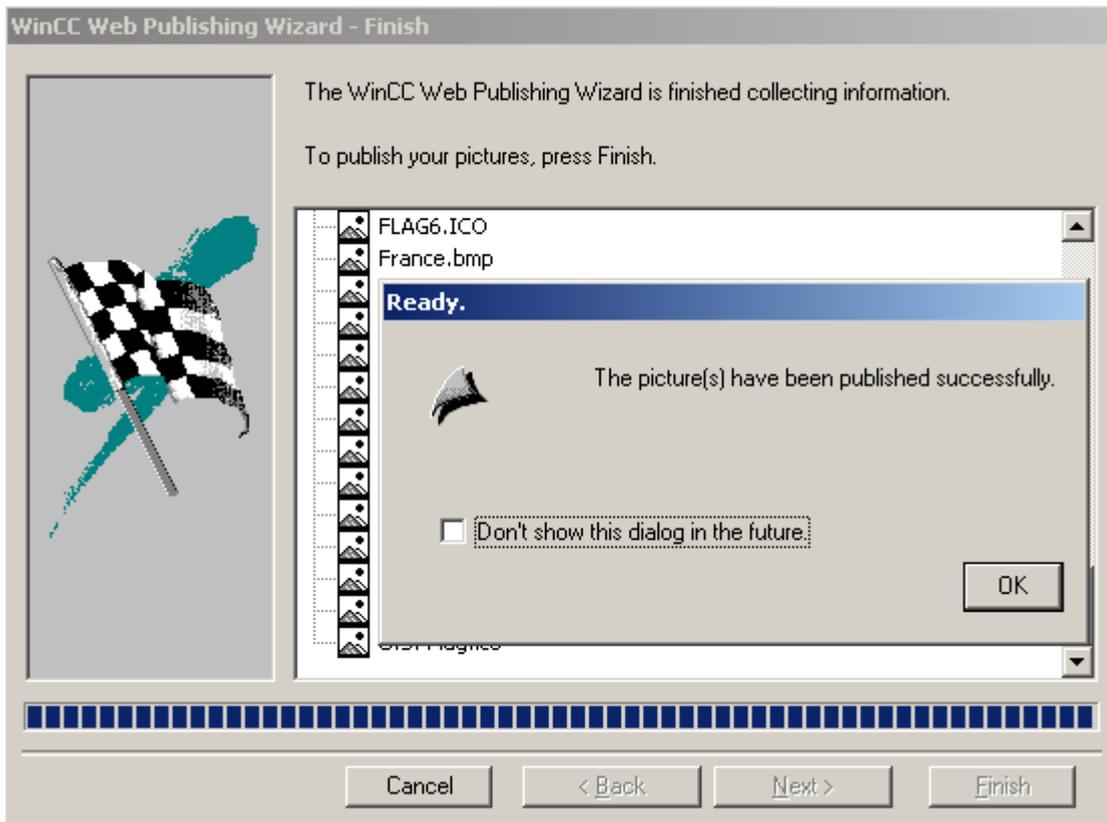
> 👆 After the completion, a dialog is displayed. Confirm it by clicking "OK". To complete the process, click "Finish".

See also

3.4.3.3 Step 7: WinCC User Administrator

> 👆 In the navigation window of the WinCC Explorer, right-click "User Administrator".

> 👆 In the shortcut menu, select the "Open" menu command.
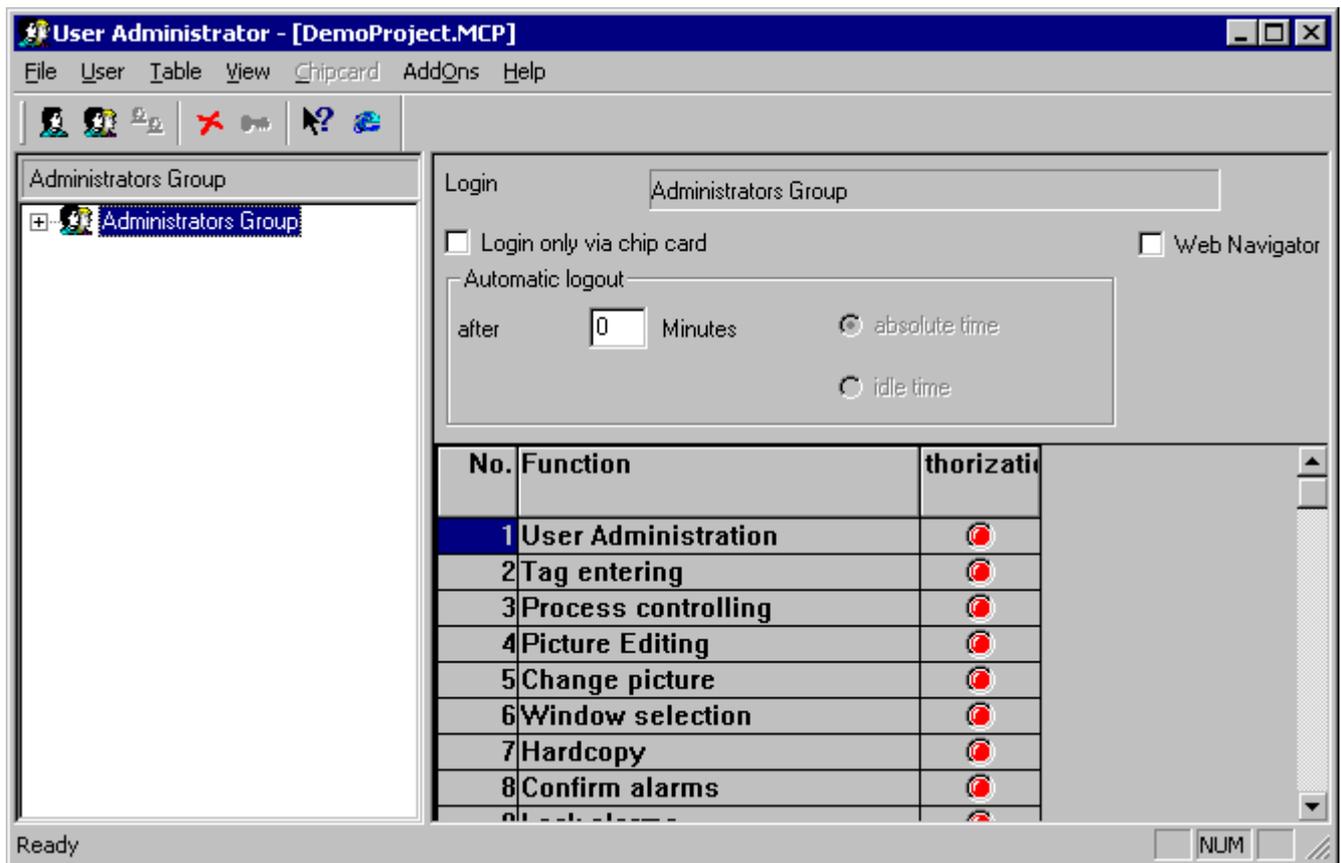
🖐 Click 👤 to create a new user.
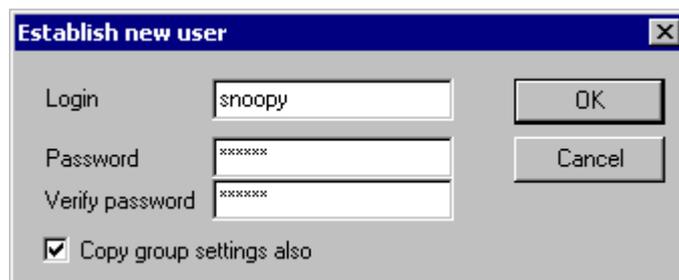
⌨ Enter the necessary data in the "Establish New User" dialog.

🖐 Confirm your entries with "OK."

🖐 Highlight the desired user in the navigation window of the User Administrator.

Defining the Startup Picture

🖐 Select the "Web Navigator" check box in the table window. The "Web Options" area is displayed.

🖐 Click the "..." button of the "Startup Picture" field.

In the following dialog, select the appropriate startup picture, e.g. " WinccPic.PDL", and click "OK".

Defining the Language

Click the "..." button of the "Language" field.

Select the appropriate language, e.g. "English (United States)" and click "OK".

Note

Only languages that have been installed in WinCC are available for selection.

Defining Rights

Highlight the desired user in the navigation window of the User Administrator.

In the table window, select the desired rights by double-clicking in the "Authorization" column.

Repeat these steps for each user.

See also

Step 8: Internet Explorer Settings (Page 64)

3.4.4   Client Access to the Web Project

3.4.4.1   Step 8: Internet Explorer Settings

Click "Tools" > "Internet Options" in the Internet Explorer.

Select the "Security" tab. Select the corresponding zone, e.g. "Local Intranet" or "Internet".
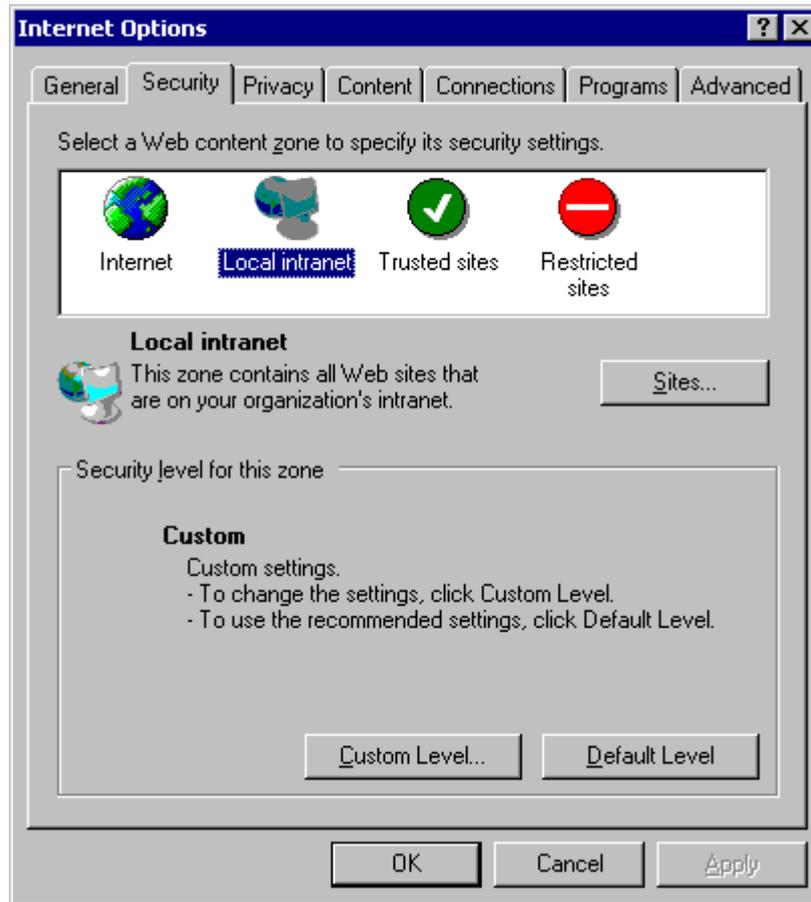
👆 Click "Custom Level".
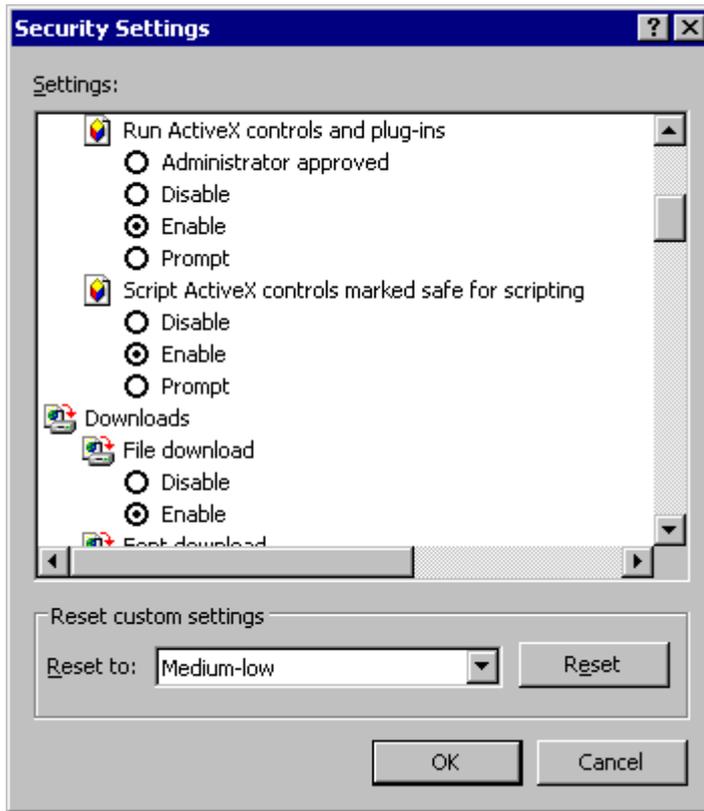
Click the "Enable" radio-buttons for "Script ActiveX controls marked safe for scripting" and "Download signed ActiveX controls".

Click "OK".

In the "Internet Option" dialog, click "Apply".

Click "OK".

This completes all necessary settings in the Internet Explorer.

See also

Step 9: Installation of the WinCC/Web Navigator Client (Page 66)

3.4.4.2 Step 9: Installation of the WinCC/Web Navigator Client

In the address field of the Internet Explorer, enter the address of the WinCC Web Navigator Server, e.g. "http://<Name_of_the_Server>" and then press the ENTER key.

You are asked to enter your user name and password, e.g. Snoopy.

🐾 Confirm your entry with "OK."

If you are accessing the WinCC Web Navigator Server for the first time, the following page is displayed:
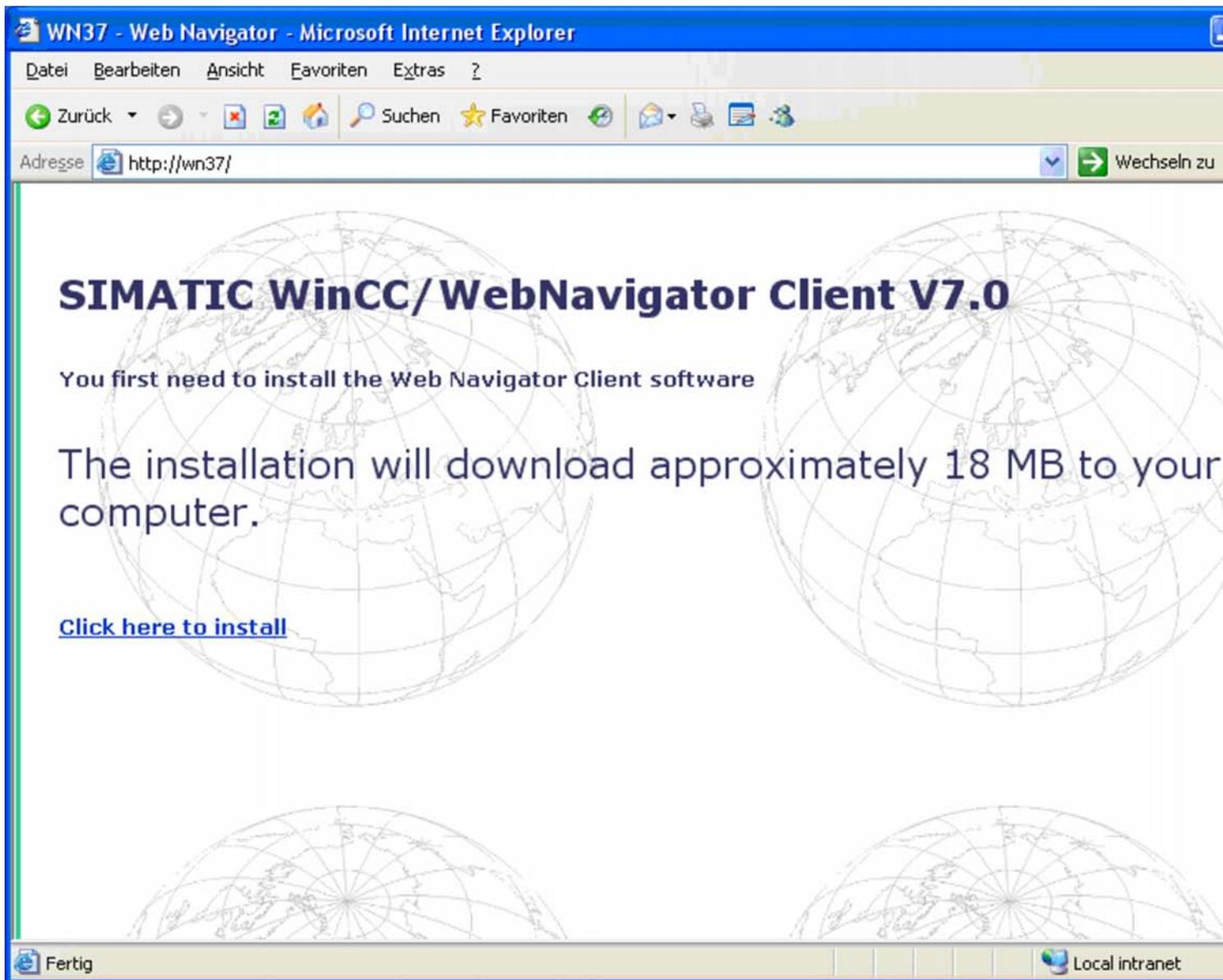
Click the "Click here to install" link to copy the program to your client computer.
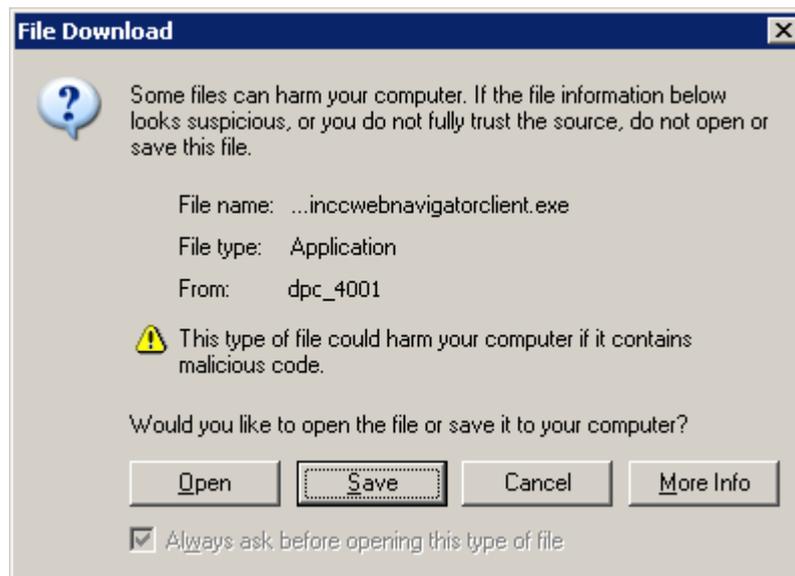
Click the "Save" button. In the next dialog, select the directory in which the Setup file of the Web Navigator Clients are to be saved.

Leave the Internet Explorer open and open Windows Explorer. Navigate to the folder in which the Setup file was saved and start the Setup file by double-clicking it.

The file is decompressed after and the setup of the Web Navigator Client is started.

Click "Next".

Activate the "I accept the terms of the license agreement" in the "License Agreement" dialog. Click "Next".

Enter the user name and organization in the "User information" dialog. Select those for whom the application is installed, e.g. "Anyone who uses this computer (all users)". Click "Next".

Select the "Complete" option in the "Setup type" dialog to install the components of the Web Navigator Clients. Click "Next".

Click the "Install" button in the next dialog.

Click the "Finish" button in the "Install Wizard completed" dialog.

After the successful installation of the WinCC Web Navigator Client software, the client connects to the Runtime project.

Note

It is recommended to save the Setup file because, in the event of a restart of the client computer being necessary, the Setup need not be downloaded again.
If an error message appears during installation of the Web Navigator Clients and the process is canceled, check that the hardware and software conditions have been met by referring to the topic "Installation and Deinstallation" .

See also

Step 10: Web Project (Page 70)

3.4.4.3   Step 10: Web Project

The startup picture corresponding to the user identified is displayed.

In the case of the user "Snoopy", "WinccPic.pdl" was defined as the startup picture.

Confirm the dialog by clicking "OK".
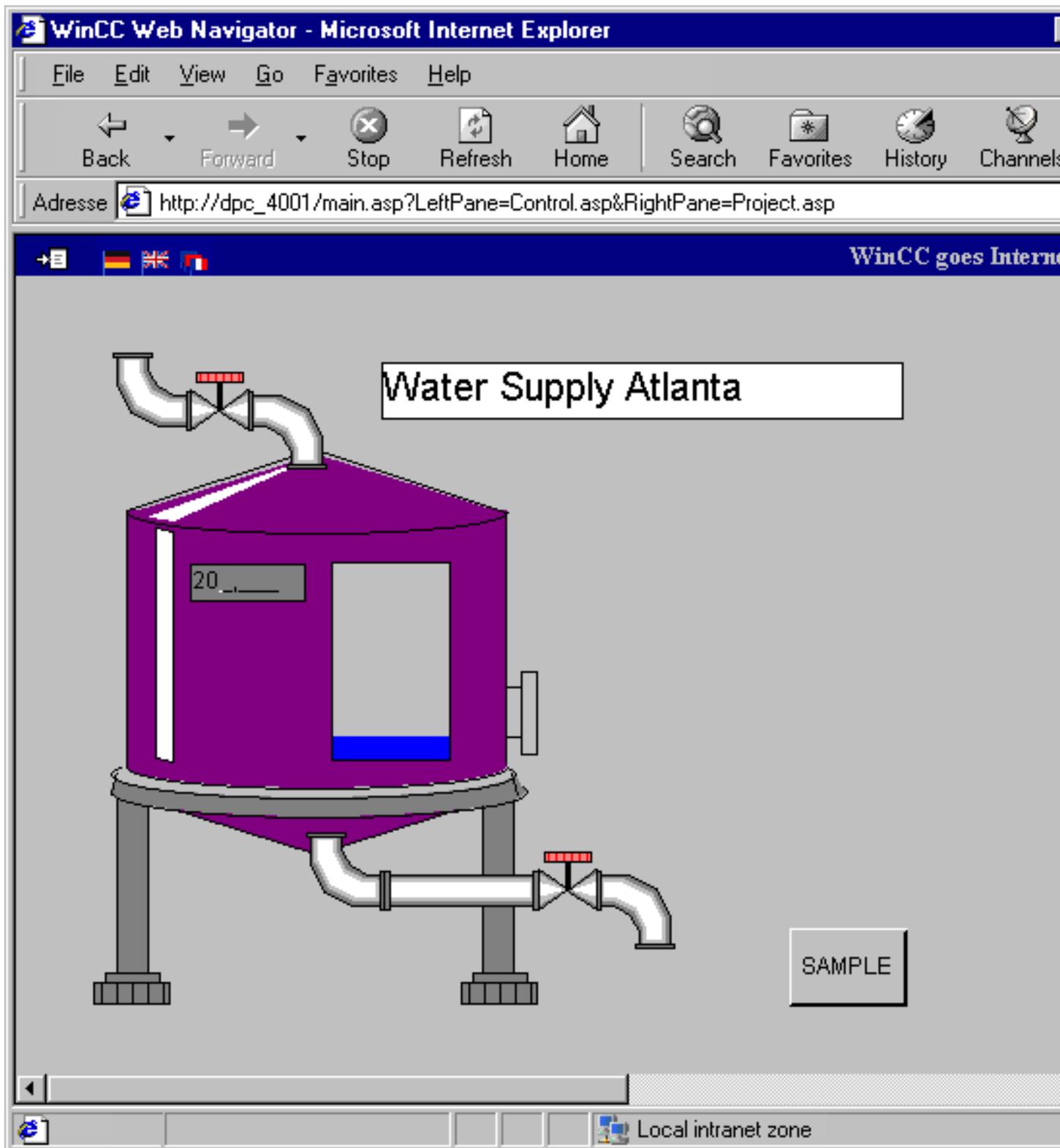
If you enter, for example, the value 50 in the input field, the fill level of the tank in the "WebDemoProject" changes accordingly.

See also

Step 11: Creating a New Process Picture (Page 72)

3.4.5 New Process Picture

3.4.5.1 Step 11: Creating a New Process Picture

In the navigation window of the WinCC Explorer, click the "Graphics Designer" and then right-click the "WinccPic.pdl" picture in the data window.

In the shortcut menu, click the "Open Picture" menu option.
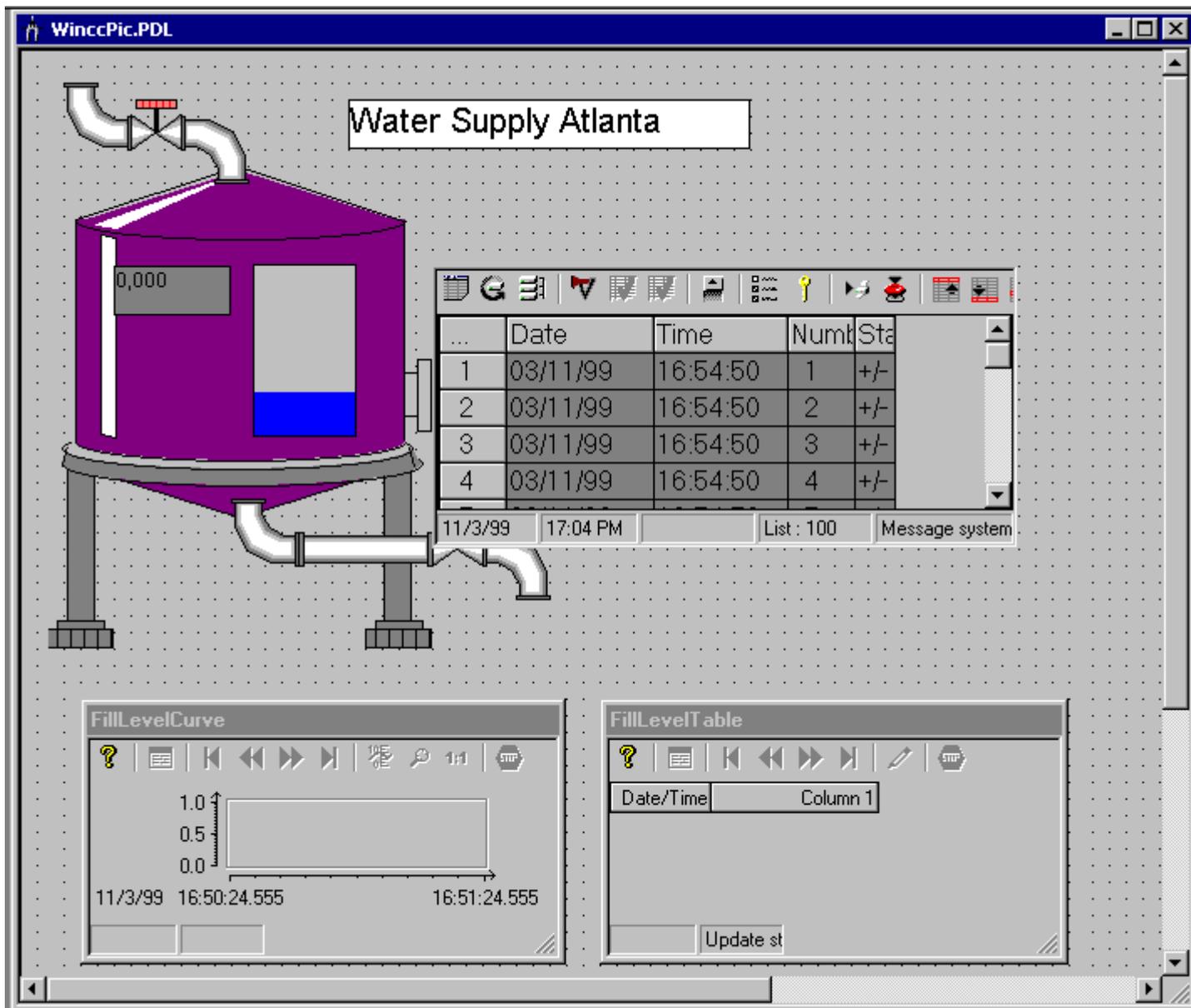
Creating a Trend Window

👆 From the object palette, select the "Controls" tab and from it the "WinCC Online Trend Control".

⌨ In the "General" tab of the quick configuration dialog, enter "FillLevelTrend" as the title of the trend window.

👆 Select the "Trends" tab.

⌨ Enter "FillLevel" as the name of the trend.

👆 Click the "Selection" button.

On the right side of the "Selection of Archives/Tags" dialog, double-click the "FillLevelArchive".

On the right side of the "Selection of Archives/Tags" dialog, click the "FillLevelArch" tag.

Confirm your inputs by clicking "OK".

Creating a Table Window

From the object palette, select the "Controls" tab and from it the "WinCC Online Table Control".

As the title of the table window, enter "FillLevelTable".

Repeat the steps performed for the "Trends" tab of the WinCC Online Trend Control in the "Columns" tab of the WinCC Online Table Control.

Confirm your entries by clicking "OK".

Creating an Alarm Message Window

From the object palette, select the "Controls" tab and from it the "WinCC Alarm Control".

In the quick configuration dialog, enter "Water Supply Atlanta" as the title of the message window.

Select the "Display" check box.

Confirm your entries by clicking "OK".

Save the picture under the name "WinccPic1.pdl" and exit the Graphics Designer.

See also

Step 12: Publishing Process Picture (Page 74)

3.4.5.2   Step 12: Publishing Process Picture

In the navigation window of the WinCC Explorer, right-click "Web Navigator".

In the shortcut menu, click the "Web Configurator" option.

In the "Select Pictures" dialog, select "WinccPic1.pdl".

Click "Finish" to complete the operation.

Note

Each picture changed must again be converted using the "Web View Publisher".

Open the "WinCC User Administrator" and, for example, set "WinccPic1.pdl" as the new startup picture for the user "Snoopy". Close the User Administrator again.

The Project view can be updated using "View" > "Refresh" in WinCC Explorer.

See also

Step 13: Process Picture on Web Client (Page 75)

3.4.5.3 Step 13: Process Picture on Web Client

Start the Internet Explorer.

Log in, for example, using the user name "Snoopy" and its password.

Confirm the prompt with "OK".

If everything is configured correctly, you should see the following picture:
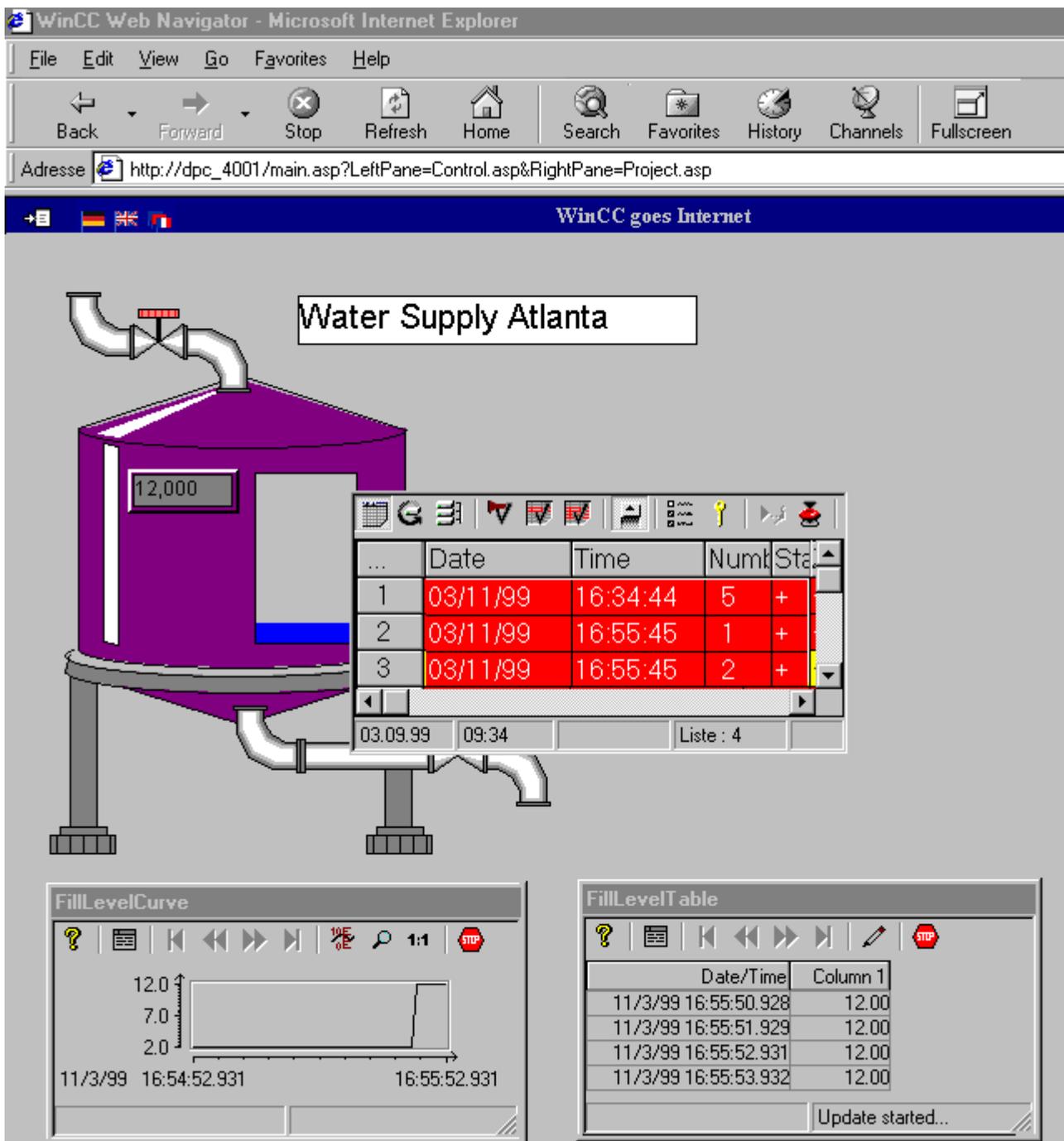
Enter a new value in the input field.

The displays of the "WinCC Online Trend Control / Table Control" changes accordingly (as in the "WebDemoProject").

Note

When using more complex functions or scripts in your project, please keep in mind the limitations, etc. outlined in the corresponding chapters of the WinCC Web Navigator documentation.

See also

Troubleshooting (Page 77)

3.5 Troubleshooting

No pictures are displayed

On the WinCC Web Navigator Server computer, check whether the "WebNavigator" Website is active:

● Activate the Internet Information Service via "Programs" > "Management" > "Internet Information Services". Check the information at "WebNavigator". If "Stopped" is displayed, the Website needs to be started. To do so, right-click "WebNavigator" and select the "Start" menu command from the shortcut menu.

Startup picture is not updated

The startup picture displayed by the Internet Explorer does not match the picture you have just edited, since the Internet Explorer has saved the previous startup picture to its temporary storage.

● Start the Web View Publisher in order to make the new picture available on the Internet.

● Delete the temporary Internet files in the Internet Explorer via "Tools" > "Internet Options".

WinCC/WebNavigator Documentation

4

4 Resources

4.1 Function Overview

Introduction

The enormous growth of the Internet in recent years has had and is having a large impact on industrial development. One of the key factors responsible for the Internet boom was the development of the World Wide Web WWW Internet service.

Browser applications with graphical user interfaces make accessing and navigating the Web easy: clicking a mouse button is all that is needed to cross geographical borders.

The WinCC WebNavigator option package to the WinCC basic system enables you to develop a solution for controlling and monitoring processes via the Intranet/Internet. With this option package and the standard tools of WinCC, a new way of distributing the HMI functions of your plant - employing the Intranet/Internet - can be implemented. The WinCC Web Navigator supports current Internet security methods and provides Wizards to assist you in your task.

The communication mechanisms of the WinCC Web Navigator utilize a powerful and optimized event-driven transmission of data that delivers the best performance via the Intranet/Internet.

The WinCC WebNavigator user interface combines various Web functions and makes them available to the user in a clear format. The contents of the navigation interface can be expanded by the user. Installed DataMonitor components are also displayed by the navigation interface.

The WinCC WebNavigator package consists of special server components that are installed on the server computer and of client components that are installed on the client computer on the Intranet/Internet.
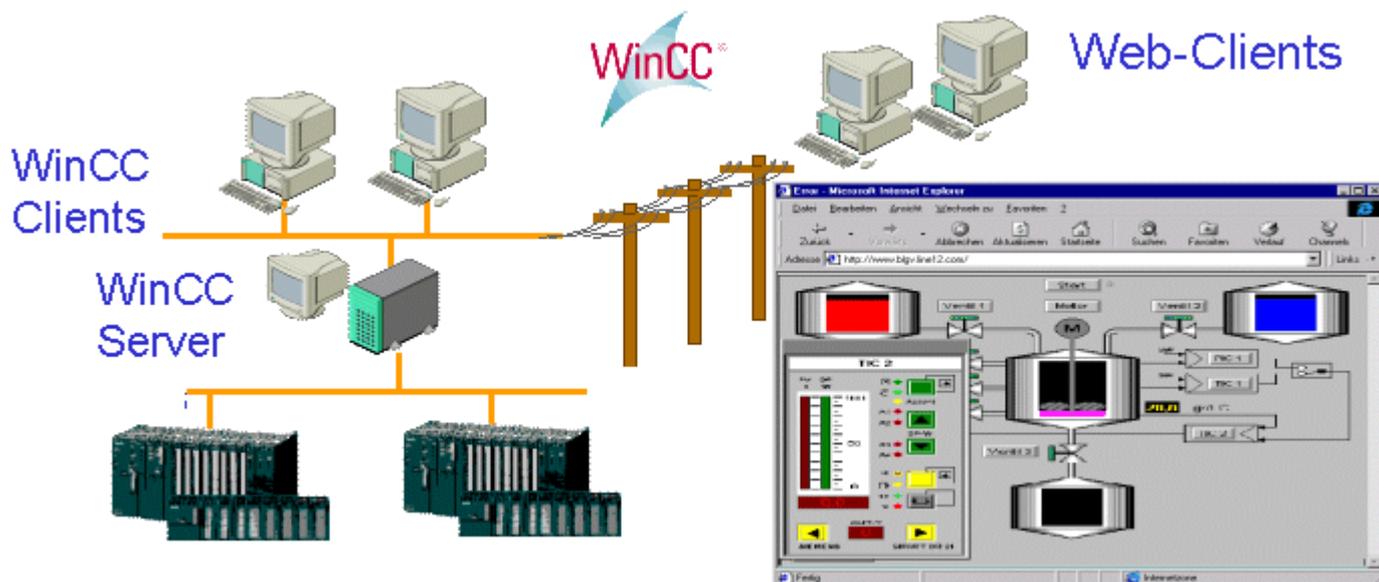
As a so-called "thin client", the WinCC Web client can control and monitor a running WinCC project from an opened Internet Browser, without the need of having to install the complete WinCC basic system on the client computer.

The WinCC Web Navigator thus cost-effectively expands the networking of client-server systems to the intranet/Internet. The project and the associated WinCC application are located on a server computer. This provides a clear separation of the visualization components on the client computer and the WinCC project running on the server computer. This means that operator stations can be set up easily, e.g. for maintenance or diagnostics purposes.

The software of the WinCC Web Navigator Client can be installed in various ways: As usual using DVD as a self-decompressing file via the Intranet/Internet or even via a group guideline based software distribution in networks. If the client component is missing during direct access to WinCC WebNavigator Server, the operator is prompted automatically to load the file to his computer. This scenario provides the WinCC WebNavigator operator with a high degree of flexibility and mobility.

A property of the user administration is the user-specific assignment of the startup picture and the language. For every user, a different startup picture and language can be set. By assigning user authorizations, a scalable access to different project areas and functions can be implemented for the various users.

The pictures displayed on the WinCC Web Navigator Client can be controlled as in a normal WinCC system, provided the user possesses the necessary user authorizations. In this way, the WinCC project running on the server computer can be controlled from anywhere on earth. The Web client supports pan, zoom and declutter functions. This enables sections of process screens displayed to be moved, process screens or sections of them to be zoomed using the mouse wheel or dragging the borders and graphic objects to be hidden and unhidden according to the level and object size.
The display of archive data of the WinCC option User Archives is also supported.

Using Visual Basic Scripting (VBS) it is possible to control the dynamic behavior of objects, for example, or establish a connection to other applications with the Web client.

The WinCC WebNavigator Server requires the Microsoft Internet Information Service for the communication to its clients. The WinCC Web Configurator is provided for setting up the WinCC WebNavigator Server, making configuring the Internet server simple and convenient. The Web Configurator is ideal for all users without Internet server knowledge: after only making a few entries, the Web server is properly configured.

The "Load Balancing" function enables Web Navigator Clients to be distributed automatically to different Web Navigator servers evenly and according to the respective server authorizations.

The Web View Publisher automatically performs the necessary adaptations for the project data so that it can run on the WinCC Web Navigator Client. In order to achieve the best possible performance, the Wizard limits itself to information that is necessary for the web.

4.2 Configuring the WebNavigator Server

4.2.1 Configuring the WebNavigator Server

Introduction

The following configurations can be made on the Web Navigator server:

- The WinCC Web Configurator is used to set up and manage the Internet Information Service (IIS).

- The "Load Balancing" function can be used, as necessary, to set up a load distribution between several web servers.

- The Web View Publisher automatically performs the necessary adaptations for the project data so that it can run on the WinCC Web Navigator Client via the intranet/Internet. Various versions of the Web View Publisher can be used and are described in Chapter "Configuring a Web Project".

See also

Configuration of a Web Project (Page 110)

Load Distribution on Web Servers Using the "Load Balancing" Function (Page 95)

Wizard-Assisted Web Setup: WinCC Web Configurator (Page 82)

4.2.2 Performance of the web server and dedicated web server

Performance of your WinCC web server

The performance of WinCC projects as well as picture loading and update times on the WinCC Web Clients are greatly influenced by the speed and band width of the WinCC Web Navigator Server's Internet access. Each client requires at least approx. 10 kbps bandwidth.

Maximum performance can be achieved by operating the WinCC Web Navigator Server on a LAN. However, if the Web Navigator Server is connected to a 64K modem, a considerably smaller bandwidth and reduced performance are the result, which negatively affect the picture loading times, updating and the number of clients which can be operated simultaneously.

Performance dedicated Web Server

Tag logging

The number of trend values which the dedicated Web server can supply to the Online Trend Control on the Web clients, is dependent on the hardware used.

Typical values for a system with Pentium 4, 2.4 GHz and 100 Mbit LAN:

- The dedicated Web server can supply 100 trend values per WinCC server at a cycle of 1s.
  Example: 1 WinCC server: 50 Web clients can simultaneously display 2 trends at a cycle of 1s, 20 trends at a cycle of 10s or 25 Web clients 4 trends at a cycle of 1s.

- The dedicated Web server can simultaneously supply 400 trend values to its Web clients.
  Example: With 4 WinCC servers, each supplying 100 trend values, 50 Web clients can simultaneously display 8 trends in at a cycle of 1s, 160 trends at a cycle of 10s or 25 Web clients 16 trends at a cycle of 1s.
  Example: With 10 WinCC servers, each supplying 40 trend values, 50 Web clients can simultaneously display 8 trends in at a cycle of 1s, 160 trends at a cycle of 10s or 25 Web clients 16 trends at a cycle of 1s.

In the case of a higher performance computer, the number of trend values which can be displayed simultaneously increases whereas the number of trend values per WinCC server remains by approx. 100 trend values at cycle time of 1s.

Alarm Logging:

The alarm servers process the requirements of the controls sequentially. If several controls are reported on a server at the same time, it may take some time until the last Alarm Control can display its alarms.

4.2.3   Setting up Web Folder

4.2.3.1   Wizard-Assisted Web Setup: WinCC Web Configurator

Application

The WinCC Web Configurator provides simple and uncomplicated support in administration and installation of Microsoft Internet Information Service (IIS). The Configurator is thus ideal for all users without web server knowledge. This setup and configuration is necessary to make

the WinCC Server accessible via the intranet/Internet. More information about the Internet Information Server can be obtained from Microsoft.

Standard Website Settings

Using the WinCC Web Configurator, you may also select which default website should be opened upon starting the web client. If "WebClient.asp" is set, the web client starts, as usual, with the process screens. If "MainControl.asp" is set, the web client starts with the Navigation interface.

How to Start the WinCC Web Configurator

1. In the navigation window of the WinCC Explorer, select the Web Navigator and access its shortcut menu.

2. In the shortcut menu, select the "Web Configurator" menu command.

   ### Note

   If you have any questions or experience problems with the following settings, contact your intranet/Internet administrator.

Initial Configuration of the WinCC Web Navigator Server

During the initial configuration, the first dialog of the WinCC Web Configurator allows you to specify the creation of a new default website or a new virtual folder. For this, please observe the following note. The following step depends on the option selected.
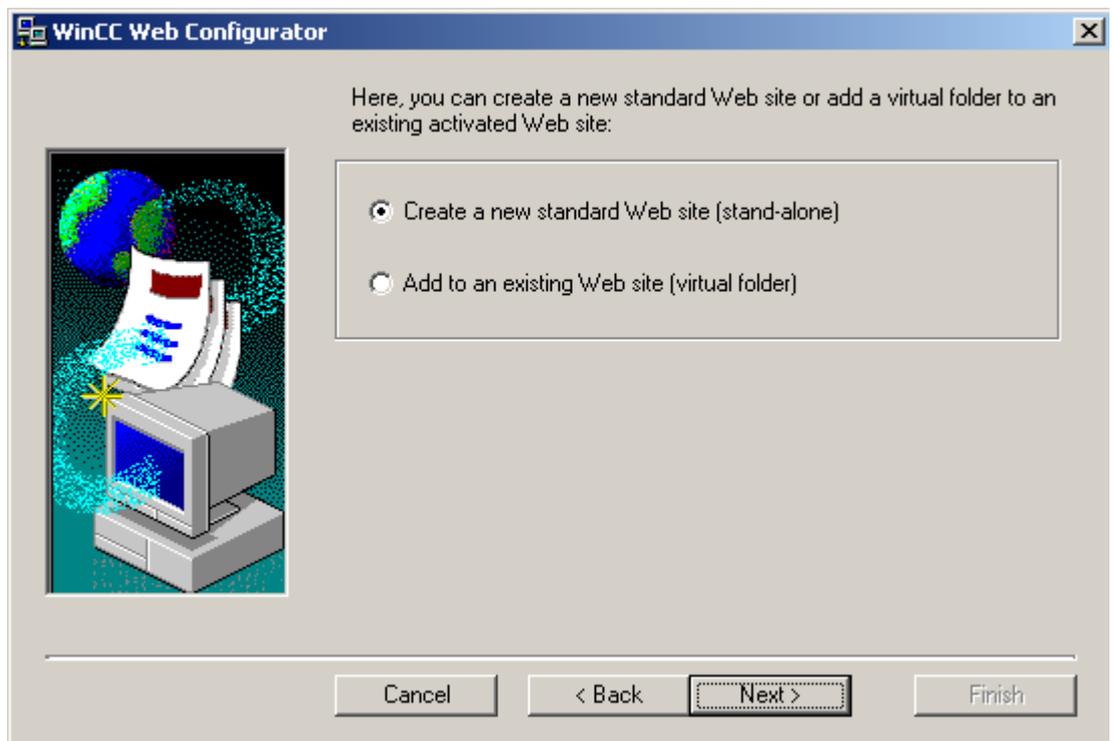
- If you only wish to operate the WinCC Web Navigator Web on your server, activate the option "Create a new standard website (stand-alone)".

- If the WinCC Web Navigator Web is supposed to be added as a subdirectory to your existing web, activate the option "Add to an existing website (virtual folder)".
  This option may be necessary if the previous default website must remain active or if the operating system supports only the operation of one website.

Editing the Configuration

If the IIS has already been configured, the settings of the existing web server or virtual directory may be changed via the WinCC Web Configurator.

The Web Configurator automatically detects an existing configuration and opens the corresponding dialog for making changes to the configuration.

Note

The appendix contains settings made by the WinCC Web Configurator.

If the website for the Web Navigator is accidentally deleted, restart the computer before creating a new website with the WinCC Web Configurator.

Please note that if manual changes were made to this website and the web communication fails afterwards, the Web Configurator attempts to automatically correct these settings.

If this is unsuccessful, delete the website from the IIS, restart the computer and create a new website with the Web Configurator.

4.2.3.2   Create New Standard Website (Standalone)

Introduction

You can create the standard website using the WinCC Web Configurator. This will also set up the firewall settings.

Attitudes

You define the following settings in the "WinCC Web Configurator" dialog.

Name of the Website	Specify a name for your website here, e.g. Web Navigator
Port	Here you can specify the connection (port) to be used by the http protocol for accessing the Internet. Only numbers ranging from 1 to 65535 may be entered. As a rule, the port numbers up to 1024 are reserved for the system. In this field, the HTTP standard port 80 is set by default. If another port number is selected, this changed number must be specified during registration of a web client in the address bar of the Internet Explorers after server name or URL. Possible formats are, for example. "http://<server_name>:<port_number>/webnavigator/maincontrol.asp" or "http://<URL>:<port_number>/Webnavigator/maincontrol.asp". If using default port 80 and only one active website on the web server, this information is not needed.
IP Address	Every computer on the Internet possesses a unique address. The address consists of a group of four numbers that are separated by periods. The numbers can have values ranging from 0 to 255. The address is defined in the Windows Control Panel. You can only use addresses that are shown in the list-box. Via the IP address, you can specify whether the computer is to be accessible on the intranet or Internet or on both networks. For example, via the IP address x.x.x.x, the computer is known to the intranet, via the IP address y.y.y.y to the Internet. If you want to make the computer accessible only on the intranet or Internet, select the corresponding address, e.g. for the intranet, this would be x.x.x.x. If the computer is to be accessible via the intranet and the Internet, select "All not assigned".
Standard Website selection fields	Select the standard Websites here which should be displayed on the web client after selecting the web server.
Reconnect interval	Enter the time interval after which the web client should automatically start to establish a connection (Reconnect) following a connection breakdown. If the value = 0 is set, the "Automatic connection establishment" function is disabled.
Starting the Website after Configuration	Activate this check box to automatically start the website following the configuration. If this check box is not activated, the website has to be manually started via the Windows console "Internet Information Services".

Procedure

1. In WinCC Explorer, select "Web Configurator" in the context menu of the "Web Navigator".
   The "WinCC Web Configurator" dialog opens.
   Click "Next" to confirm.

2. Select "Create a new standard webpage (Standalone)" and confirm with "Next".
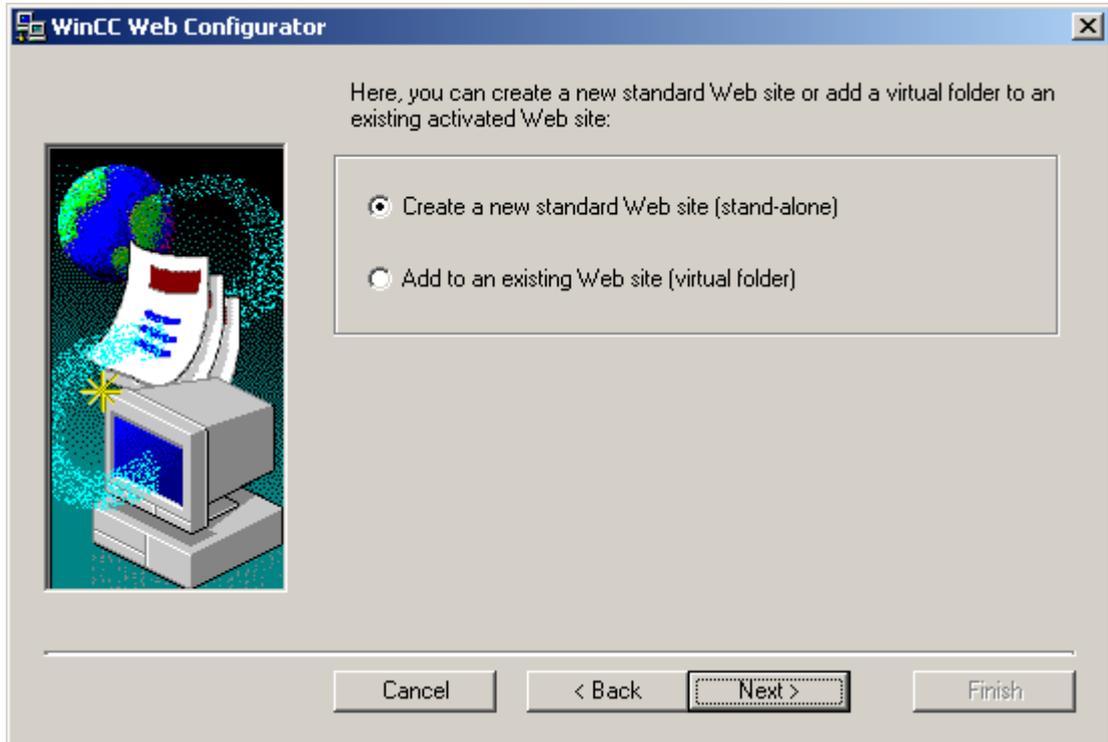
3. Define the desired settings and confirm with "Next".
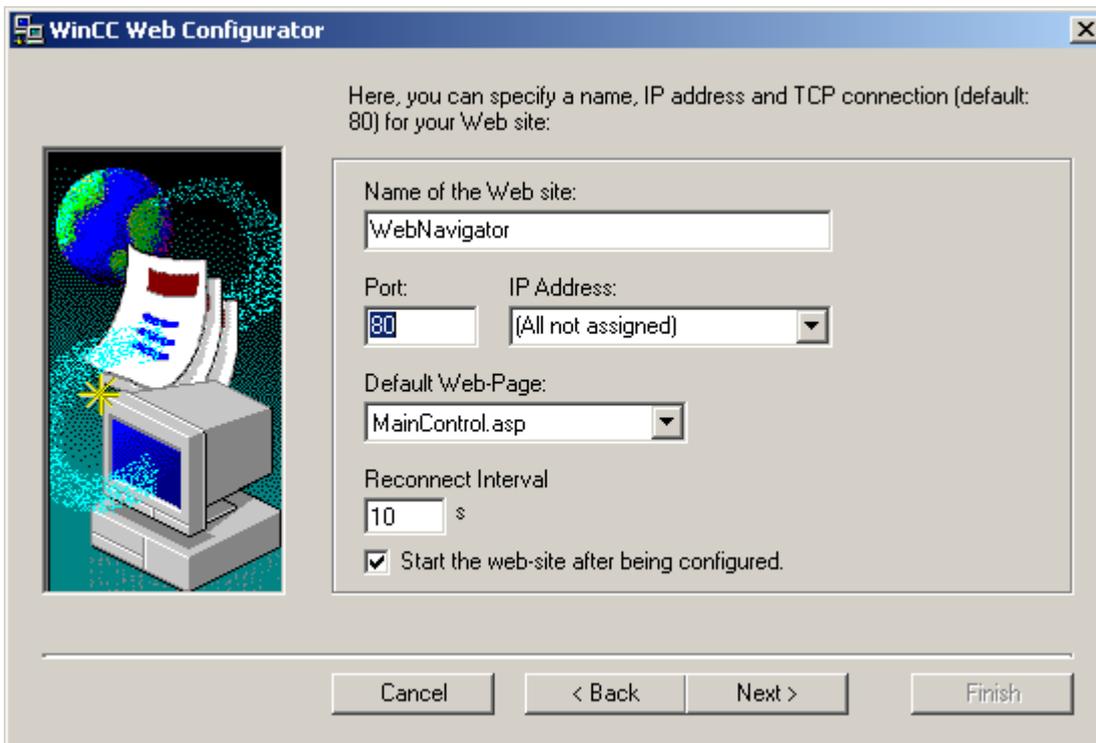
4. The following dialog will open:

If you have not activated the firewall, the button "Windows Firewall" will not be displayed.
In this case you must close the Web Configurator by clicking "Finish".
Once you have activated the firewall, you continue with Step 5.

5. Select the button "Windows Firewall".
   The "Windows Firewall" dialog will open.
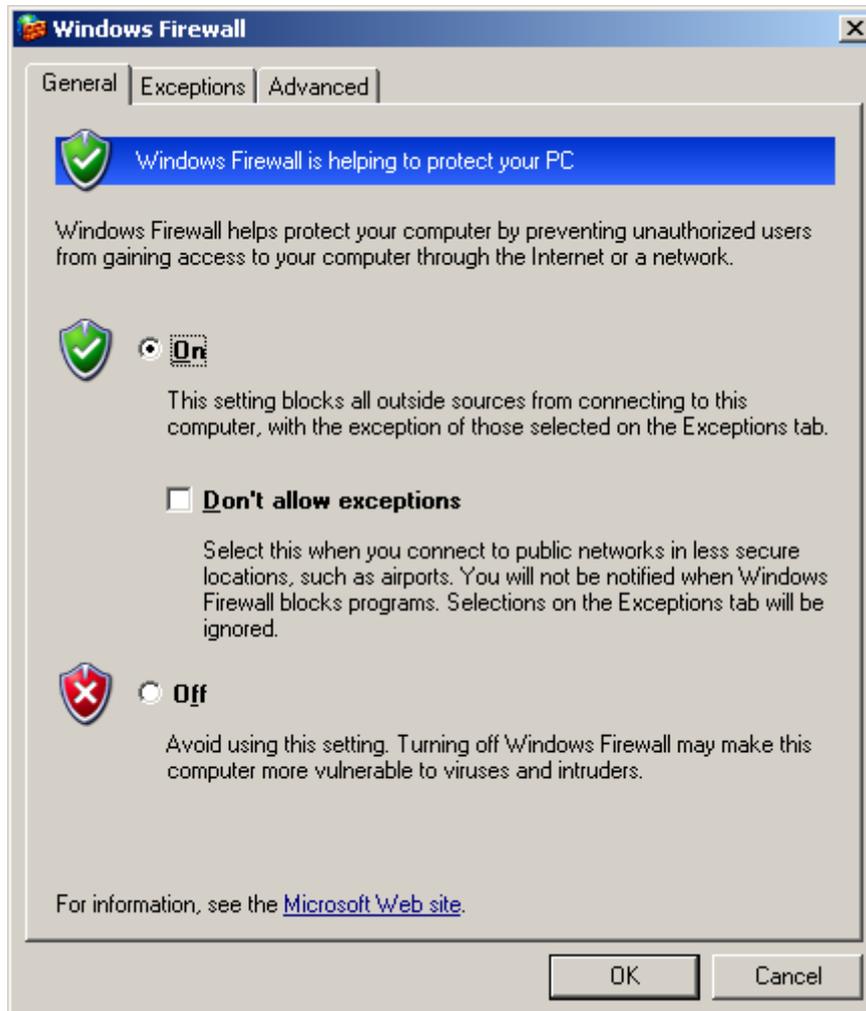
6. Select the desired network connection in the "Advanced" tab and click "Settings...".
   The "Advanced Settings" dialog will open.
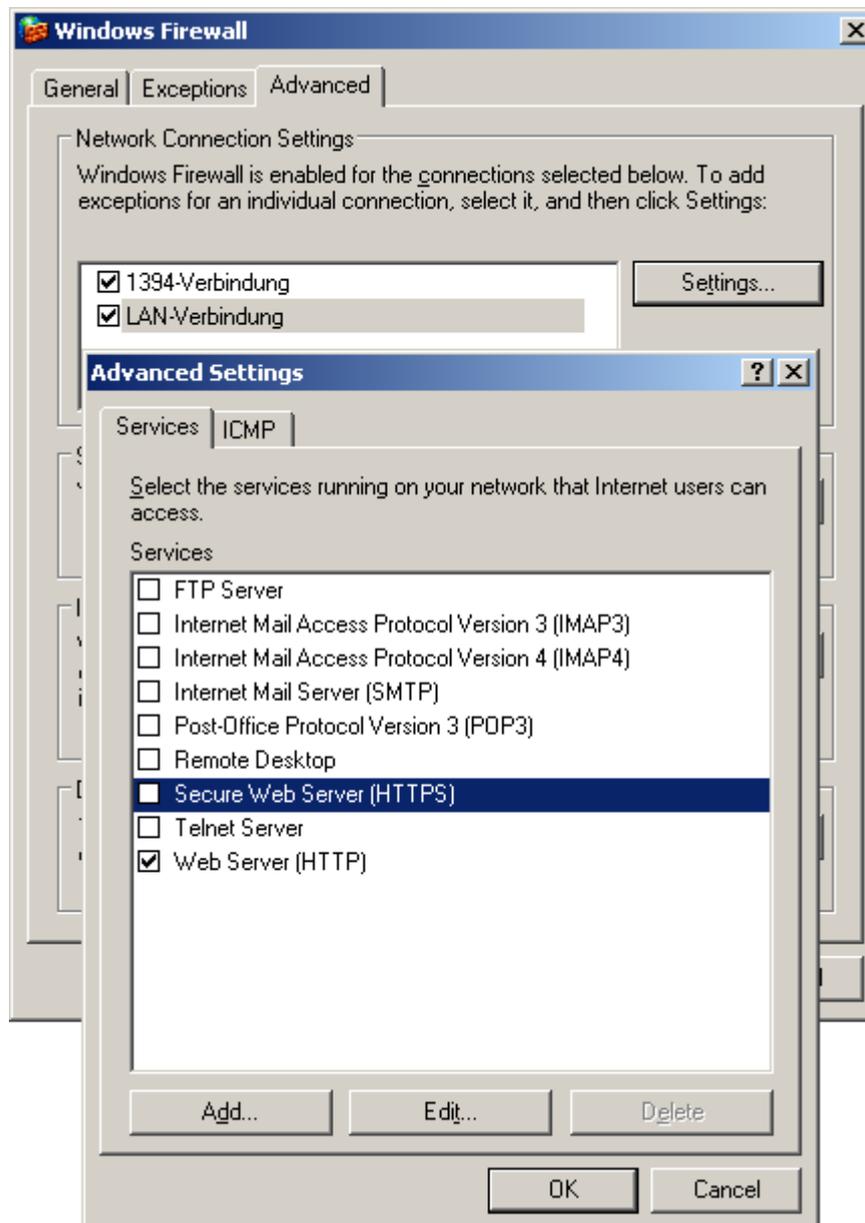
7. Activate the entry "Secure web server (HTTPS)" or "web server (HTTP)". Select the button "Edit" to display the current service settings of the web server.

8. Exit the open Windows dialogs with "OK" and the Web Configurator by clicking "Finish". The configuration of the server will be completed.

Results

After the configuration has finished, the newly created website (Web Navigator Web) is activated.

Use of other ports besides Standard Port 80

If you do not use the Standard Port 80, then you will also need to customize the firewall settings accordingly.

Procedure

1. Open the "Advanced Settings" dialog via the button "Settings" in the "Windows Firewall" dialog.

2. Click the "Add" button.
   The "Service Settings" dialog will open.
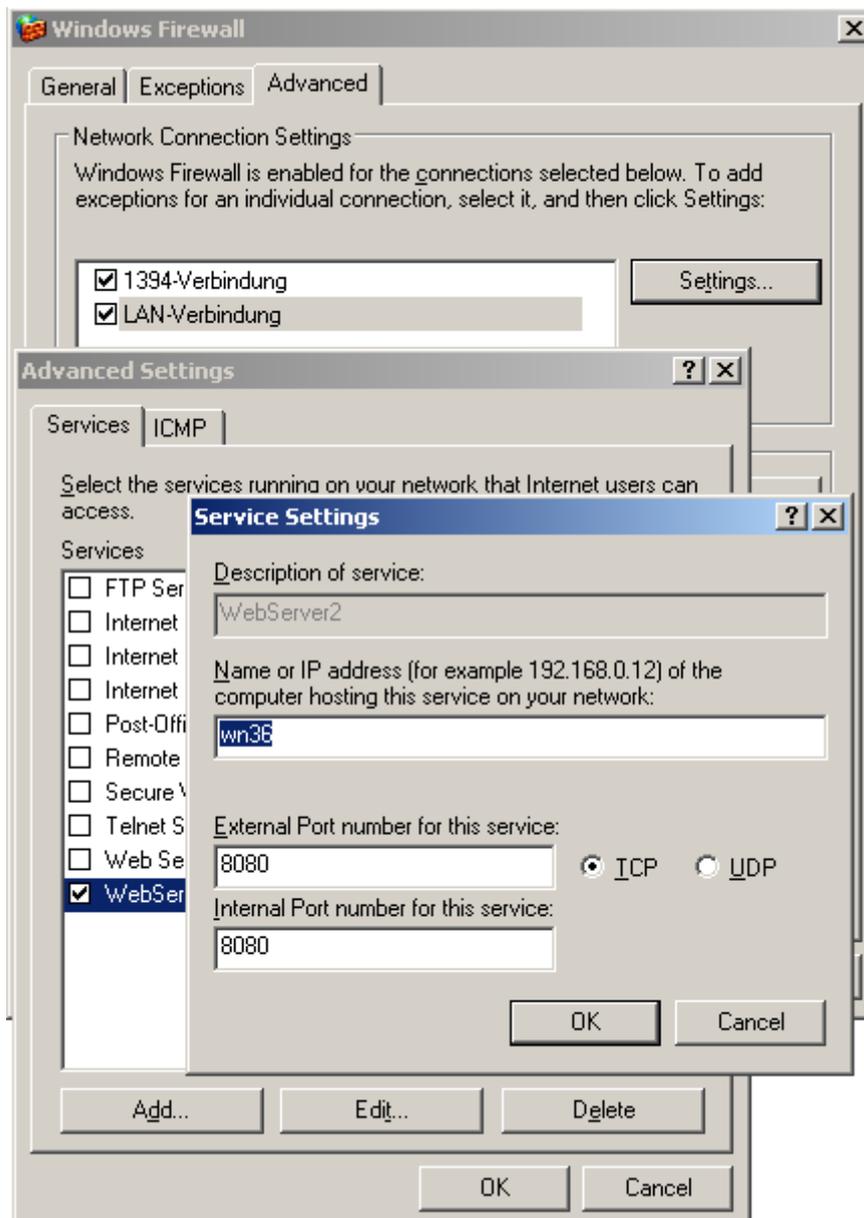
3. Define the settings for your web server:
   - Name of the web server in the "Service Settings" field
   - Name or IP address
   - External and internal port number for this service
   - Service "TCP"
   Click on OK to confirm.

4. In the "Advanced Settings" dialog, select the newly created web server.

4.2.3.3 Creating a Virtual Directory

Procedure

- When selecting the radio-button "Add to an existing Website (Virtual Directory)", click the "Browse" button.

- In the next dialog, select the active Website to which the virtual directory is to be added.
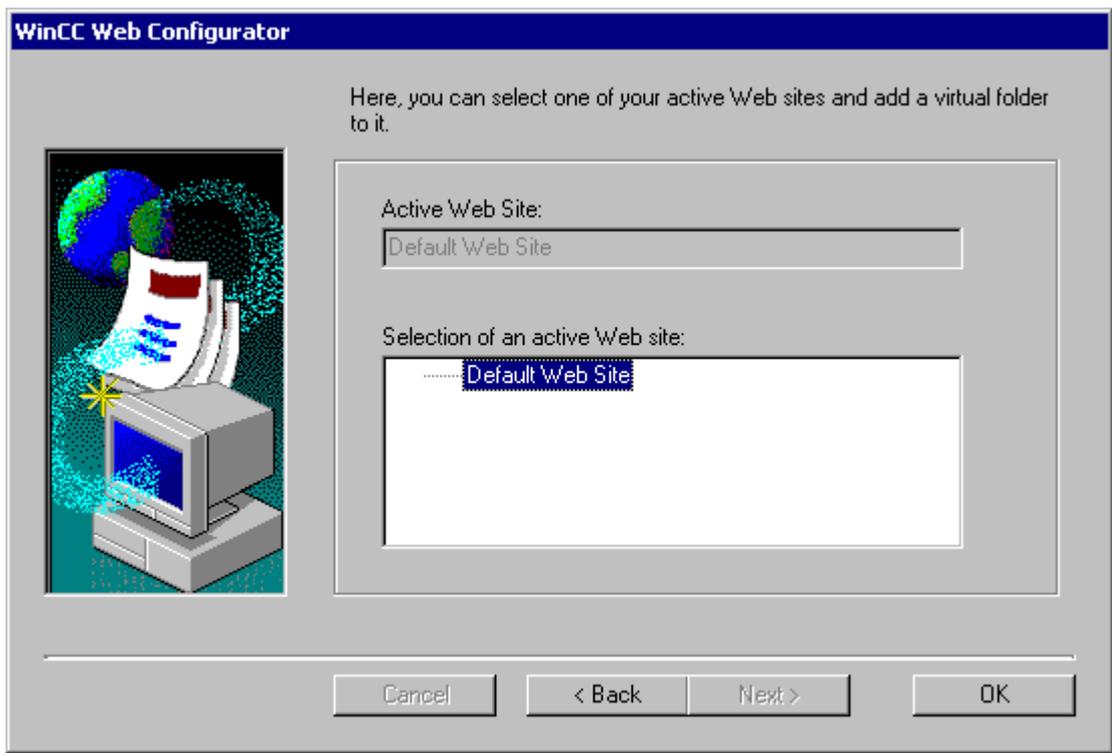
- After selecting the active website, click "OK" to return to the previous dialog. Click "Next".
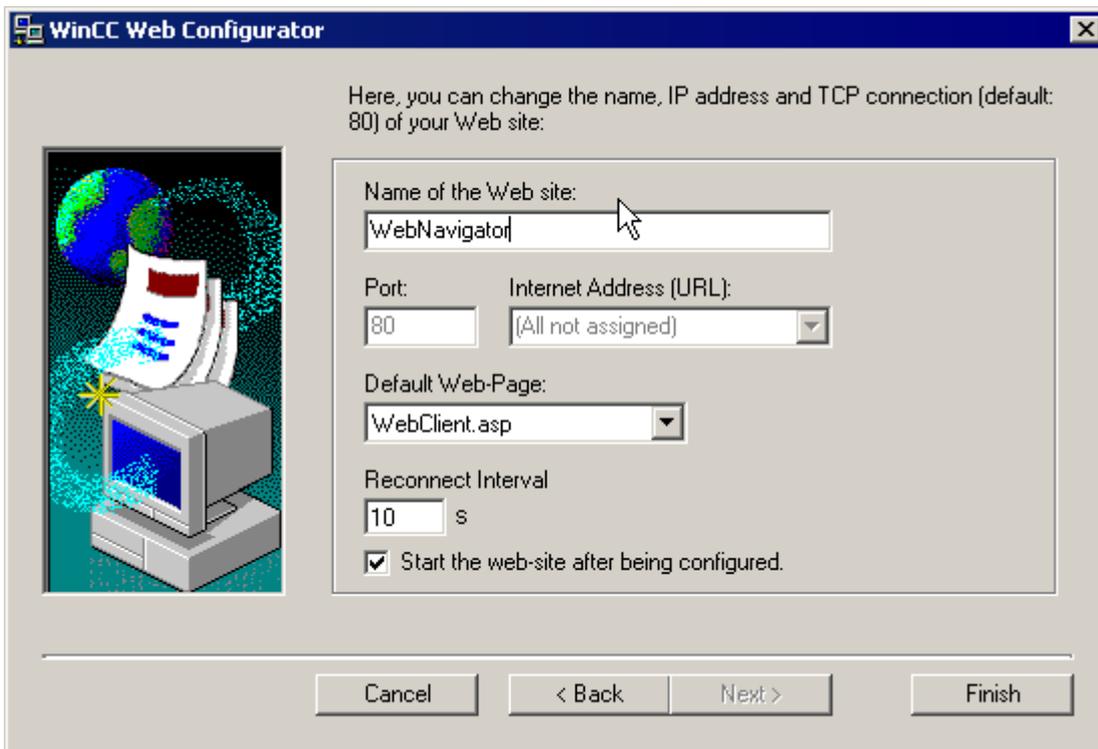
Name of the virtual directory:	Here you can specify the name of your virtual directory, which is added to the active website.
Port and IP address	The port and the IP address are predefined and cannot be edited. The WinCC Web Configurator reads the data of the active WinCC Web Navigator Server from the IIS.
Standard website selection fields	Select the standard websites that are to be displayed on the web client after selecting the web server.
Reconnect interval	Enter the time interval after which the web client should automatically start to establish a connection (reconnect) following a connection breakdown. If the value = 0 is set, the "Automatic connection establishment" function is disabled.
Starting the Website after Configuration	Activate this check box to automatically start the website following the configuration. If this check box is not activated, the website has to be manually started via the Windows console "Internet Information Services".

- Click "Finish" to complete the configuration.

To access the Web Navigator, the name of the virtual Web Navigator website must be added to the URL on the client (e.g. http://WebServer/WebNavigator).

No Active Website

If no active Website is found, the Web Configurator terminates with a message.

Click "OK" to confirm.

Before running the Wizard again, a website must be activated. The procedure to do this is outlined in the chapter "Checking the activated Website".

4.2.3.4   Checking of Activated Website (Web)

- Activate the Internet Information Service.

- To do this, select "Programs" > "Management" > "Internet Information Services".

- In the navigation window, select the computer. In Windows XP, the subfolder "Websites" must also be selected. The data window displays the corresponding websites.

- Check the information displayed for the websites. If "Stopped" is displayed next to the desired website, e.g. "WebNavigator", the website needs to be started. To do this, right-click the website and select the "Start" menu command from the shortcut menu.
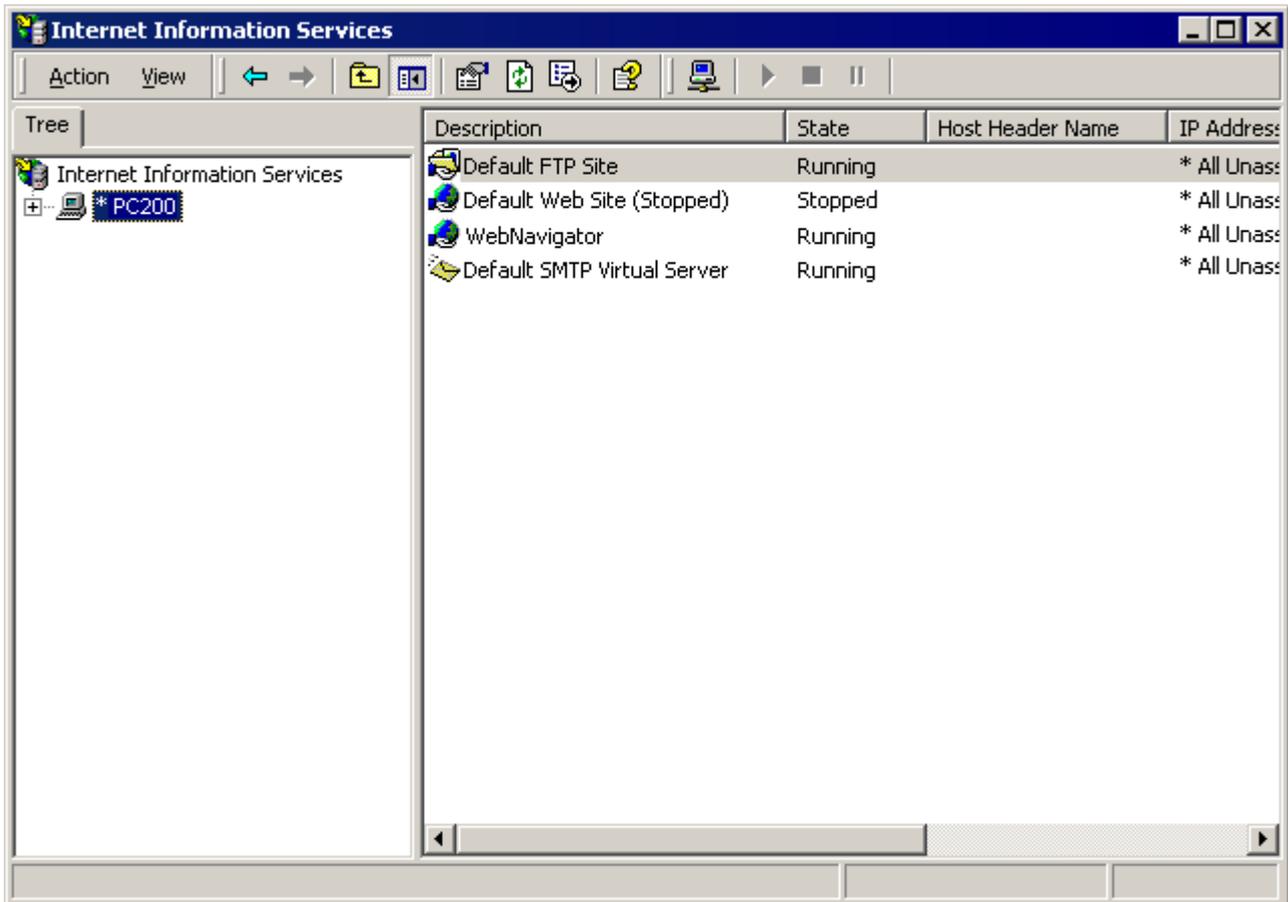
- Close the dialog.
- The website is now activated.

4.2.4 Load Distribution Using the "Load Balancing" Function

4.2.4.1 Load Distribution on Web Servers Using the "Load Balancing" Function

Overview

The "Load Balancing" function enables Web Navigator Clients to be distributed automatically to different Web Navigator servers evenly and according to the respective server authorizations. Each Web Navigator server can implement load distribution using the "Load Balancing" function. A web server can be configured as a distributing Load Balancing server or as a participating web server. A Load Balancing server is automatically a participating web server, too. Within a group of participating web servers, several can also be configured as Load Balancing servers.

When logging on from a web client to a Load Balancing server, the web client is forwarded to one of the participating web servers with the least load and according to its server license. If

the least number of web clients are logged on to the Load Balancing server, the new web client remains connected to it. If a participating web server fails, the web clients registered on it are automatically routed to one of the other participating web servers. The address of a web server is independent of the activation of the "Load Balancing" function. The address of a web server used prior to activation continues to be valid.

The function must be set up on each of the participating web servers and Load Balancing servers. In this case, all Load Balancing servers and participating web servers are recorded in a list. On a Load Balancing server, the query interval must also be set up and its function as a Load Balancing server activated or deactivated. No configuration is necessary on the web clients.

Licensing

A maximum of 32 web servers connected to each other can be supported by the "Load Balancing" function.
A maximum of 32 web servers connected to each other can be supported by the "Load Balancing" function. No license is necessary on the web clients.
In the case of WinCC computers with WinCC redundancy, a Load Balancing server or participating web server can be operated with a "WinCC Redundancy" license and "Load Balancing Step-Up" license.

Example:
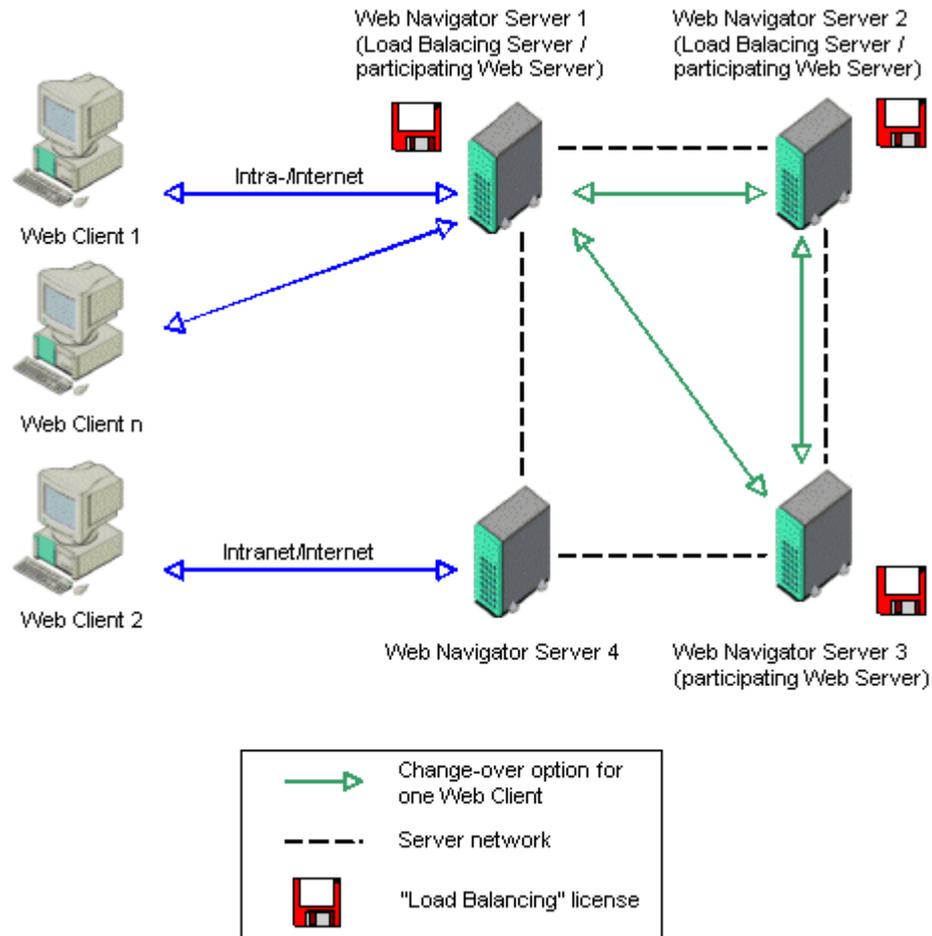
In the figure, the web servers 1 to 3 are participating in the "Load Balancing" function. A "Load Balancing" license is installed on these web servers. Web servers 1 and 2 are configured as Load Balancing servers. When web client 1 logs on to web server 1 or 2, the client is automatically forwarded to the web server with the lowest load. If the connected web server fails, web client 1 is routed to one of the other two web servers. If the web server connected fails, web client 1 is routed to one of the other two web servers.

Web server 4 is not participating in the "Load Balancing" feature. If web client 2 logs on to this web server, the logon fails due to a high load level of the server. If web server 4 fails, the client is not forwarded to web servers 1 to 3 despite the fact that a network connection exists.

Internet options on Load Balancing servers and participating web servers

N: 142645 - 6.0.1

N: 205768 - 6.1.2

In order that the Load Balancing server can distribute the web clients to other web servers as they log on, the participating web servers and the Load Balancing server must be capable of reaching each other via the URLs mentioned in the list of participating servers.

The use of a proxy server may cause the target address of the participating web server / Load Balancing servers "http://<servername>" to be replaced by "http://<servername.proxyname>" resulting in the web server addressed not being found.
To avoid this behavior, each of the servers participating in Load Balancing must enter the target address of all the other participating servers in Internet Explorer in the "Exceptions" field under "Tools > Internet Options > Connections > LAN Settings > Extended".

See also

Configuring the "Load Balancing" Function (Page 98)

4.2.4.2   Configuring the "Load Balancing" Function

Introduction

The "Load Balancing" function enables Web Navigator clients to be distributed automatically to different Web Navigator servers evenly and according to the respective server authorizations.

The function must be set up on each of the participating web servers and Load Balancing servers. In this case, all Load Balancing servers and participating web servers are recorded in a list. On a Load Balancing server, the query interval must also be set up and its function as a Load Balancing server activated or deactivated. No configuration is necessary on the web clients.

Note

A web server with a "Web Navigator Diagnostics Server" license must not be included in the list of servers participating in load balancing.

Requirements

- The WinCC basic system, Web Navigator server and a "Load Balancing" license have been installed.

- The same WinCC project must exist on each of the participating web server and load balancing server and the same users must have been configured.

- The standard web page for Web Navigator must have been created as stand-along page on the web server.

Configuring the "Load Balancing" Function

1. Select the "WebNavigator" entry in WinCC Explorer in the navigation window. Select the "Load Balancing" menu item from the associated shortcut menu. The "Load Balancing Configuration" dialog is opened.

2. Enter the address of a web server to participate in "Load Balancing" in the top field. Click "Add". The address entered is transferred to the server list.
   Repeat the process for each web server to participate in "Load Balancing". The name of the Load Balancing server must also be entered in the list.
   A server name can also be deleted by selecting it in the list and clicking the "Delete" button.

   ### Note

   A web server with a "Web Navigator Diagnostics Server" license must not be included in the list of servers participating in load balancing.
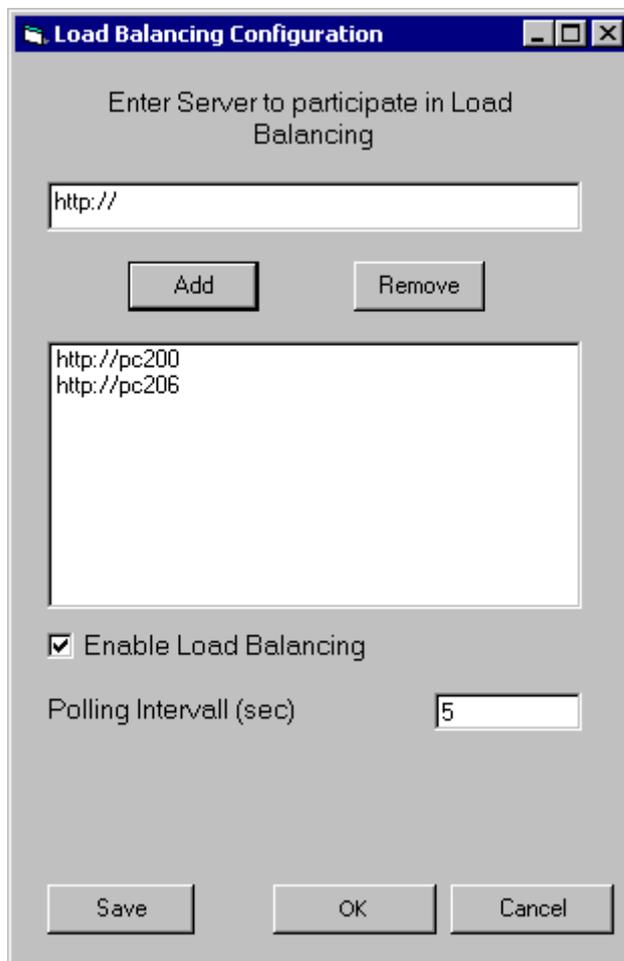
3. Select the "Enable Load Balancing" check box to activate the local web server as the Load Balancing server.
   The check box remains deactivated on the participating web servers.
   If the check box is cleared, the list of web servers is still retained.

4. Use the "Polling Interval" field to select the time interval at which the other participating web servers should be polled.
   The time is defined in seconds and is only relevant on a Load Balancing server.

5. Click the "Save" button to store the entries.
   Click "OK" to close the dialog.

6. Repeat the above procedure on all participating web servers and Load Balancing servers.

Note

The lists on the Load Balancing server and all participating web servers should be identical to ensure a uniform functionality should a one of the web servers fail.

The modifications take effect when WinCC Runtime is restarted.

4.3 Structuring with the WinCC/Web Navigator Server

4.3.1 Structuring with the WinCC/Web Navigator Server

Introduction

Before connecting your WinCC Web Server to the intranet/Internet, you must devise a concept taking into account your security and system conditions.

4.3.2 Island Solution
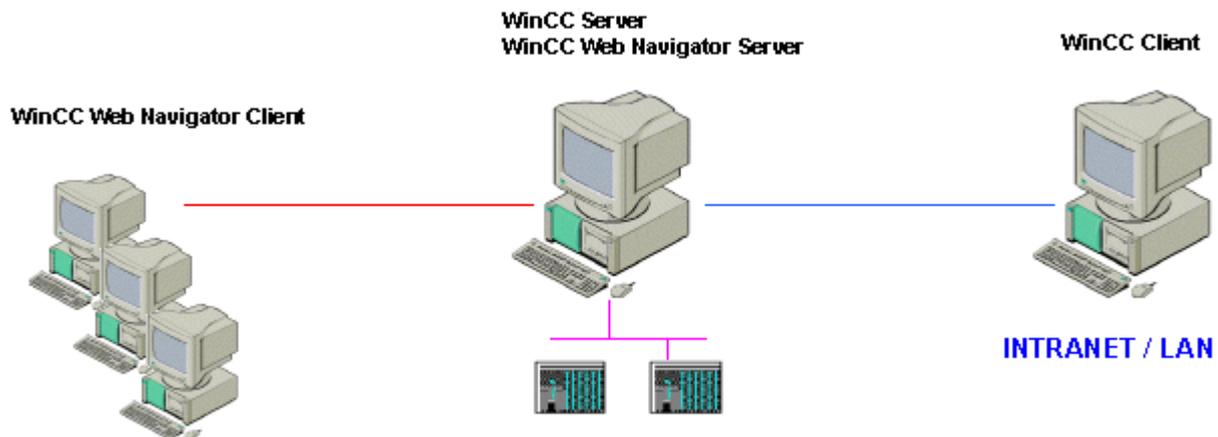
In the above illustration, the Web Clients are not connected to the intranet, but only serve as HMI for the running WinCC project. You can thus set up computer stations that, for example, serve monitoring or maintenance functions and is cost-effective.

4.3.3 WinCC/WebNavigator Server on the WinCC Server

The WinCC Server and the server component of the WinCC Web Navigator are installed on one computer. The WinCC Web Navigator Client can control and monitor the running WinCC project via the Internet as well as the intranet. With WinCC Web Navigator Clients, a client-server system can be expanded.

To protect against attacks from the Internet, firewalls are employed. The first firewall protects the WinCC Web Navigator Server from Internet attacks, the second firewall provides additional security for the intranet.
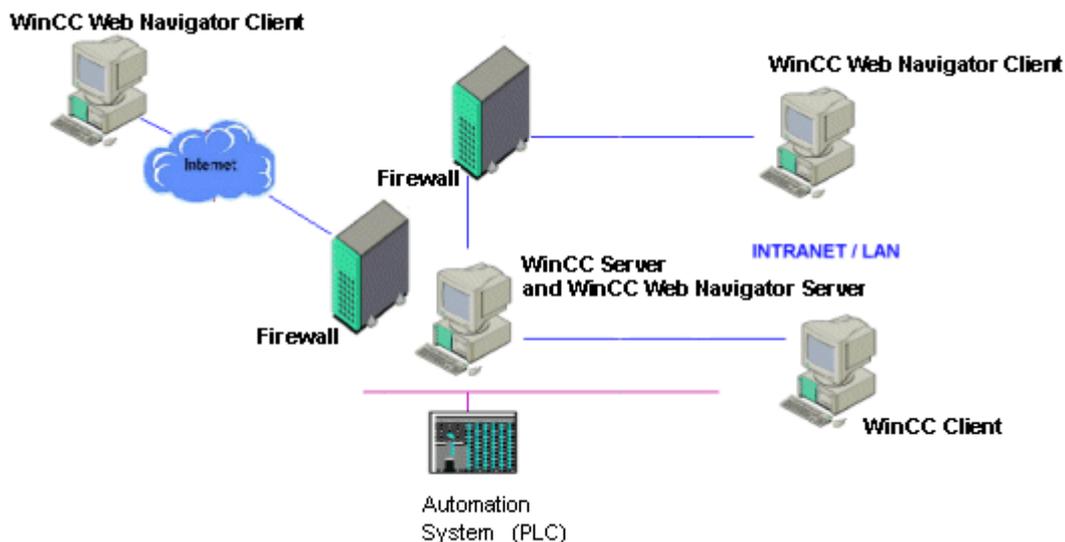
4.3.4 Separation of WinCC Server and WinCC/WebNavigator Server

Communication via Channel

A group of automation devices is assigned to the WinCC Server. The project includes all data such as programs, configuration data and miscellaneous settings. On the computer with the WinCC Server and the WinCC Web Navigator Server, the WinCC project is mirrored 1:1 and not networked with the automation devices.

The synchronization of the data takes place via the OPC channel (OPC = OLE Process Control). For this, the WinCC Web Navigator Server requires a license for the number of OPC tags.

Two firewalls are employed here to protect the system against unauthorized access. The first firewall protects the WinCC Web Navigator Server from Internet attacks, the second firewall provides additional security for the intranet.
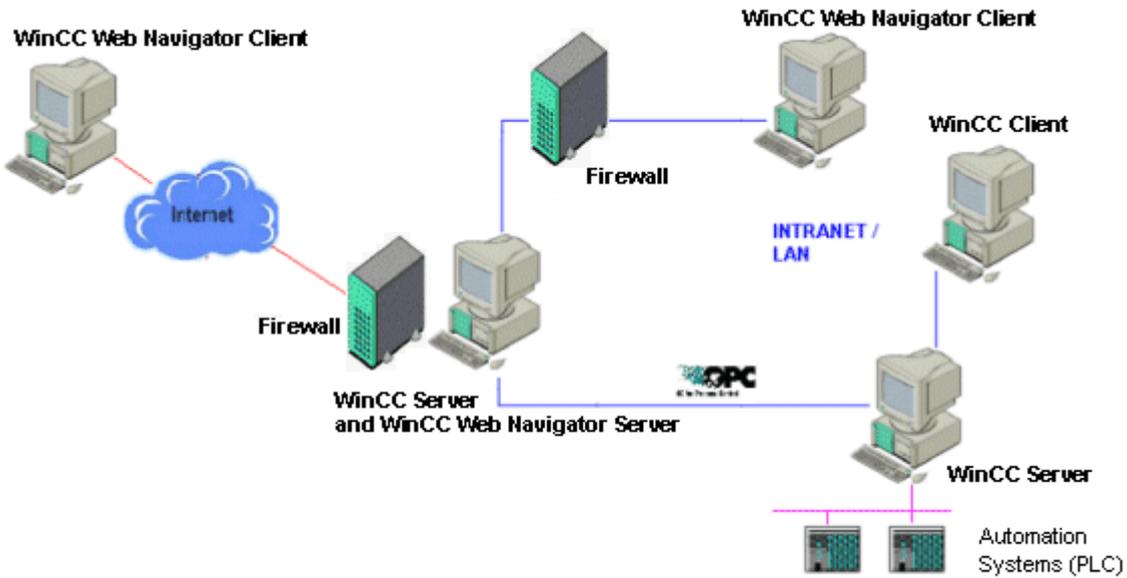
Communication via Process Bus

Just like in the above illustration, two firewalls are employed to protect the system against unauthorized access. On the computer with the WinCC Server and the WinCC Web Navigator Server, the WinCC project is mirrored 1:1. The synchronization of the data takes place via the process bus.
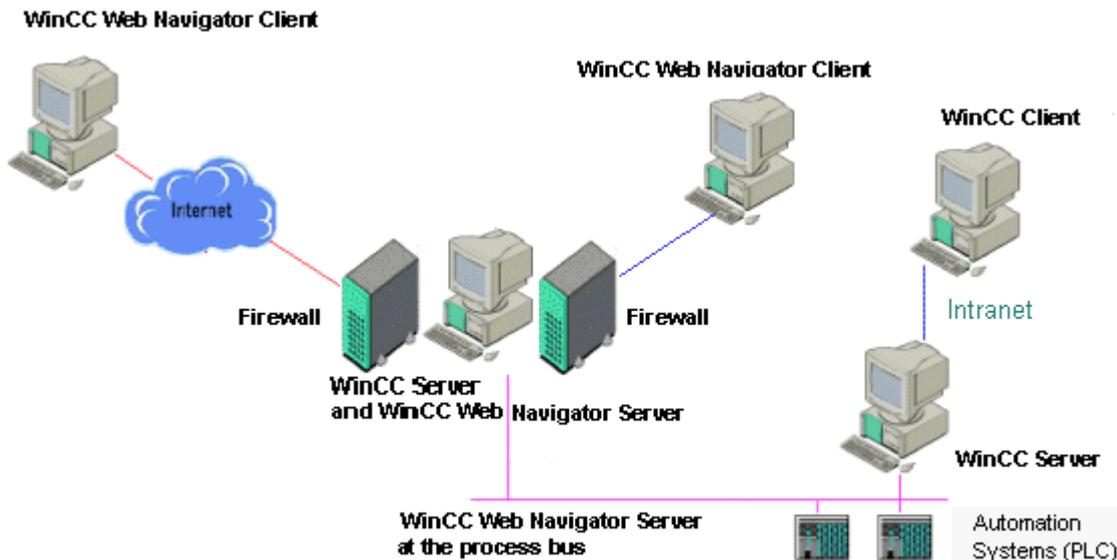
4.3.5   Dedicated Web Server

For the central supply of data to the web clients, the installation of a dedicated web server is advantageous in larger systems. The dedicated web server processes and optimizes the accesses of the web clients and is available as a proxy of the WinCC servers to the clients. The dedicated web server can simultaneously access multiple subordinated WinCC servers. In this case, the user gains access to multiple WinCC projects by logging onto the dedicated web server (no individual project logons).

The dedicated web server supports the redundancy switch of two subordinated WinCC servers using WinCC Redundancy.

The functionality of the dedicated web server is made available on a WinCC client by installing the Web Navigator Server.
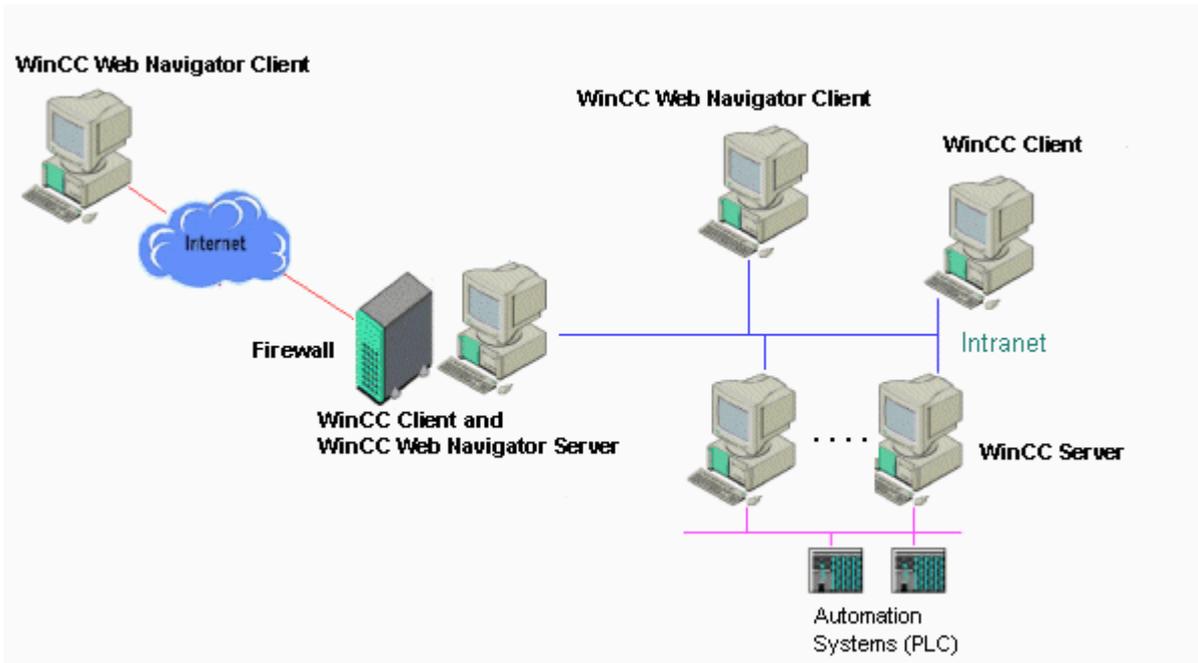
4.4 Configuration of the User Administration

4.4.1 User Administration in the WinCC User Administrator

Introduction

The management of the user rights when employing the WinCC Web Navigator takes place in the WinCC User Administrator. Users are assigned various authorizations in it for operating and monitoring purposes. In addition, a start picture and the language can be configured for individual users in the "Web Options" area. The WinCC User Administrator thus enables the setup of a secure and clear user administration for WinCC and the access via the WinCC Web Navigator.

If a user logs onto the Web Navigator Server with the Web Navigator Client, the server will check whether the user is registered in the WinCC User Administrator and sends the configured user rights to the web client for evaluation. During login, the web server also checks whether the maximum number of licensed web clients has been reached. If the user is not registered, a log-in will not be permitted.

The tasks of the WinCC User Administrator include:

- Creation and editing of users and user groups.

- Assignment and administration of access rights known as authorizations.

- Assignment and management of the automatic logout, start picture and the language for users with project access via the WinCC Web Navigator.
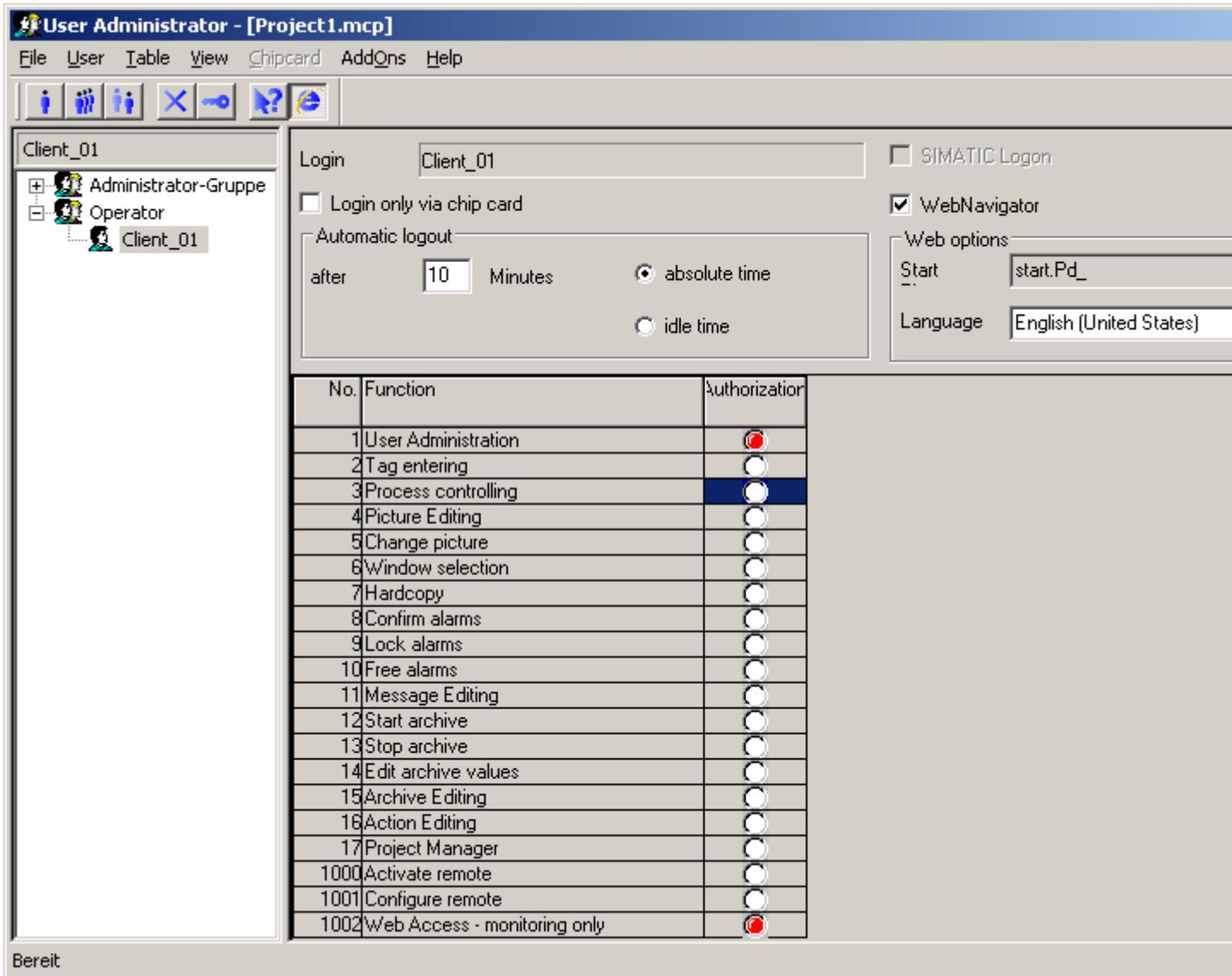
Support for WinCC Option "Basic Process Control" on the Web Client

The user administration of WinCC uses WinCC Web Navigator to support the following functions for the "Basic Process Control" option:

- Area-specific authorizations

- User-specific assignment of start picture and language

For more information on supported functionalities of the Web Navigator Client during a connection to a PCS7 OS, refer to the PCS7 documentation.

Authorizations

The following authorizations can be assigned to a user:

Standard authorizations no. 1 to 999

The standard authorizations can be created, edited, deleted and assigned to users.

The name of an authorization indicates what impact the respective authorization is to have, but not how it is actually used.

User hierarchies from PCS7 no. 1 to 8

These user authorizations are available after running the Wizard of the OS project editor (Option Basic Process Control). The predefined authorizations cannot be deleted or edited.

System privileges no. 1000 to 1099

The system privileges are automatically generated by the system and cannot be recreated, edited or deleted. The system privileges can be assigned to a user just like any other authorization.

System authorization No. 1002 "DataMonitor - Just monitor" has a special function when the WinCC Web Navigator is used.

- If it is assigned to a user, he or she may only monitor a WinCC project ("Just monitor") and cannot, for example, acknowledge messages or write to tags through I/O field inputs or script. Client-local internal tags can continue to be written and also have to be for Basic Process Control.
  This authorization is only relevant for the web client and does not influence other authorizations assigned to the user. A "DataMonitor Web Edition" license is required. If there is no such license, a license for a WebNavigator client is requested from the WebNavigator server. If a license is not available, the WebNavigator client runs in Demo mode after logging on.

- If it is not assigned to a user, this user may operate and monitor a WinCC project depending on the assigned authorizations.
  A "Client" license is required.

Additional information regarding the user administration can be found in the WinCC Information System at "Working with WinCC" and "Configuration of the User Administration". To configure multilingual projects and non-Latin based fonts, information is available under "Working with WinCC" / "Multilingual Project Configuration".

4.4.2   Setting Web Options for Users

Introduction

For the access to a WinCC project via the WinCC/WebNavigator, certain user authorizations are assigned in the WinCC User Administrator to the user and are settings configured for the start picture and language.

Automatic logout

The "Automatic logout" function provides the following advantages:

- The WinCC project is only accessible for a limited period from the WebNavigator client. This also applies in particular for unmonitored clients that still have access to the WebNavigator server.

- The license used by the client is released again after an automatic logout.

- The current load of the WebNavigator server is reduced after an automatic logout.

If you enter a "0" in the entry field for the period until an automatic logout, the function is deactivated. The user remains logged in until the Internet Explorer is closed or until the system is shut down.

If you use the "Absolute time" option, the configured time until the automatic logout runs from the moment of logging in, irrespective of the operations carried out by the user during this period.
If you activate the "Inactive time" option, the configured time runs from the moment of the last keyboard or mouse operation by the user. After this operating pause the user is logged out automatically.
After the monitoring time has expired, a message prompting the user to enter his password again is displayed. If the user enters his password during the specified time, he can access the WinCC project again.
If an incorrect password is entered three times or if no logon is carried out within the specified period, an automatic logout is effected. In the case of an automatic logout access by the client to the WinCC project is terminated. The license used by the client is released again.

Note

Logging on as a new user is not possible by using the dialog box that allows renewed logging on before the automatic logout expires.

Configuring Web Options

1. In the WinCC Explorer, open the "User Administrator" editor.

2. In the navigation window, select the desired user or create a new user.

3. In the table window, the user authorizations existing in the WinCC project and an already configured assignment to this user are displayed. Check the setting of System Authorization No. 1002 "DataMonitor - Just monitor" and make any changes necessary.
   If this system authorization is activated, the user may only observe the project (Just monitor) and a "DataMonitor Web Edition" license is required. If there is no such license, a license for a WebNavigator client is requested from the WebNavigator server.
   If this system privilege remains deactivated, the other user authorizations assigned to the user apply. Check the settings of the other authorizations.

4. Select the "Web Navigator" check box in the table window. The "Web Options" area is displayed.

5. In the "Automatic logout" field use the "Absolute time" and "Inactive time" option buttons to set the type of automatic logout desired. Subsequently enter the time until an automatic logout in the entry field.

6. In the "Start Picture" field, use the "..." button to select the start picture for this user. As the start picture, only pictures that have been published with the Web View Publisher on the WebNavigator Server can be selected.

7. In the "Language" field, select the language for this user. Available for selection are the languages installed in WinCC.

8. Close the User Administrator.

Additional information regarding the user administration can be found in the WinCC Information System at "Working with WinCC" and "Configuration of the User Administration".

4.4.3 Migrating User Data from Older Projects

Introduction

Under the WinCC Web Navigator before Version 6, user rights were managed by the Web Administrator. From version 6 of the Web Navigator, the user administration takes place with the WinCC User Administrator. Old user data can be migrated with the "WebNavV6Migration" tool for further use in the Web Navigator V6 or higher.

The migrated, old users are placed under the user group "WebNavigatorUserGroup" by the migration tool. The user authorizations of this user group are passed on to the migrated users. If this user group does not yet exist, it will be created by the tool and the processing stopped. After the desired user authorizations have been assigned to the group, the migration tool can be restarted.

In addition to the password, the migration tool also transfers the user's settings pertaining to the start picture and the language.

Requirements

- The WinCC Web Navigator Server has to be installed for the "Web Options" area to be active in the WinCC User Administrator.

- The WinCC project into which the user data is to be migrated has to be open.

- The WinCC User Administrator for this project is a user group "WebNavigatorUserGroup". The group has been assigned the necessary user authorizations.

Migrating the User Data

1. In the Windows Explorer, select the WinCC installation folder. Access the associated subdirectory, "WebNavigator/Server/bin", and start the "WebNavV6Migration.exe" program. The user interface of the tool is only provided in English.
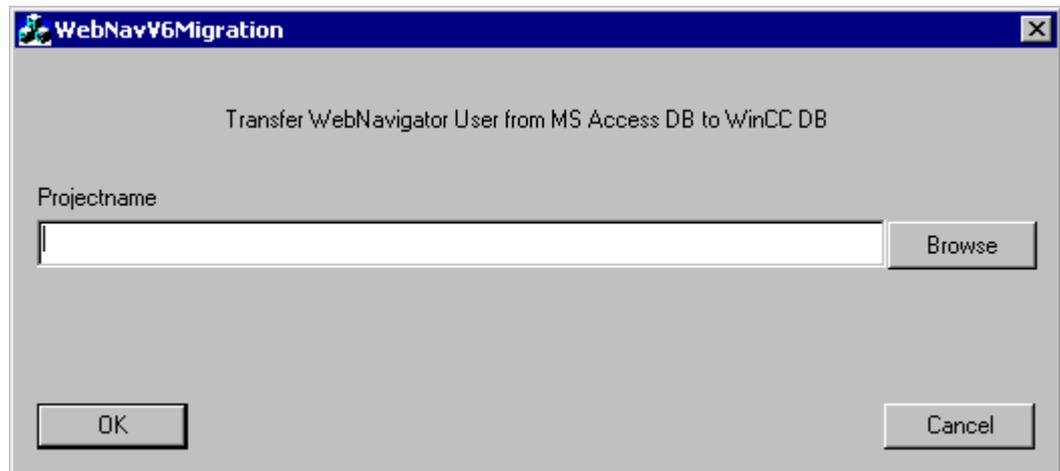
1. In the "Project Name" field, select the project from which the old user data is to be migrated.

2. Confirm the selection with the "OK" button. Users of the old project are then set up in to open WinCC project in the "WebNabvigatorUserGroup" group and inherit the user authorizations assigned to the group.
   If the old user database record cannot be read, an error message will be issued. In this case, the database driver "DAO JetEngine" from the current "Web Navigator" CD-ROM needs to be installed on the computer from which the user data is to be migrated into the WinCC project.

3. After the successful migration, a message with the number of migrated users will be output. This is followed by the inquiry the old database can be deleted. Select the desired option. The migration tool is closed.

4. Open the "User Administrator" editor in WinCC Explorer of the current project.
   Check the settings of the migrated user and adapt them to the current project as necessary.

5. Close the User Administrator.

Additional information regarding the user administration can be found in the WinCC Information System at "Working with WinCC" and "Configuration of the User Administration".

4.5 Configuration of a Web Project

4.5.1 Configuration of a Web Project

Introduction

This chapter describes the configuration of a Web project and special features to bear in mind.

- Publish WinCC process pictures with the Web View Publisher to compress and adapt the project data.
  Publishing can take place in several ways, depending on the source and target folders of the published pictures or system structure.

- Use the "PdlPad" tool to locate errors in the scripts used in the published WinCC process pictures.

- Assume and adapt existing WinCC projects to make them accessible via Intranet/Internet.

- Limitations to be taken into account.

- Differences to the WinCC the basic system

- Using scripts
  Publishing with the Web View Publisher can take place in several ways, depending on the source and target folders of the published pictures or the system structure.

Multilingual projects and non-Latin fonts

The configuration of foreign language texts, user names, etc., and the use of non-Latin fonts, e.g. for Asian projects, is performed in the WinCC project. Certain conditions must be fulfilled and settings made. E.g., the desired configuration language or a special font must be installed in the operating system. After installing a language, it must be transferred to the Alarm Logging editor and Text Library so that the configuration can be made in that language or specific font.

Additional information regarding the user administration can be found in the WinCC Information System at "Working with WinCC" and "Multilingual Project Configuration". To configure multilingual projects and non-Latin based fonts, information is available under "Working with WinCC" / "Language Support in WinCC".

4.5.2 Multilingual projects and non-Latin fonts

Multilingual projects and non-Latin fonts

The configuration of foreign language texts, user names, etc., and the use of non-Latin fonts, e.g. for Asian projects, is performed in the WinCC project. Certain conditions must be fulfilled and settings made. E.g., the desired configuration language or a special font must be installed in the operating system. After installing a language, it must be transferred to the Alarm Logging editor and Text Library so that the configuration can be made in that language or specific font.

Additional information regarding the user administration can be found in the WinCC Information System at "Working with WinCC" and "Multilingual Project Configuration". To configure multilingual projects and non-Latin based fonts, information is available under "Working with WinCC" / "Language Support in WinCC".

4.5.3 Web settings

Web settings

You define the project-specific settings in the "WinCC Web Settings" dialog box.
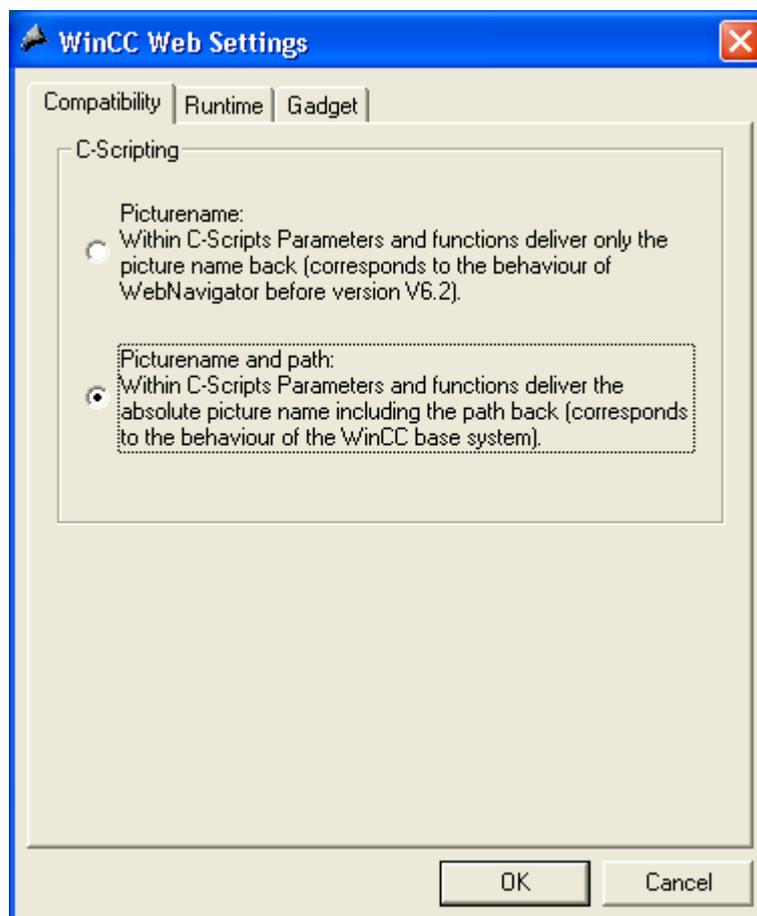
The dialog is opened in the WinCC Explorer in the pop-up menu of the "Web Navigator" icon via the "Web Settings" menu item.

The "Compatibility" web setting

In WinCC Web Navigator prior to version 6.2, there was a restriction for C scripts. The following parameters and functions did not return the complete path and the picture name but only the picture name on the web client.

- Parameter "lpszPictureName"

- Function "GetParentPicture"

- Function "GetParentPictureWindow"

Starting with Web Navigator version 6.2, the user can activate the absolute addressing and can therefore eliminate this restriction for the web client on demand.

- Picture name:
  Absolute addressing is deactivated by default. The above-mentioned functions or parameters only return the picture name.
  The compatiblity with older web client versions and the C scripts created for them thus remains intact.

- Picture name and path:
  If absolute addressing is deactivated, the picture name is returned with the complete path.
  This response is in accordance with the WinCC basic system and therefore, the C scripts used in the WinCC basic system need not be changed to run on the web client.

The "Runtime" Web Setting

The client-server properties are specified on the "Runtime" tab.
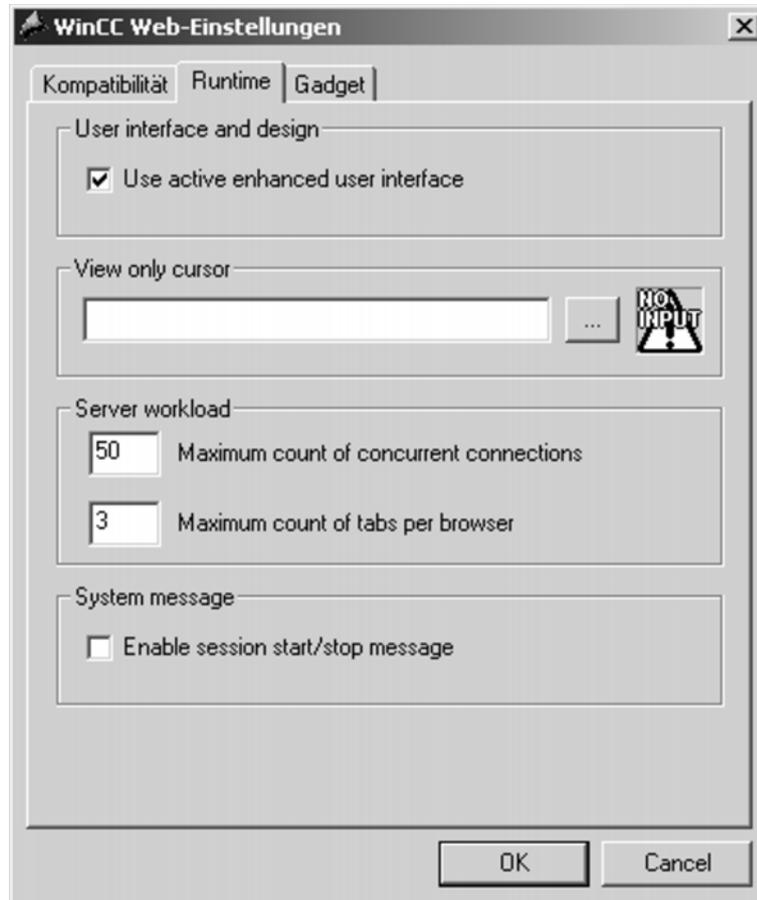
- Use "WinCC Classic" design: The classic design of WinCC is used instead of the enhanced user interface, if the WebClient is not powerful enough.

- "View only" cursor: Defines the appearance of the cursor to show that the operator cannot operate Runtime. The system authorization 1002 "Just monitor" was assigned to the operator in the user administration. Select a cursor definition file in order to change the appearance.

- Server load: Specify the maximum number of connections that can access the WebNavigator Server concurrently. The number of concurrent connections can exceed the number of WebNavigator server licenses if, for example, several tabs are opened in the Internet Explorer. A limitation to "50" is necessary, since the WebNavigator server guarantees a maximum of 50 connections in normal operation without additional loads. However, ensure that the value is not smaller than the actual number of your Web Navigator Server licenses.

- Specify the maximum number of tabs that can be opened simultaneously in the Internet Explorer, Version 7.0 and higher. Note that generally several instances of the same Internet Explorer count as only one WebNavigator Server License: For example several tabs or new windows.

- System message: Activate the check box in order to output a corresponding system message when a Web client logs on or off. The check box is deactivated by default, because the logon and logoff system messages are not configured by default either in order to avoid an additional server load.

The "Gadget" Web Setting

Sidebar Gadgets are mini applications with useful information for the Windows Vista Sidebar.

A preconfigured Gadget for displaying WinCC process pictures under Windows Vista is located on the WebNavigator Client in the installation directory under "\WinCC\Webnavigator \GADGET".

You combine one or more published WinCC process windows for the Gadget in the following dialog box on the WebNavigator Server. As soon as the Web project is in Runtime, the WebNavigator Server cyclically makes a jpg image, "pdlImage.jpg", consecutively of each process picture as a snapshot. The Gadget accesses this file cyclically in the "\WinCC \WebNavigator\Server\Web\image_gadget" directory again.

Note that configuring user interaction is not permitted in the displayed process pictures. This includes calls from login dialogs or notice dialogs via scripts for instance.

The following objects are not supported for the display in a Gadget:

- Global Script Diagnostics Window

- WinCC Media Control

- WinCC Controls from migrated projects that have been installed with versions before WinCC V7.0:

  – WinCC Alarm Control

  – WinCC Online Table Control

  – WinCC User Archives Table Element

NOTICE
The project shown in the Gadget cannot be operated. A short update cycle for the Client Gadget places a load on the Web Server.

Example: 2 process pictures, cycle time 5 seconds

Time [s]	Image
5	Process_Picture_1 -> pdlImage.jpg
10	Process_Picture_2 -> pdlImage.jpg
15	Process_Picture_1 -> pdlImage.jpg
20	Process_Picture_2 -> pdlImage.jpg
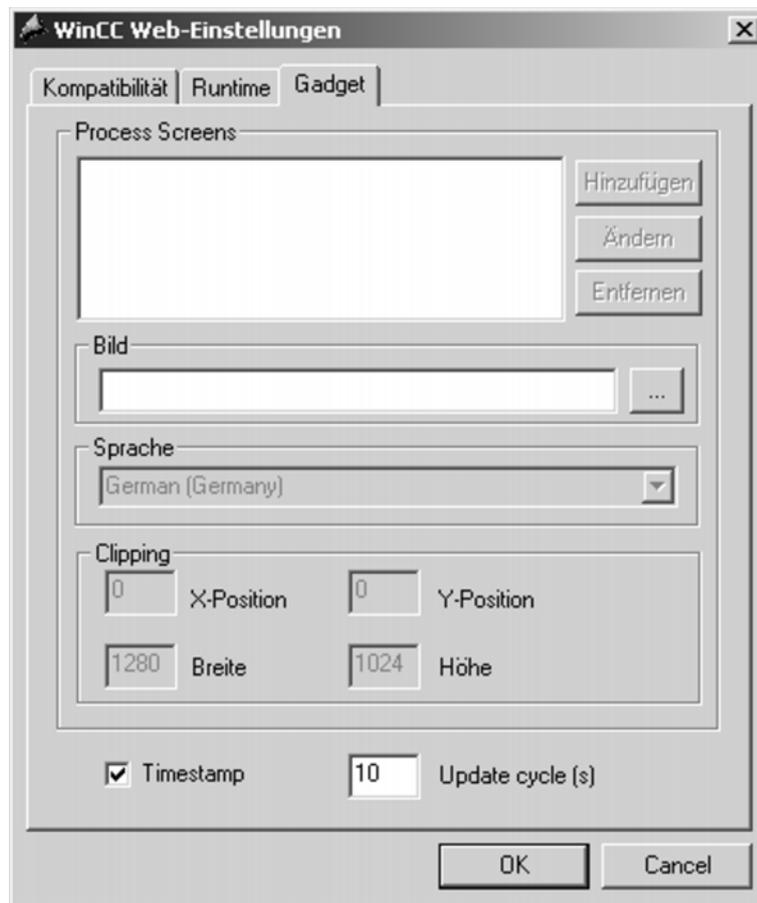
1. Select a published process picture under "Name".

2. Specify the Runtime language for the picture.

3. Define the section of the process picture that is displayed in the Gadget. The size of the process picture is first determined from the project and is displayed by default at this point. As a rule the process picture is too large for display in the Gadget. Ensure that the clipping has the same width and height as the Gadget, at least the same width-to-height ratio. Otherwise the process picture will be displayed distorted in the Gadget or with a black frame around it.

4. Click "Add". The picture is added to the Gadget under "Pictures".

5. Repeat steps 1 to 4 if necessary. The gadget then shows another picture after 17 seconds for example.

6. Define "Update Cycle" with the time interval in seconds to be used by the WebNavigator server to refresh the process pictured displayed in "pdlImage.jpg", for example, every 5 seconds. At the beginning of the time interval, the new process picture is selected and the current process value is read from the PLC. At the end of the interval the snapshot is created and stored in "pdlImage.jpg".

CAUTION
Non-current process values displayed in Gadget
If a process value has not yet been read from the control system at the time of the snapshot, the start value is displayed, for example "0". Make sure to select a sufficiently large update cycle, normally 5 seconds. Select the update cycle respectively larger if many process values have to be updated, e.g. for trend displays. A brief update cycle on the WebNavigator Server places a load on the process communication.

On the WebNavigator Client:

1. Double-click the Gadget "_WebNavigator.gadget" in the installation directory under "\WinCC\Webnavigator\GADGET". The Gadget is stored under Windows Vista in the Sidebar.

2. Define the size of the Gadget and the update cycle, in which the Gadget loads a picture from the WebNavigator Server, every 17 seconds for example.

3. Enter the address of the WebNavigator Server. The Gadget establishes a connection to the WebNavigator Server.

4. If necessary, drag-and-drop the Gadget onto the desktop.

4.5.4 Publishing WinCC Process Pictures

4.5.4.1 Publishing WinCC Process Pictures

Introduction

When configuring a Web project, the WinCC process pictures are published so that they can run on the WinCC Web Navigator Client via the intranet/Internet. Publishing is performed with the Web View Publisher which automatically makes the necessary adaptations to the project data.

The following adaptations will be performed:

• Compression of the data to achieve the best possible performance on the Internet.

• Removal of project-specific data that is not required for the operation.

- Conversion of picture windows into an ActiveX component.

- Conversion of scripts to make them operational on the WinCC Web Navigator Client.

The publishing with the Web View Publisher can take place in several ways, depending on the source and target folders of the published pictures or system structure.

- Publishing on the local computer:
  The source folder is the current WinCC project folder and the target folder the subfolder "WebNavigator/Pictures" existing in it.

- Publishing on a dedicated web server by employing the server prefix:
  The source folder is the WinCC project folder on another WinCC computer, which is predetermined by selecting the server prefix. The target folder is located on the WinCC client in the WinCC project subfolder ".../WebNavigator/Pictures".

- Remote publishing:
  When publishing remote, the source and target folders can be located on one or multiple web servers. The publisher itself can be started on the web server with the source or target folder or on a third web server.

Errors During Publishing

If warnings appear or errors occur during publishing, the process pictures affected are marked in the output field of the Web View Publisher. The "PdlPad" tool can be started directly in the publisher in order to check the scripts used in the published pictures.

A further source of errors can be due to publishing without project functions, described below.

Publishing Without Project Functions

When publishing with the Web View Publisher, the selected project functions are always published. When publishing without project functions, none of the published pictures possesses project functions any longer. The project functions of the last publishing process are always available in the published pictures and, thus, on the web client.
The selection of project functions available in the Publisher is dependent on those in the pictures published in the same process. If, for example, some project functions have been modified but not, however, their interfaces, all necessary project functions must still be published, not just those modified. However, not picture must be published in the same process if it has not been modified.

See also

Publishing WinCC Process Pictures with the Web View Publisher (Page 118)

Publishing WinCC Pictures on a Dedicated Web Server (Page 125)

4.5.4.2   Publishing WinCC Process Pictures with the Web View Publisher

Introduction

In order to use the WinCC project in the Intranet/Internet, WinCC process pictures can be created or already created pictures can be used in WinCC in Graphics Designer.

Note

The names of the pictures used via the Web Navigator must not contain a double-underscore character, since the character string before the double-underscore is interpreted as a server prefix.

If you use Basic Process Control, the name is also not to begin with a single underscore character. For using the Picture Tree Manager, the names of superordinate pictures are preceded by "@PTN_". With a leading underscore character, the picture name will then have a doubled underscore character.

If you are using more complex functions or scripts, please also read the corresponding chapters outlining the limitations, etc. If you have created your project and your pictures with the WinCC Graphics Designer, you will only need the Web View Publisher to make these pictures operational on the intranet/Internet.

The Web View Publisher automatically makes the necessary changes to the project data (conversion of WinCC pictures, scripts) so that they can run on the WinCC Web Navigator Client via the Intranet/Internet.

How to Start the Web View Publisher:

1. In the navigation window of the WinCC Explorer, access the pop-up menu of the "Web Navigator" and select the "Web View Publisher".
   This will start the Web Publishing Wizard.
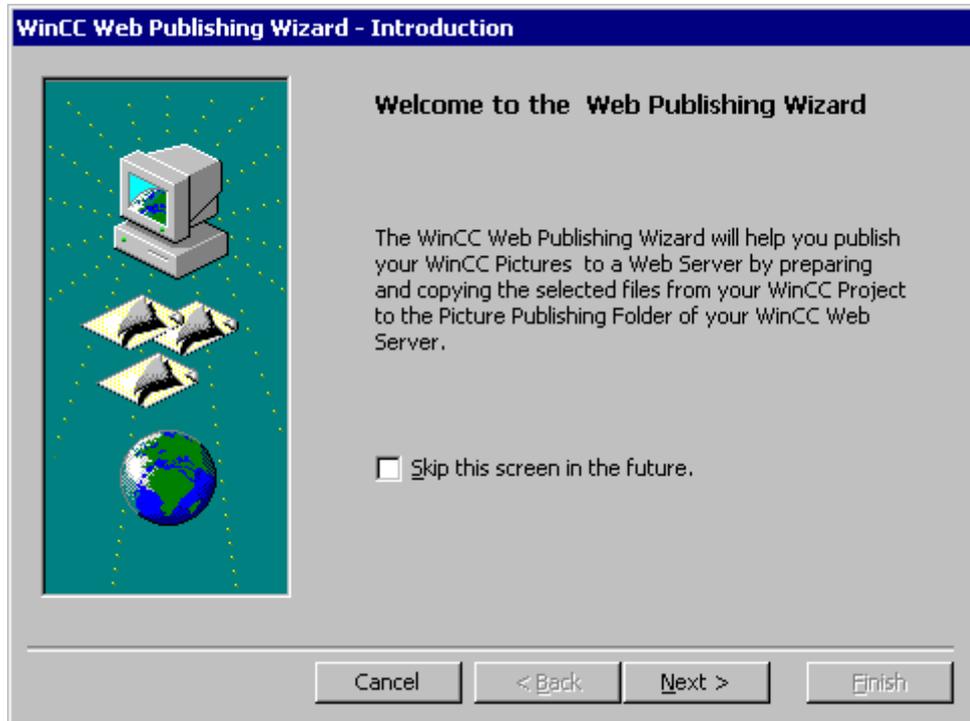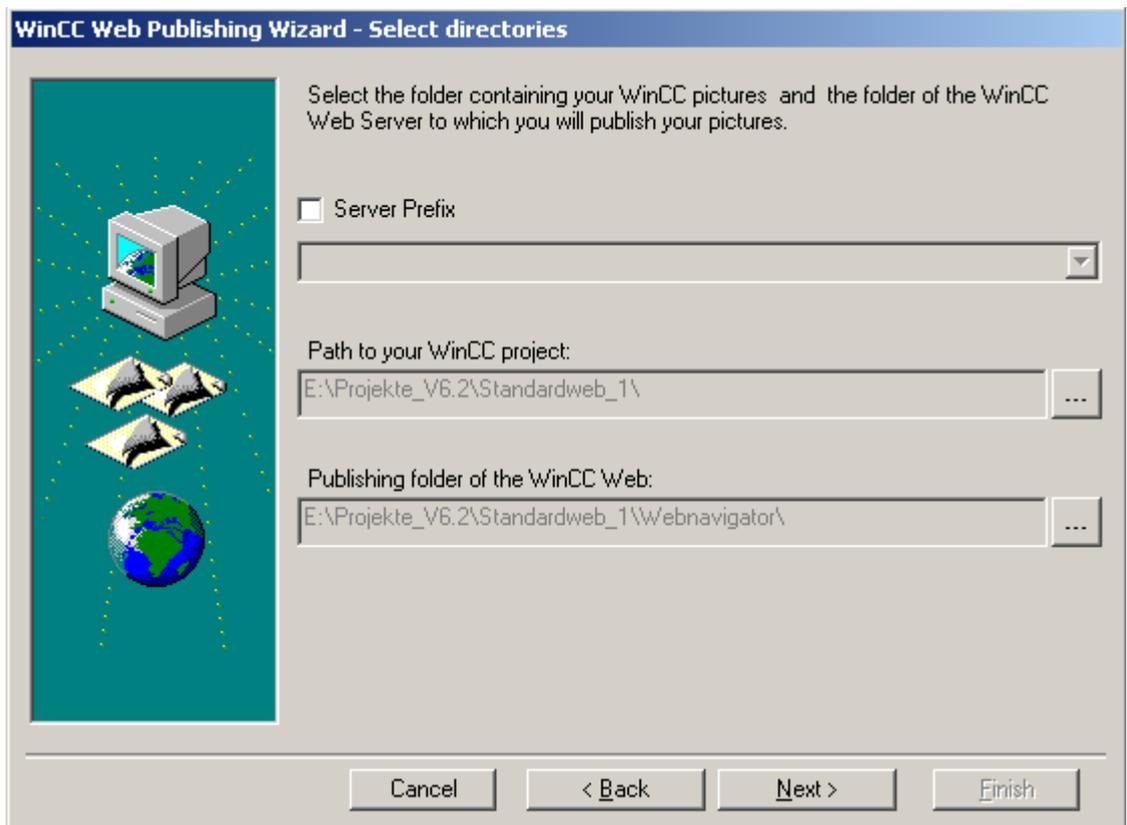
2. Click "Next" to go to the next dialog.

3. In the field "Path to WinCC Project Folder", select the project directory of the WinCC project with the pictures to be published, e.g. "..WinCCWinCCProjects".
   Use the "Publishing folder of the WinCC Web" field to select the target folder for the published pictures, e.g. "..\Siemens\WinCC\WinCCProjects\<project_name>\WebNavigator".
   For the untime of the Web Navigator, the folder suggested within the WinCC project folder must be kept as the target folder of the published pictures. The path specification should only be changed when pictures are to be transferred, e.g. to a different project.

4. Click "Next" to go to the next dialog.

Select the pictures that you want to publish on the WinCC Web Navigator Server.

5. Click "Next" to go to the next dialog.

WinCC Web Publishing Wizard - Select functions

Files:
Alarm\AXC_bhidedlg.fct
StandardFunction.fct

Selected Files:
GlobCVarAnmelden.Fct
IsEqualDuoble.fct
IsEqualFloat.Fct
ProjectFunction.fct
StandardFunction.fct

>>
<<
>
<

Cancel   < Back   Next >   Finish

Via ">", select the C Project Functions that are to be published. The selection of individual VB scripts is not possible.

6. Click "Next" to go to the next dialog.

Select the graphics referenced in the process pictures (*.PDL) that you want to publish on the Web server (e.g. bitmaps).

7. Click "Next" to go to the next dialog.
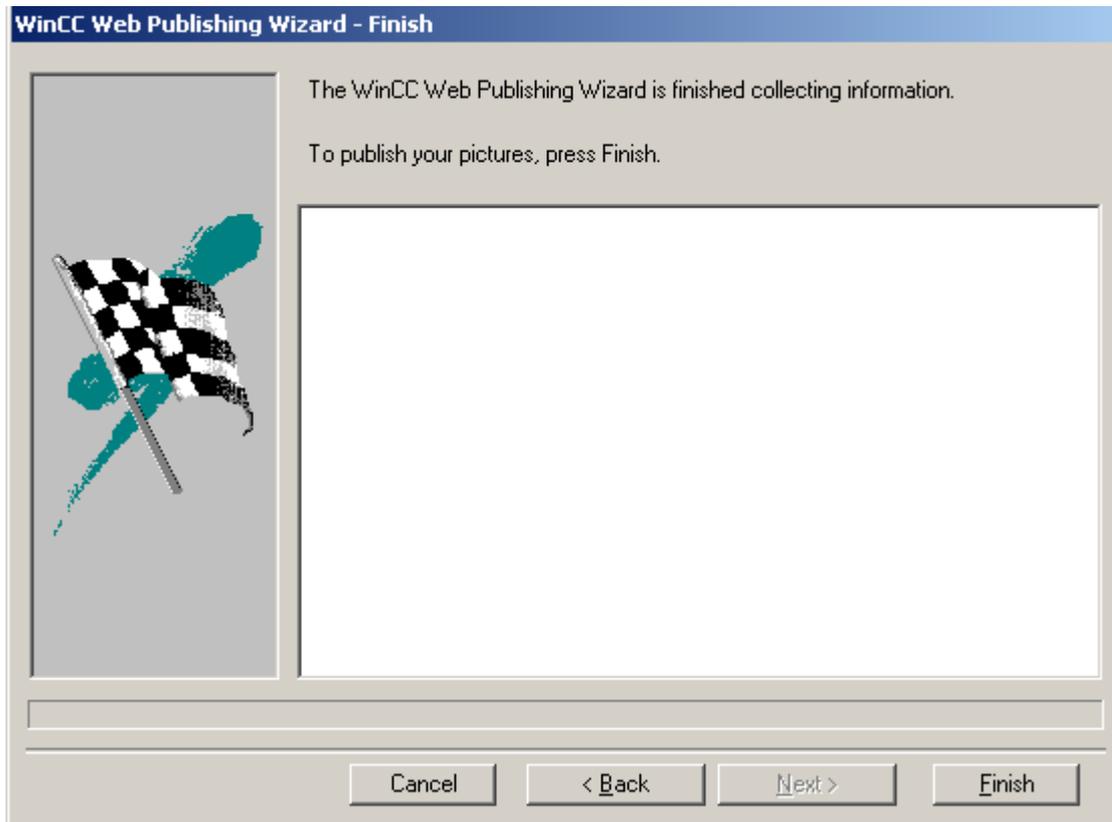
8. Click "Finish" to start the publishing of the pictures. You can track the progress in the progress display.

9. After the completion, a dialog is displayed. Confirm it by clicking "OK".
In the output field of the Publisher, the pictures in which script errors were found will be highlighted. By double-clicking the file name, the picture can be opened in the "PdlPad" and the script errors be determined and corrected.
You can exit the Wizard via the "Finish" button or change the Wizard selections with the "Back" button and, if necessary, publish again.
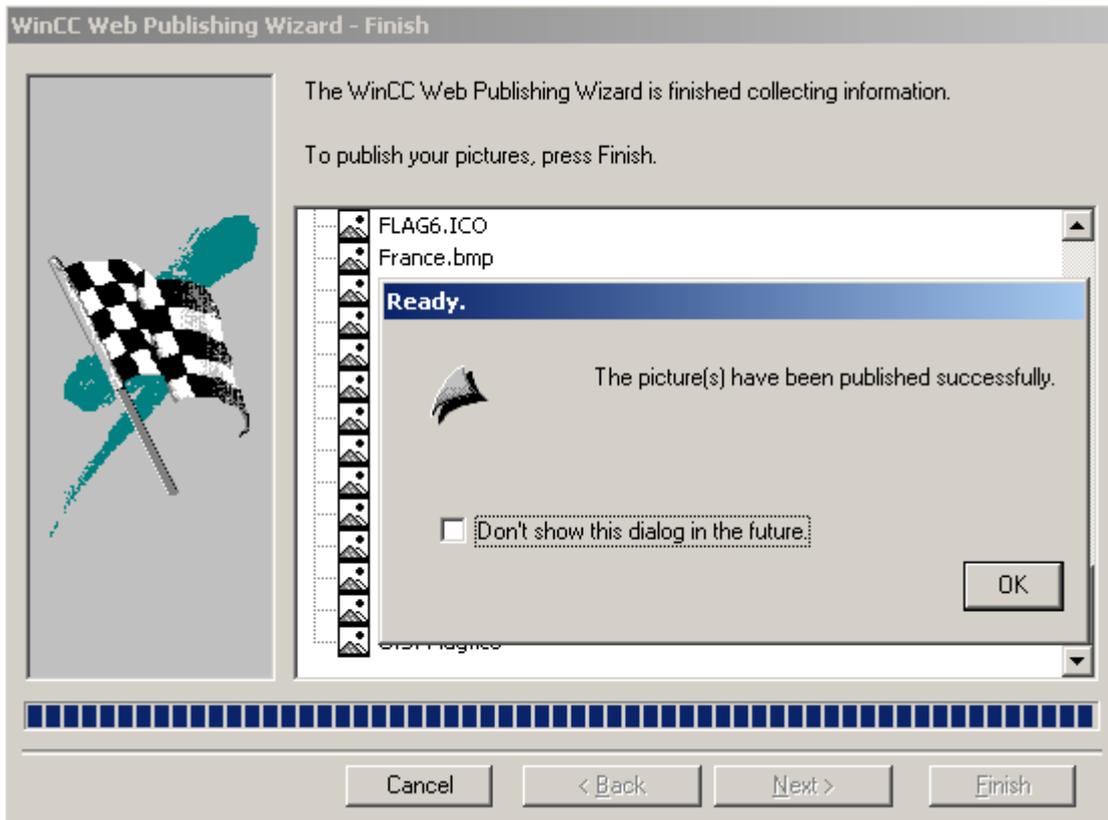
4.5.4.3 Publishing WinCC Pictures on a Dedicated Web Server

Introduction

For the central supply of data to the web clients, the installation of a dedicated web server is advantageous in larger systems. The dedicated web server processes and optimizes the accesses of the web clients and is available as a proxy of the WinCC servers to the clients.

This results in a number of benefits:

● The load can be distributed among multiple dedicated web servers, increasing the performance of the total system.

● The physical separation of dedicated web server and WinCC server on different computers increases security.

- The physical separation of the servers also permits a spatial separation via operational functions, e.g. system support and EDP department.
- The dedicated web server supports the redundancy switch of two subordinated WinCC servers using WinCC Redundancy.
- The dedicated web server can simultaneously access multiple subordinated WinCC servers. In this case, the user gains access to multiple WinCC projects by logging onto the dedicated web server (no individual project logons).

The functionality of the dedicated web server is made available on a WinCC Client by installing the Web Navigator Server.

For publishing on the dedicated web servers, the WinCC Web View Publisher is used. The Web View Publisher automatically makes the necessary changes to the project data (conversion of WinCC pictures, scripts, functions) so that they can run on the WinCC Web Navigator Client via the Intranet/Internet.

The published pictures are stored in the project of the WinCC client in the folder ".../ WebNavigator/Pictures".

- Pictures of the own project under the name "<picture_name>.PD_ ".
- Pictures of different projects under the name "<server_prefix>_ _<picture_name>.PD_ ". "_ _.PD_ ".

Note

The names of the pictures used via the Web Navigator must not contain a double-underscore character, since the character string before the double-underscore is interpreted as a server prefix.

If you use Basic Process Control, the name is also not to begin with a single underscore character. For using the Picture Tree Manager, the names of superordinate pictures are preceded by "@PTN_". With a leading underscore character, the picture name will then have a doubled underscore character.

When publishing pictures on the dedicated web server, the WinCC project of the WinCC client/dedicated web server should be open to avoid problem during the publishing of referenced graphics and project functions.

The "Graphics Runtime" option must not be activated in the startup list of a WinCC project of a dedicated web server.

Customized standard functions cannot be published. If these customized standard functions should be available on the web client, these can be created as project functions and then published.

Only use the WinCC Web View Publisher for projects that have been created with WinCC V6.2 or higher.

Another example is the "remote" publishing on a dedicated web server /WinCC client (B) from another computer (A). For this, the dedicated web server/WinCC client (B) must possess

permissions to the project folder of its WinCC project in Windows. If the WinCC project of computer (B) is now opened on computer (A), the Web View Publisher can be started on computer (A) to publish WinCC pictures of other WinCC servers to the dedicated web server (B).

Requirements

- The Web Navigator Server has to be installed on the WinCC client.

- The C and VB scripts of all WinCC servers to which the WinCC client has access must be present on the WinCC client.

- The packages of the WinCC servers to which the WinCC client has access must be loaded on the WinCC client.

- If projects should be published on other computers, this computer must be connected via a network before starting the Web View Publisher so that the projects can be displayed and selected in the publisher's selection dialog. It is not possible to enter a path directly.

Publishing on a Dedicated Web Server

1. In the navigation window of the WinCC Explorer, access the pop-up menu of the "Web Navigator" and select the "Web View Publisher". This starts the Web Publishing Wizard.
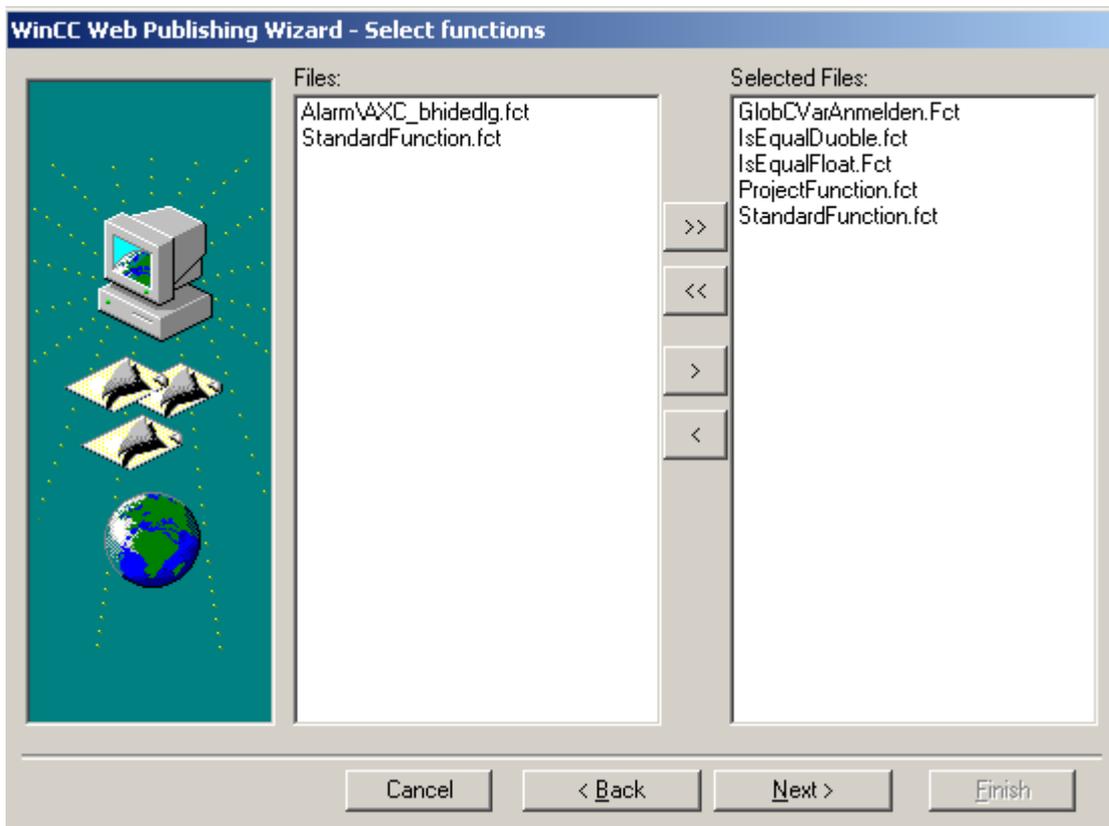

2. Click "Next" to go to the next dialog.

WinCC Web Publishing Wizard - Select directories

Select the folder containing your WinCC pictures and the folder of the WinCC Web Server to which you will publish your pictures.

☐ Server Prefix

▼

Path to your WinCC project:

E:\Projekte_V6.2\Standardweb_1\   ...

Publishing folder of the WinCC Web:

E:\Projekte_V6.2\Standardweb_1\Webnavigator\   ...

| Cancel | < Back | Next > | Finish |
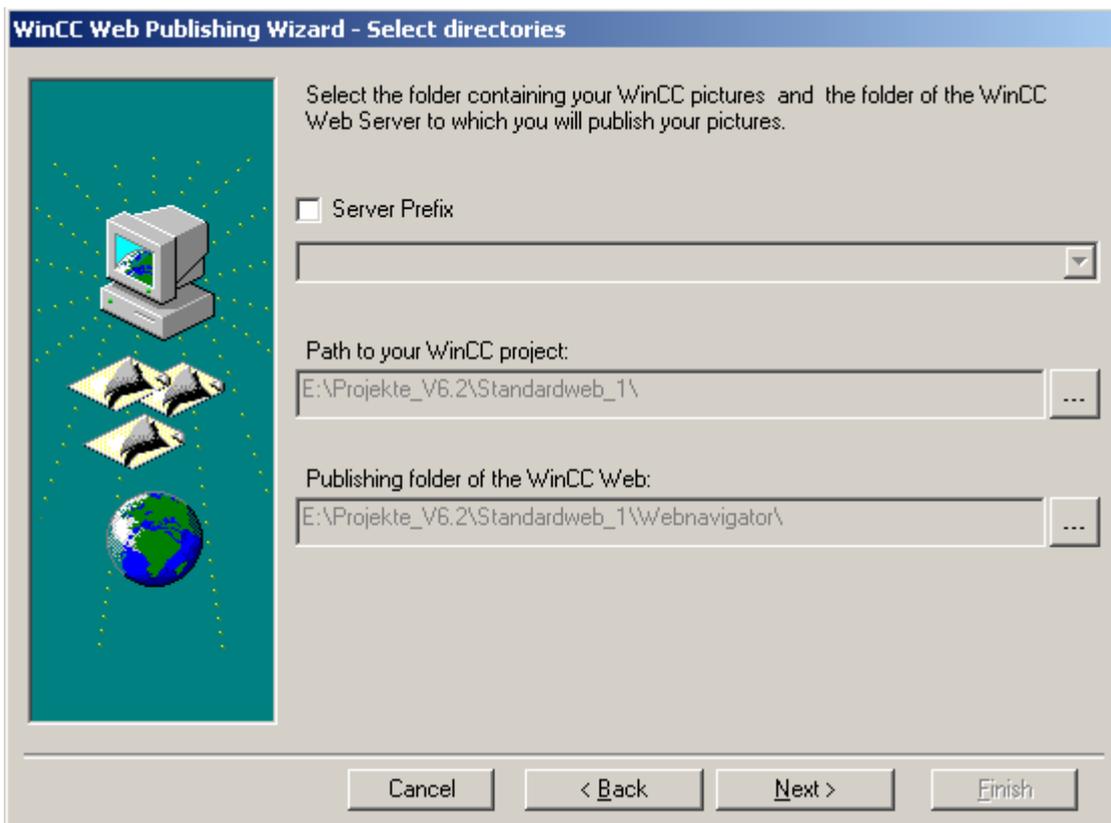
3. Activate the "Server Prefix" check box. Select the prefix of a WinCC server in the "Server Prefix" field. The prefixes of the servers whose packages have been loaded onto the WinCC client are available for selection. Deleting a prefix from the selection automatically changes the displayed paths in the fields below.
   In the field "Path to WinCC Project Folder", select the project directory "\\<server_name>\<server_prefix>_ _<project_name>" of the WinCC project with pictures to be published.
   Check the target folder of the published pictures in the "Publishing folder of the WinCC Web" field. Change the set path, if necessary.
   For the runtime of the Web Navigator, the folder suggested within the WinCC project folder must be kept as the target folder of the published pictures. The path specification should only be changed when pictures are to be transferred, e.g. to a different project. In this case, the prefix selection list will be expanded accordingly.

4. Click "Next" to go to the next dialog.

Select the pictures that you want to publish on the WinCC Web Navigator Server.

5. Click "Next" to go to the next dialog.

Via ">", select the C Project Functions that are to be published. The functions present in the project of the WinCC client are available for selection in the "Files" field. The selection of individual VB scripts is not possible.

6. Click "Next" to go to the next dialog.

Select the graphics referenced in the process pictures that you want to publish (e.g. bitmaps).

7. Click "Next" to go to the next dialog.
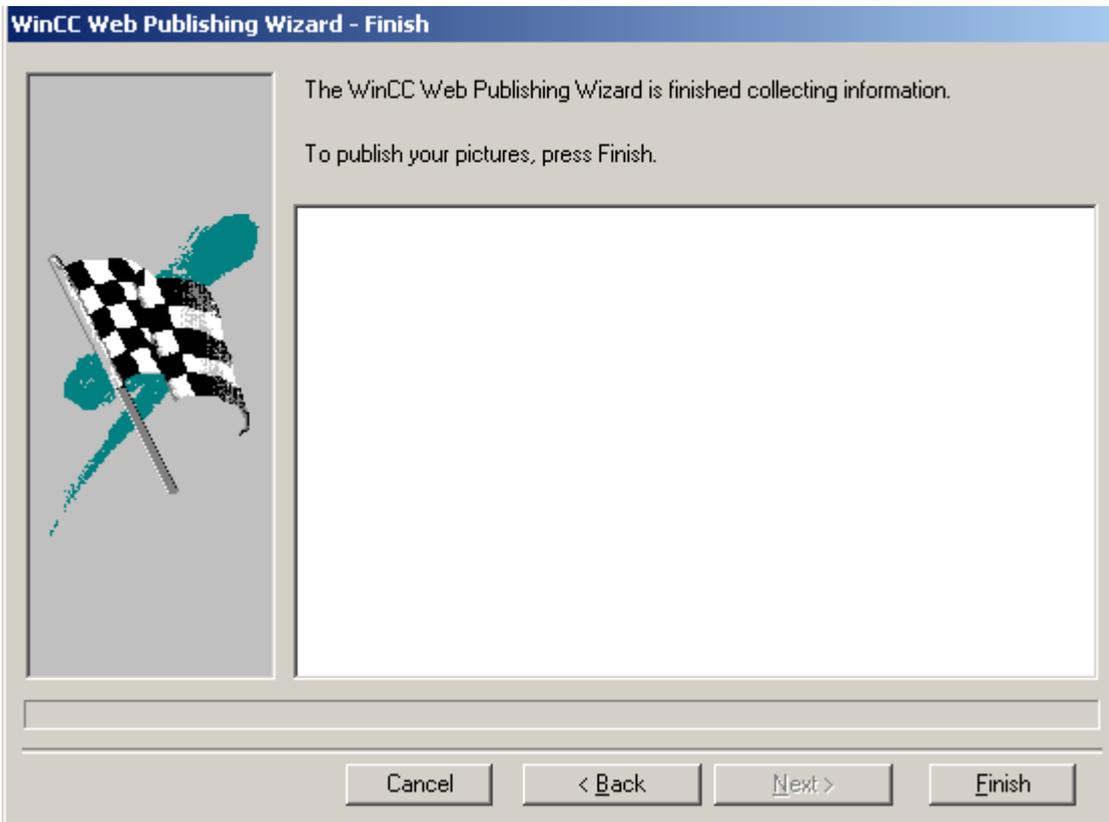
8. Click "Finish" to start the publishing of the pictures. You can track the progress in the progress display.

9. After the completion, a dialog is displayed. Confirm it by clicking "OK".
   In the output field of the Publisher, the pictures in which script errors were found will be highlighted. By double-clicking the file name, the picture can be opened in the "PdlPad" and the script errors be determined and corrected.
   You can exit the Wizard via the "Finish" button or change the Wizard selections with the "Back" button and, if necessary, publish again.
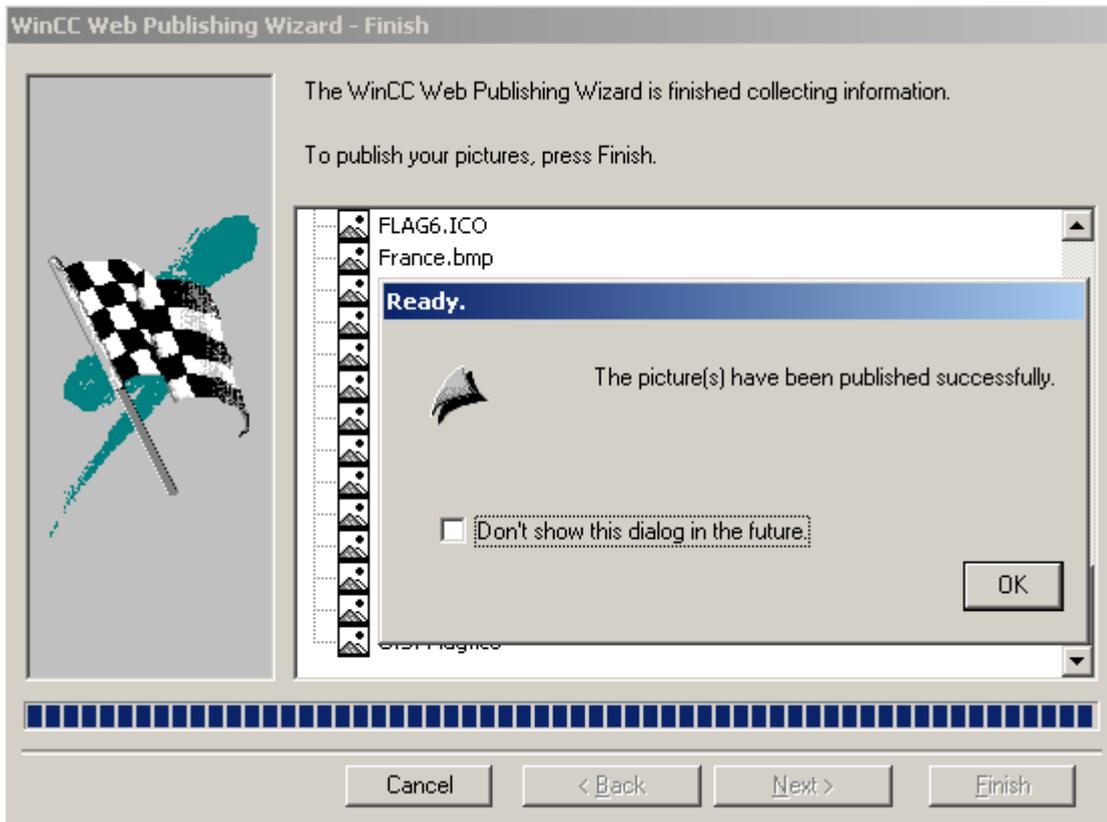
4.5.4.4   Remote Publication of WinCC Process Pictures with the Web View Publisher

Introduction

In order for the WinCC project data (pictures, scripts) to be operational on the WinCC Web Navigator Client via the Intranet/Internet, it is published with the help of the Web View Publisher.

When publishing remote, the source and target folders can be located on one or multiple web servers. The publisher itself can be started on the web server with the source or target folder or on a third web server.

Requirements

- Remote Publishing can only be used on the Web Navigator Server or if the Web Navigator Remote Publisher has been installed but not, however, with the dedicated web server.

- The Web View Publisher must receive Windows permissions to the source and target projects. By default, these permissions are created by WinCC. Check, however, whether these permissions are not limited, for example, to certain users.

- If projects should be published on other computers, this computer must be connected via a network before starting the Web View Publisher so that the projects can be displayed and selected in the publisher's selection dialog. It is not possible to enter a path directly.

- For remote publication of the WinCC project on a dedicated web server, the project must have been opened remotely on the publishing computer.
  For remote publication of the WinCC project on a dedicated web server, the project must have been opened remotely on the publishing computer, of WinCC Explorer must be closed.

Note

The names of the pictures used via the Web Navigator must not contain a double-underscore character, since the character string before the double-underscore is interpreted as a server prefix.

If you use Basic Process Control, the name is also not to begin with a single underscore character. For using the Picture Tree Manager, the names of superordinate pictures are preceded by "@PTN_". With a leading underscore character, the picture name will then have a doubled underscore character.

Customized standard functions cannot be published. If these customized standard functions should be available on the web client, these can be created as project functions and then published.

Only use the WinCC Web View Publisher for projects that have been created with WinCC V6.2 or higher.

Remote Publishing with the Web View Publisher

1. In the navigation window of the WinCC Explorer, access the pop-up menu of the "Web Navigator" and select the "Web View Publisher".
   This starts the Web Publishing Wizard.
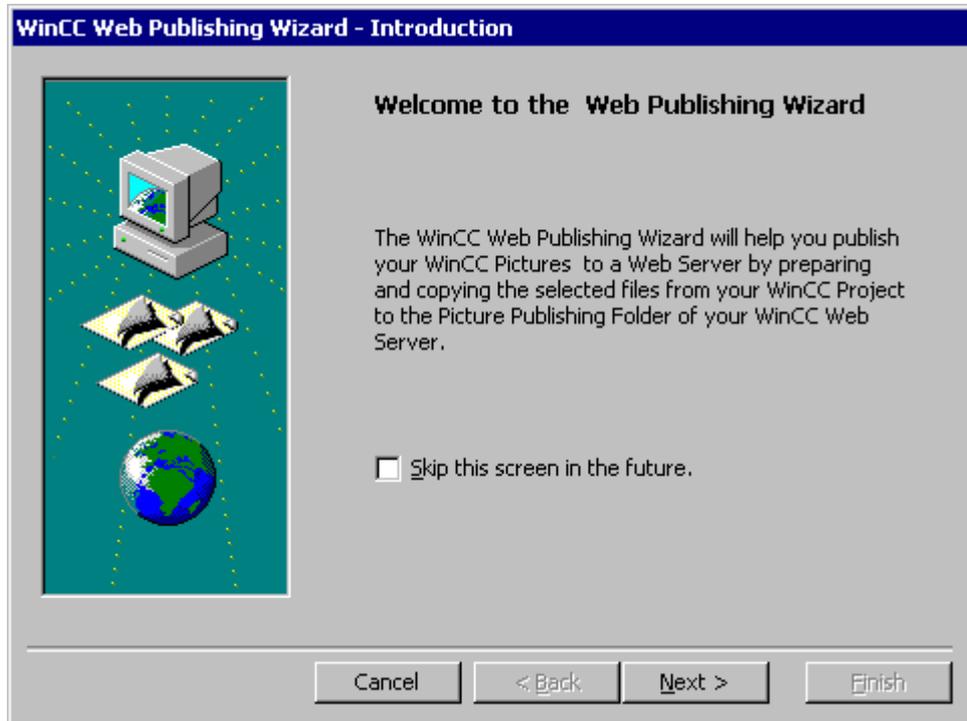
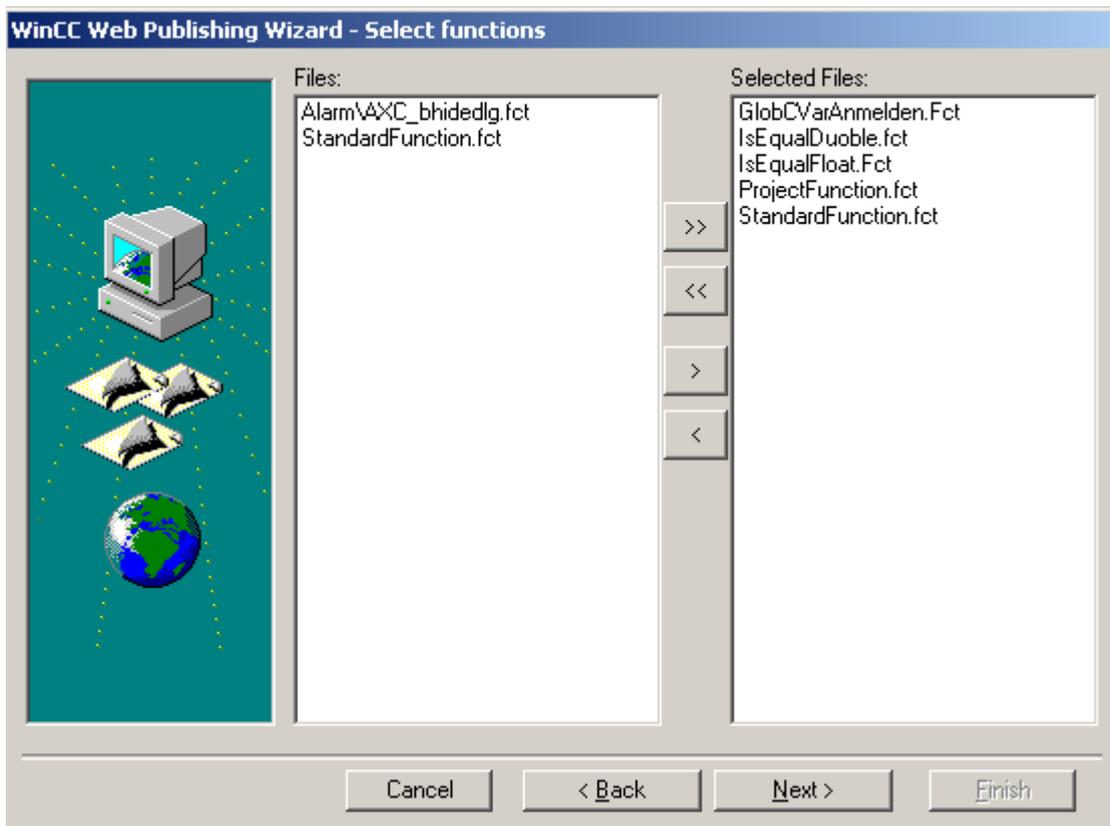2. Click "Next" to go to the next dialog.
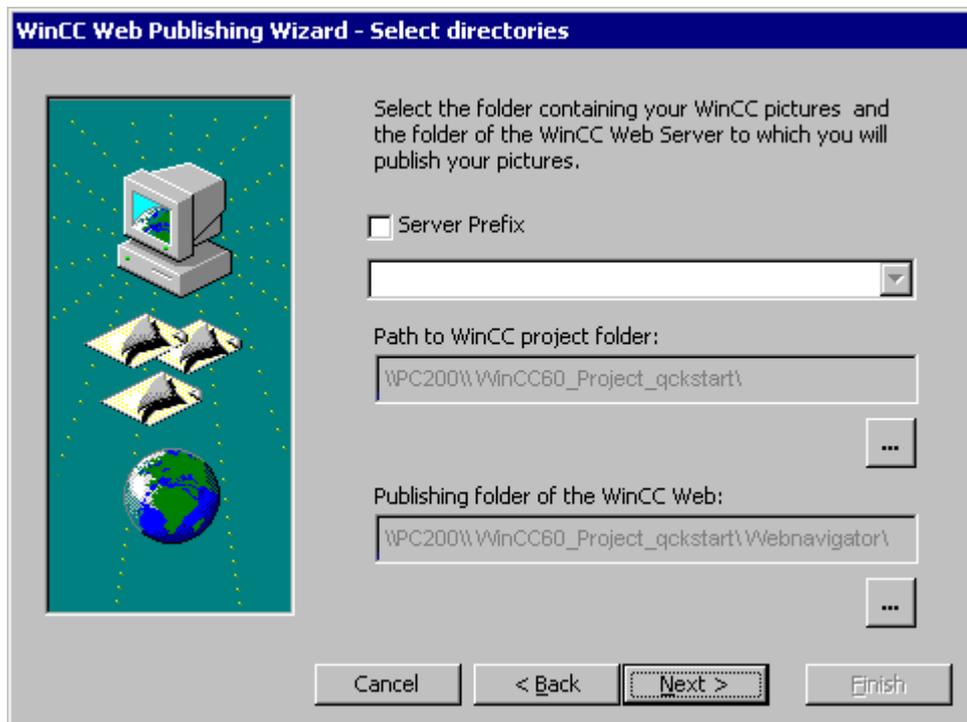
3. In the field "Path to WinCC Project Folder", select the source project where the WinCC pictures are located. The source project will be shown using the permission name on the other WinCC servers. The selection made appears in the field in the format"\\<computer_name>\<enable_name>.
   In the "Publishing Folder of the WinCC Web" field, check the target project information in which the converted pictures are to be stored. The path is adjusted during the selection of the source project. Should the target project be located on another WinCC server, select the corresponding project.

4. Click "Next" to go to the next dialog.

Select the pictures that you want to publish on the WinCC Web Navigator Server.

5. Click "Next" to go to the next dialog.

WinCC Web Publishing Wizard - Select functions

Files:
Alarm\AXC_bhidedlg.fct
StandardFunction.fct

Selected Files:
GlobCVarAnmelden.Fct
IsEqualDuoble.fct
IsEqualFloat.Fct
ProjectFunction.fct
StandardFunction.fct

>>

<<

>

<

| Cancel | < Back | Next > | Finish |
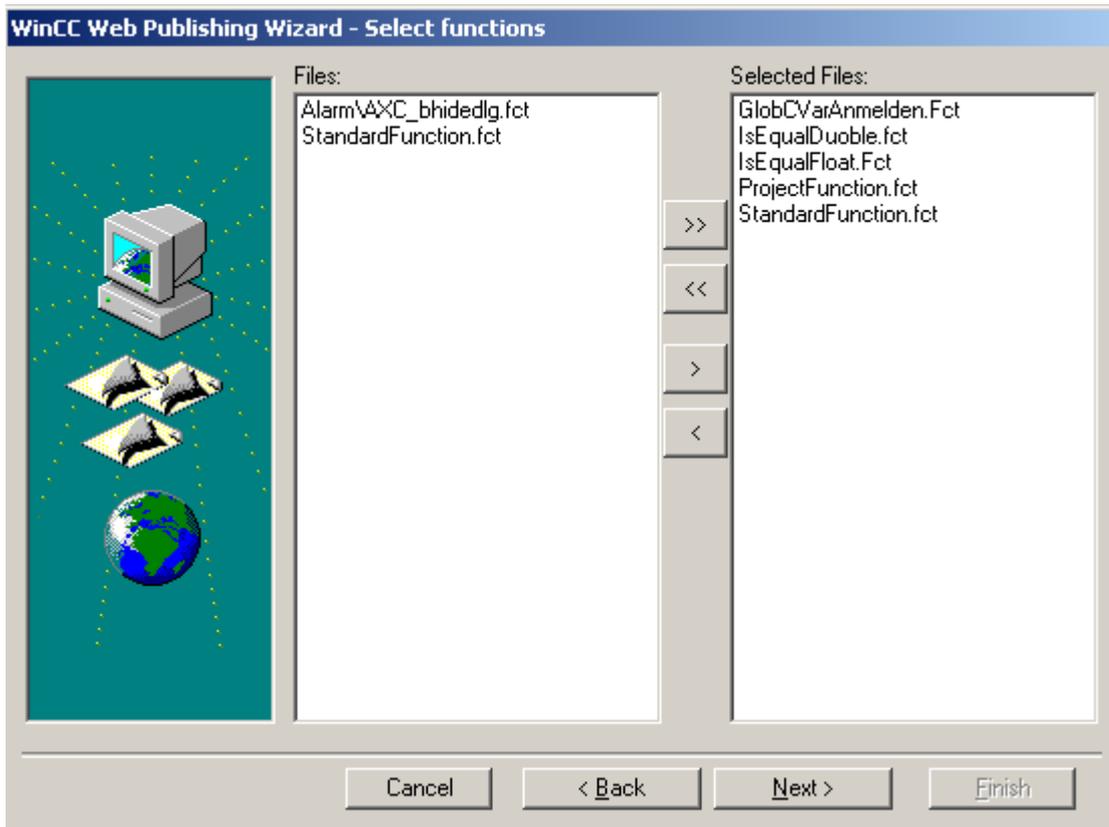
6. Via ">", select the C Project Functions that are to be published. The selection of individual VB scripts is not possible.

7. Click "Next" to go to the next dialog.

Select the graphics referenced in the process pictures that you want to publish on the Web server (e.g. bitmaps).

8. Click "Next" to go to the next dialog.

WinCC Web Publishing Wizard - Finish

The WinCC Web Publishing Wizard is finished collecting information.

To publish your pictures, press Finish.

| Cancel | < Back | Next > | Finish |
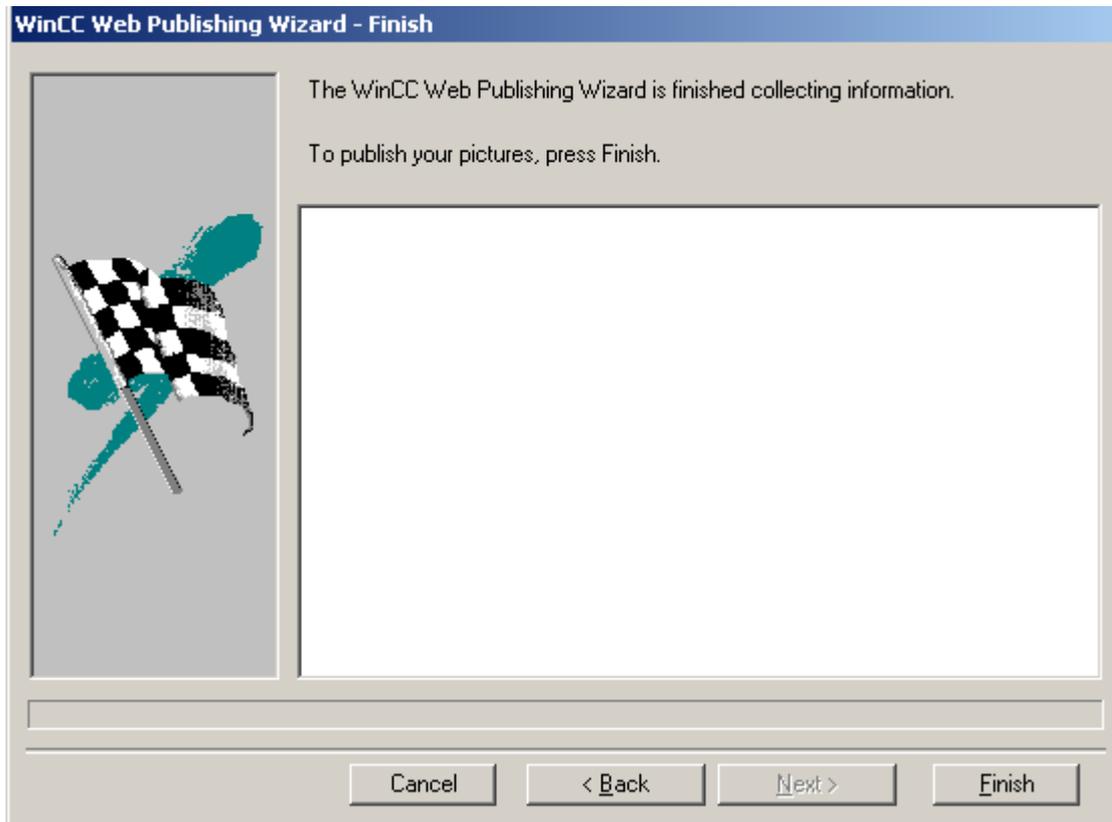
9. Click "Finish" to start the publishing of the pictures. You can track the progress in the progress display.

10. After the completion, a dialog is displayed. Confirm it by clicking "OK".
In the output field of the Publisher, the pictures in which script errors were found will be highlighted. By double-clicking the file name, the picture can be opened in the "PdlPad" and the script errors be determined and corrected.
You can exit the Wizard via the "Finish" button or change the Wizard selections with the "Back" button and, if necessary, publish again.
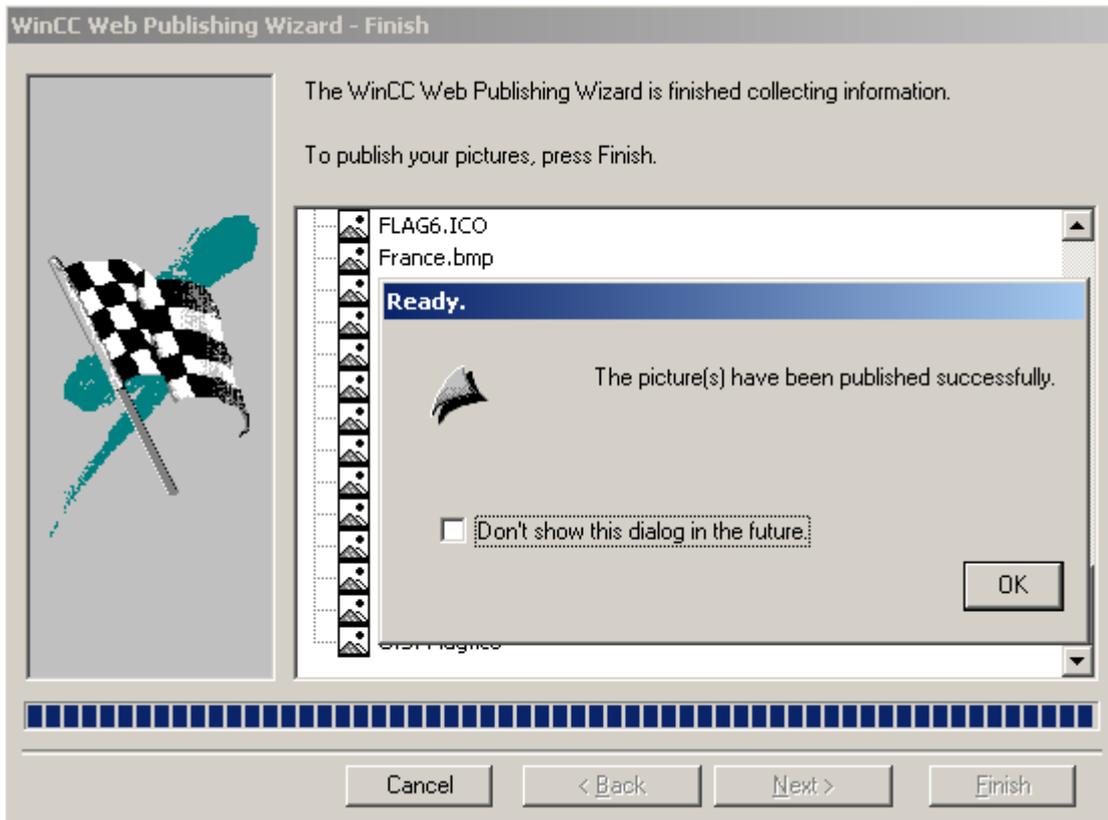
4.5.5   Transfer and Adaptation of Existing Projects

Introduction

Projects already created with WinCC can be used to make them available via Internet and intranet.

Essentially, this requires the publishing of the already created WinCC pictures with the WinCC Web View Publisher in the WinCC Web folder and the setup of the web users with the WinCC User Administrator.

Note

Only use the WinCC Web View Publisher for projects that have been created with WinCC V6.2 or higher.

For projects that have been converted from WinCC V6 to WinCC V7, the instructions on migration into the WinCC Basic documentation must be observed.

The current version of the WinCC Web Navigator has many limitations in its functionality and does not support all functions that a standard WinCC Basic system offers as a "Thin Client".

Check your existing WinCC configuration with regard to these limitations and adapt it if necessary.

NOTICE

In the WinCC Web Navigator, only a certain number (approximately 600) of functions and standard functions are available, which you can use on the WinCC Web Navigator Client. A list of functions with are supported or not supported by the WinCC Web Navigator Client is provided in the Appendix.

4.5.6   Limitations

When transferring the extensive WinCC Runtime functionality to the minimal Runtime environment of the WinCC Web Navigator Client, limitations are unavoidable.

The following WinCC options and functionalities are not available, amongst others, via the Intranet/Internet on the Web Navigator Client:

When using non-supported functions, the user will be informed of this in Runtime with plain text messages.

● The WinCC Web Navigator Client only offers the view of a running WinCC project. A configuration of the WinCC Server projects via the web client is not possible.

● Only those WinCC option packages/add-ons can run on the WinCC Web Navigator, whose documentation expressly states that.

● Not all ODK functions are supported on the WinCC Web Navigator Client. A list of the functions supported is provided in the Appendix.

● Web Navigator Client does not support all functions of WinCC basic system with Basic Process Control. A description of supported and non-supported functions may be found in WinCC Information System under "Options > Options for Process Control > System Overview Controlling Options > Configuration in PCS7 Environment > Web Client" as well as under "Release Notes > Controlling Options".

● The Report Designer is an integrated reporting system of WinCC for the time- or event-triggered documentation of alarm messages, operations and archive contents. This reporting system is not supported via the Intranet/Internet. Thus, the output of reports is, for example, only possible on the Web Navigator Server and WinCC client.

- No separate archive system is running on the WinCC Web Navigator Client. The message archive and message system can only be operated and monitored.

- Computer-local tags in conjunction with user archives are not supported on the web client. For additional information, go to "Differences with basic system > Computer-local tags".

- The redundancy switch is only supported on the dedicated web server.

- - In ActiveX Control "WinCC Alarm Control", the property "triggers an action" is not supported. In Alarm Control, selection according to alarm class is only possible on a Web client executed locally on the Web server.
  To ensure correct display on the Web client, the checkboxes in the "Apply Project Settings" area must not be activated in the WinCC project in the configuration of the "WinCC Alarm Control" on the Message Blocks tab control.

- Operation using the hotkeys configured in WinCC is not supported by the Web Navigator client because Internet Explorer does not distinguish between operating objects from WinCC and its own.
  On the other, operations using the tab key are supported.

- Certain objects of the Global Library of WinCC are not supported by Web Navigator Client.
  In Web Navigator, these are the objects "1_Slider", "2_Slider" and "4_Slider" from the directory "Global Library / Operation / Operating Panels".

- National special characters in names of process pictures or references graphs are not supported by the web client during Internet connections.

4.5.7 Using Scripts

VB Scripts

When using Visual Basic Scripts, there are only small limitations due to unsupported functions. The appendix contains an overview of these functions.

Global Script

The WinCC Web Navigator Client only offers a view of the project. The configuration of scripts takes place in the server project of the WinCC server.

Global Scripts cannot run on the web client. Global Scripts on the server are supported.

Unlike in WinCC, all scripts on the WinCC Web Navigator client are integrated in the same name space. This makes possible function calls between scripts that are implemented in different objects. Global tags are known to all scripts. For this reason, "defines" - such as "#define Motor 1 100" - that are stored in scripts of this file may only occur once across all scripts.

If multiple occurrences are required due to configuration reasons, "define" needs to be deactivated first by a "#undef".

Example:

```
#undef Motor1
```

```
#define Motor1 200
```

Special features

Project functions which should run on the Web Navigator Client must not use include-files. The PdlPad tool provides support in examining problems in the pictures used and displaying problem points.

Scripts created with the Dynamic Wizard are, in part, not capable of running on the Web Navigator Client because functions which are not supported may be used in the scripts. If these scripts should be capable of running on the web client, they must be tested by the user and corrected, e.g. by inserting the condition "#ifdef RUN_ON_WEBNAVIGATOR".

Actions

Actions are scripts that respond to operations and events. The appendix of the Online Help contains the functions that are supported.

Scripts with Tag Triggers

Tags are polled in the Web Navigator in a cycle of one second and not in the configured cycle time. This can lead to an increased load for the communication connection between the AS and WinCC server and must be taken into close consideration when the communication between AS and WinCC server is operated at utilization load limits.

If other tags are requested in tag triggered scripts whose names, e.g. are created with a string function, these tags can only be read synchronously (in as far as they are not known). This can lead to unusually long execution times. To prevent this happening, enter the tags names used in the trigger list.

Diagnostics for VBS and Global Script

The WinCC Web Navigator supports the diagnostics for VBS and Global Script through the application window.

When placing the application window in the process picture for the VBS and Global Script diagnostics, select the window content "Global Script" and the template "GSC Diagnostics".

4.5.8   The "PdlPad" Tool

Introduction

Installing the WinCC Web Navigator Server will also install the "PdlPad" tool, with which the scripts of the published pictures can be checked.

In order to check the scripts, open the published picture in PdlPad and click the "Check Scripts" icon. Corrections to the scripts can be entered in PdlPad and saved. These correction,

however, are only saved in the published pictures, not in the process picture of the WinCC project.

Starting PdlPad:

● Double-click "PdlPad.exe" in the installation directory "\Webnavigator\Server\bin"

Starting from the Web View Publisher

The Web View Publisher automatically makes the necessary adaptations to your WinCC process pictures so that they can run on the WinCC Web Navigator Client via the Intranet/ Internet. These published pictures are in the WinCC project folder under " ..\ WebNavigator \ Pictures".

If the "Check Scripts" check box is activated when running the Web View Publisher, the published pictures in which script errors were found will be highlighted in the output field of the Publisher. By double-clicking the file name, the picture can be opened in the PdlPad and the errors be determined and corrected.

Additional information about publishing can be found at the topic "Publishing WinCC Process Pictures".

Starting from the Windows Start Menu

To check the scripts of a published picture, open this picture in the PdlPad from the WinCC project folder under " ..\ WebNavigator \ Pictures".

```
PdlPad - [MyStart.PDL]
File  Edit  View  Window  Help

<Modul Engine="CissScript" Name="Document" >

//---------------------------------------------------------------
// Object: StartBild      Property:

void  StartBild_OnLButtonUp(UINT nFlags, int x, int y)
{
char* lpszPictureName = "MyStart";
char* lpszObjectName = "StartBild";
char* lpszPropertyName = "";

//      OpenHomePicture();
}

</Modul>

<EventSink Name="Document">    </EventSink>
```

                                                    CheckScripts

------------ No Errors in MyStart.PDL ------------

CheckScripts   Ln 1,Col 1
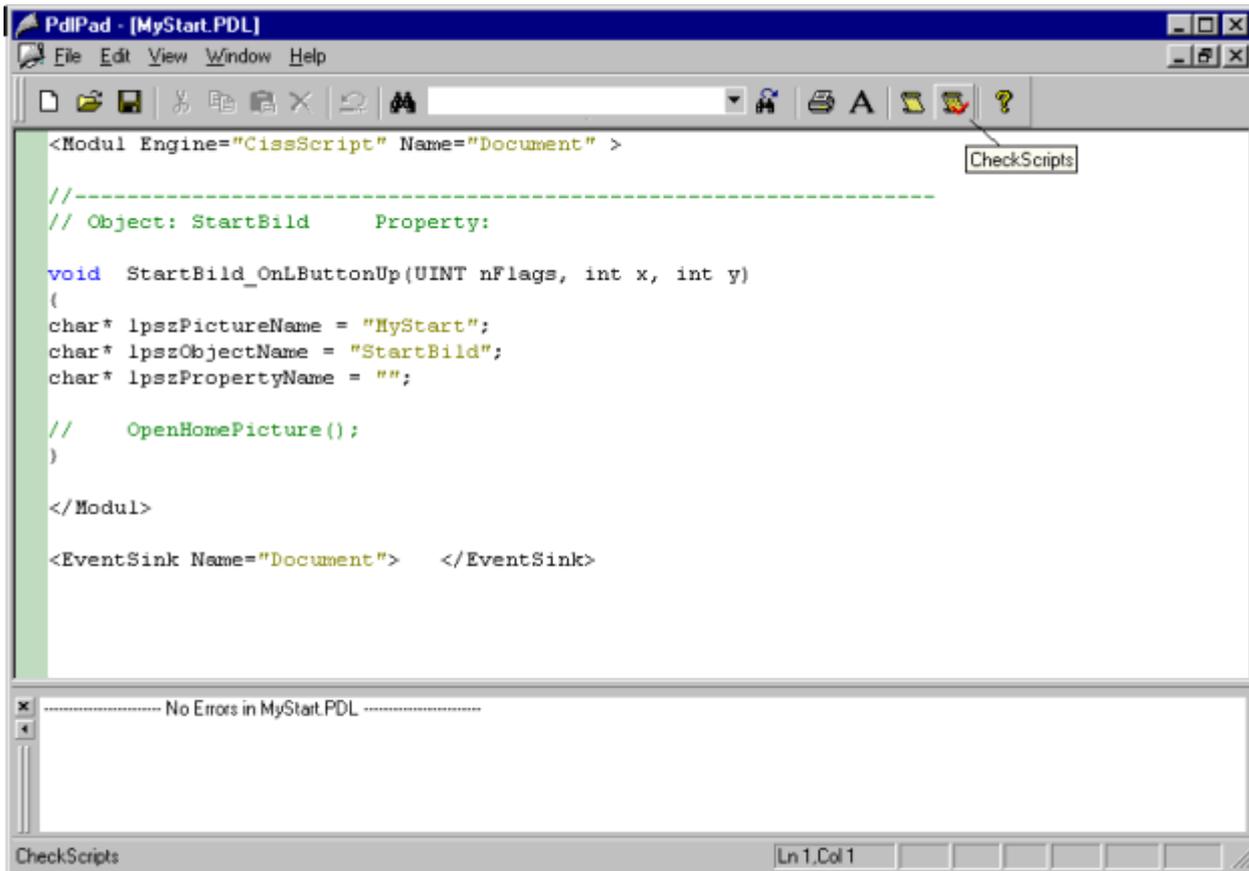
4.5.9   Differences to the WinCC Basic System

4.5.9.1   Picture Selection

In Web Navigator, a WinCC picture is downloaded asynchronously over the Internet. Therefore, in contrast to the Basic System, the picture change asynchronous rather than synchronous. This fact must be taken into consideration for scripts which trigger a picture change.

The following applies:

If, within a script, a picture window triggers the selection of a picture, objects of the new picture are subsequently not accessible within the same script since the picture has not been loaded at that particular time. Any delay (such as Sleep(2000)) is of no help here as the script and Internet Explorer wait along with the delay.

A better solution is to execute the subsequent script parts during an OpenPicture Event which will be triggered once the picture has loaded.

4.5.9.2   Scripting

Screen deselection

You can use the ANSI C function, SetPictureName, in a C script, for example, to deselect a screen.

If you call other functions in the script, they will not be executed or they will be executed with error. The context of the screen is lost when the screen is deselected.

Preprocessor definition

Especially for Web Navigator, there is a preprocessor definition in scripting:

RUN_ON_WEBNAVIGATOR

Code subject to this preprocessor definition will be executed in Web Navigator only. Thus it is possible to write scripts which perform differently under Web Navigator than in the Basic System.

Example:

```
void OnOpenPicture (char* lpszPictureName, char* lpszObjectName,
char* lpszPropertyName)

{

#ifdef RUN_ON_WEBNAVIGATOR

// enter here code to be executed only in the Navigator

#else

// enter here code that is executed only in the basic system

#endif

}
```

4.5.9.3   Script Execution

In contrast to the WinCC Basic System, the event-triggered scripts (OnClick etc.) are executed inn the same process space as the picture display, namely within the context of Internet Explorer.

This must be noted when working with delays in scripts (for example, Sleep(3000)). In this case, the displayed picture is not accessible for exactly that time span.

4.5.9.4   Synchronous Script Functions

Synchronous script functions present a high load on the system. The "SetTagxxx" function in particular should not be used in cyclic scripts. If several clients (>10) call the SetTagxxx functions in a fast cycle (1s or less), the server is overloaded.

For synchronous script functions, such as "xxxWait", which perform a synchronous tag write and subsequent wait on the result, as well as CApi calls, it should be noted that these calls go synchronously to the server. Therefore, a frequent call to these script functions may seriously and adversely affect the performance of the web client. Using an Internet connection, such call may even take up to the order of seconds.

Script functions which manipulate the objects within the displayed picture are of no concern as the roundtrip to the server does not materialize.

4.5.9.5 Addressing of Objects in Pictures

Note

From version 6.1 SP1, Web Navigator supports the absolute addressing of objects in pictures. Therefore, there is no longer any difference to the WinCC basic system.

In Web Navigator versions prior to V6.1 SP1, only relative addressing was possible which Web Navigator continues to support. However, a description no longer exists.

4.5.9.6 Defining a Picture-Local Script Tag

In order to keep picture-specific data in scripts, one should avoid using WinCC tags in Web Navigator. These tags, if read or written in scripts, always involve a round trip to the server, thus placing a load on the communication.

There are several options to maintain picture-specific data:

Configuration of "invisible" graphic objects

By creating invisible graphic objects, one has the option to use the properties of these invisible objects as a picture-specific tag.

In addition, it has the advantage of executing certain actions upon changes of these saved values.

Example: Creating an invisible text field.

Here you may save any arbitrary texts in TextProperty which then can be read or written by any script handler.

In the color properties of the text field, for example, you may save colors which are read and written using scripts and may affect the picture status without requiring a roundtrip to the server.

4.5.9.7 Computer-local Tags

Overview

The WinCC/WebNavigator client supports computer-local tags.

Take the following features into account:

- With the dedicated Web Server
- With text tags
- With User Archives

Computer-local tags with the dedicated Web Server

When using a dedicated web server, only the computer-local tags of the dedicated web server are available on the web client. Therefore, these tags cannot assume their own values on the web client.

Computer-local tags of subordinate WinCC servers

The computer-local tags of the subordinate WinCC server cannot have separate values on the Web Client.

Special characters in computer-local text tags

The start value of computer-local tags may only contain characters that are allowed in the tag names. For example, a colon in the start value leads to the tag not being recognized on the Web Client.

More information on special characters can be found in the WinCC Information System under the topic "Working with WinCC" > Working with projects > Appendix > Impermissible characters".

Computer-local tags and user archives

Computer-local tags in conjunction with user archives are not supported on the web client.

4.6 Using the WinCC/Web Navigator Client

4.6.1 Using the WinCC/Web Navigator Client

Introduction

The WinCC Web Navigator Client allows viewing, operating and monitoring a running WinCC project of the WinCC server. Because of this, no configuration of the server project is possible.

The functions and properties of the Web Navigator Client are described in the following chapter.

4.6.2 Functions and General Properties of the Web Client

Establishing of a Connection (Reconnect) by the Web Clients Automatically Connection Error

If the communication between the web client and web server is defect, the user receives a message on the web client. The message appears, for example, on terminating WinCC Runtime on the WinCC server within 10s, following a power failure on the web server within 60s.
The web client then automatically tries to establishing a connection in order to restore the connection. Following reconnection, the Start page of the WinCC project is selected.
 A condition for this is that a connection was established successfully between the web client and web server beforehand.

The delay between attempts to establish a connection can be configured on the web server in the Web Configurator. If the value "0" is set, the web client does not attempt to reconnect automatically.

Connecting the Web Client to a different version of web servers

If a Web Navigator Client is to be connected to a Web Navigator Server of a different version, such as V1.2, please read "Mixing and Compatibility of Versions" in the Chapter "Requirements".

Monitor Keyboard

A virtual keyboard on the picture is unhidden on the Web Navigator client, as with WinCC, with which to enter numeric and alphanumeric input. The keyboard can be displayed on the web client regardless of the configuration in the WinCC project.

The application must be selected and installed in the client installation.

The settings for the monitor keyboard are defined in the Web Navigation user interface in the "Settings" menu. If the Web Navigation user interface define the settings directly in the "ClientConfig.asp" file. The file can be opened in the Internet Explorer using the address "http://<server_name>/ClientConfig.asp".

Further information on the screen keyboard is provided in the corresponding chapters in the WinCC Information System.

Installing Downloads or Plug-Ins on the Web Client

If a download or plug-in should be installed on a web client from the web server just connected, no other web client may be stared on this client computer or an attempt to establish a connection to the same server from another open Internet Explorer window. This also applies when the web clients on a client computer are connected to different web servers. It is generally recommended to close al the other unnecessary applications on the client computer during the installation of the Web Navigator software.

If ActiveX controls are also installed along with a plug-in, the Internet Explorer must be closed and reopened.

Communication

The communication between the WinCC Web Navigator Server and Client is possible via HTTP and HTTPS. To protect the system against unauthorized access, HTTPS should be used.

Multiple instancing by a new window in Internet Explorer

Multiple instancing through several separate windows is not supported on the Web Client.

The multiple instancing will be created if the function "New Window" in the menu "File > New > Window" is used in the Internet Explorer.

[block-title]▷Multiple instancing using tabs in the Internet Explorer

As of Version 7.0 the Internet Explorer supports several tabs and tab groups with Web pages in a single Internet Explorer window (tabbed browsing). This allows you to set up several views of the project in the Web Client. Example: Tab 1 shows "Screen 1", Tab 2 shows "Screen 2".

Overlapping Lock

An overlapping lock in process pictures is not supported on the web client.

Persistency in Runtime

The files concerning persistency on the web client are in the folder "Documents and Settings / User / Application Data / WebNavigator". The Control Settings in which Runtime Persistence was activated, may only be reset by resetting the individual settings in Control or by deleting the file.

- Persistence in RT on a standard server

The persistency data is stored on the web client specifically for pictures and objects. If work is carried out with several projects on the server and these projects contain pictures or objects of the same name, observe the following. If a Persistence in RT is created for a project, the persistency is transferred for the picture of the same name to the other projects.

- Persistence in RT with dedicated web server

If two WinCC clients are connected to the same WinCC server in a system, it is irrelevant, from the aspect of the persistence in RT, via which WinCC client the web client is connected to the WinCC server. Once the persistency settings have been defined for a server picture, these settings are available on the respective web client. It is irrelevant with which WinCC client the web client is connected.

Project Change

After changing the WinCC project on the web server, the Web Configurator must be executed again so that the web clients can connect to the web server again.

Language Change

A language switch can be implemented on the WinCC Web Navigator Client.

If a text from the Text Library is changed on the WinCC server in Runtime, this may not be automatically recognized by the WinCC Web Navigator Client. The Internet Explorer saves the pictures in the cache. The cache is a special memory in which the content of frequently used objects, e.g. Internet pages, are stored. In order to refresh the displayed pictures, the picture has to be reloaded via the "Refresh" icon or the "F5" key.

Language-Dependent Text When Using Text References

Language-dependent text output through text references is displayed on the web client in the language currently set on the respective WinCC server.

The same applies to multi-user systems where a WinCC client with its own project has, for example, text references of a second WinCC server loaded via packages. If a web client or a WinCC client are registered on this WinCC client with their own project, the text references of the second WinCC server appear in this client in its current language.

Customized ActiveX Controls

Customized ActiveX Controls (Industrial X), inserted in WinCC, also work on the web client when they are installed on the client computer. The Controls can be compressed so that they can be downloaded. To do this, the WinCC Plug-In Builder can be used, for example. Further information is available under "WinCC Plug-In Builder" or the IndustrialX hotline.

WinCC Slider Control

In the case of WinCC Slider Control, the "ContinousChange" attribute should be set to "No" during configuration in WinCC. If the attribute is set to "Yes", an event trigger is started following a minimal position change which can results in a heavy load for the communication of the web client.

Zoom Function in Runtime

The extended Zoom functions in Runtime cannot be deactivated on the web client. If the zoom functions are not required for use, do not use a wheel mouse with the Auto Scroll setting on the web client.

Access to Process Tags

Process tags can be read and written just like at the WinCC client. The process image is supplied with tag values by the WinCC Explorer. Depending on the authorizations issued in the WinCC User Administrator, the web client user can either only monitor ("System privilege No. 1002") or operate and monitor.

When using the DataMonitor, the Web Navigator is used for the transfer of information and for the user administration. While the Web Navigator Client represents a complete HMI system, the DataMonitor client is a pure display and evaluation system for process values from WinCC or data from the WinCC long-term archive server.

Mouse Cursor and Operable Objects with Lacking Authorization

In WinCC Basis System process pictures, the mouse cursor is displayed over operable objects without the green dynamization arrow if the registered user does not have sufficient authorization. Equally, operable objects are displayed as deactivated if sufficient authorization is lacking.

In the Web Navigator Client these objects with insufficient authorization appear as if operable due to system constraints. These objects are not deactivated due to system constraints, and the mouse cursor is displayed with the dynamization arrow over the objects. Only upon attempted operation or value input, a message appears that the user does not have sufficient authorization.

4.6.3 Web Client Properties Concerning Pictures

Update Cycle for the Tag Connection with Direct Connection

In the case of tag connection with direct connection, a tag value with configured "Upon Change" update cycle is updated on the web client in cycles of "1 second". This must be taken into account, for example, when displaying tag values.

Display of messages

The existing WinCC message archive or WinCC servers alarm logging system can be operated and monitored on the WinCC Web Navigator Client via the WinCC Alarm Control. The execution of the function "Loop in Alarm" is not possible.

Display of Process Values in Trends and Tables

On the WinCC Web Navigator Client, the display of the process values in trend or table form can be implemented via the WinCC Online Trend Control and the WinCC Online Table Control. Changes with regard to the trend and table windows are possible. The Web Navigator Client, however, cannot have its own archive, the data of the process values comes exclusively from the archive system of the WinCC server. Several properties of the controls cannot be changed on the Web client, such as the archive and tag selection and the persistence settings.

Display of Archive Values in Trends and Tables with Open Picture

When displaying archive values with the Online Trend Control and Online Table Control, the "Open Picture" setting in the configuration of these controls must be taken into account. In the Control properties, the option "Load Archive Data" in the "Open Picture" area of the General tab control should be selected. This option is not active in the Control properties on the web client, and this is why the current setting is not displayed and cannot be changed.
If the option is not set, no data are displayed for the open picture on the web client. Only after clicking the "STOP" and "GO" buttons in the toolbar of the Controls, values are displayed.

Display value of a user archive using User Archives Table Control

Changes in a user archive trigger an update of the User Archive Table Controls which display exactly the contents of this user archive. The following factors affect the performance of process pictures with User Archive Table Control on the web client and should be noted.

- The number of User Archive Table Controls accessing the user archive at the same time should be kept as low as possible.

- Cyclic changes to the user archive should be utilized as little as possible.

- The communication load of the connection to the web server also has an effect.

Picture in Picture Technology and Cyclic Scripts

If several windows (>10) are configured in a picture window and cyclical scripts with synchronous calls are used in these windows (e.g. SetTagxxx), the numerous synchronous calls can lead to performance problems and, under certain circumstances, some scripts may not be executed due to timeouts. At present, only 16 windows with cyclic scripts are supported in one window. If no cyclic scripts are used, 31 windows can be enabled in one window.

The "Sizeable" property cannot be implemented in picture screens in web clients. The user cannot change the screen size at runtime.

Picture Change

In the event of a picture change on the web client, global C-tags are reinitialized.

When triggered, the OpenPicture() function opens the parent picture of the executing object in the dedicated web server.
For more information on addressing, refer to "Differences to the WinCC Basic System" / "Addressing Objects in Pictures".

Picture Change on Dedicated Web Server

If a picture with a server prefix was loaded on the dedicated Web server / WinCC client, no picture from the local WinCC project can subsequently be displayed without the server prefix. To display a picture from the local WinCC client project, the "@local" server prefix must be used during the addressing, e.g. "@local::picture123.pdl" for addressing the picture "picture123".

Displaying a Modified Process Picture on the Web Client

If a process picture is modified in WinCC Graphics Designer on a computer with web server and WinCC in Runtime, whereby the picture is displayed on a web client, the modified process picture must be published again. This is the only way that the modifications can be displayed on the web client. The display may have to be updated manually depending on the settings in the web client's Internet Explorer under "Internet Options > Temporary Internet Files > Settings".

This process also applies for modifications of control properties, such as persistency settings of the Tag Logging Controls.

To assume the modifications made on a web client on a dedicated web server, the relevant WinCC project is opened remotely on the dedicated web server. The modified picture is then opened and stored in Graphics Designer and then published by Web Publisher to the dedicated web server. If several pictures or one large picture are modified, the process can be simplified by the "Convert pictures" in the pop-up menu of Graphics Designer. The modified picture or pictures must also be published subsequently.

Possible Causes of Error Messages on the Web Client

On publishing with checking of the scripts, pictures are signaled by the fact that warnings and errors occur. These pictures are still published and can be selected by clients. However, Runtime errors can occur which are signaled by the client.

Project Functions in Pictures

When a project is selected for the first time the project functions are loaded after the startup picture has been loaded. Therefore, a delay can occur between the first display of the startup picture and execution of operations; i.e. the picture is displayed but can only be operated after approx. 1 second.

If a project function called from a picture is no longer available in the project, no project functions run in this picture. Further information is available in the Chapter "Configuring a Web Project" / "Publishing Without Project Functions".

4.6.4   "Hardcopy" Function on the Web Client

Introduction

The current view of the web client can be output on a standard printer. The hardcopy can be triggered by a configurable key combination or a script. The definition of the key combination or the screen area to be printed out can be set at the start of the hardcopy application. The function can be used by all web clients.

Starting the Hardcopy Application

To use the Hardcopy function, the "PrtScr.exe" application is implemented which can be downloaded as a Plug-In from the web server. The application is started on the web client, e.g. via the command line, by entries in the AutoRun Group or via a script. Hardcopy is then triggered according to the parameters defined.

Parameters	Function
Without parameters	Not permissible on the web client! "infinit" can be used as a substitute.
-end	Terminates a running instance of PrtScr.exe

Parameters	Function
-hardcopy	Starts PrtScr.exe, directly triggers a hardcopy and then waits for the key combination. Only use on the web client in combination with the "infinit" and "hotkey" parameters!
-nomcp	Starts PrtScr.exe, directly triggers a hardcopy and then ends PrtScr.exe
/C= left;top;right;bottom	Starts PrtScr.exe, directly triggers a hardcopy of the indicated screen area and then ends PrtScr.exe (please note the space following "/C=")) Example: prtscr.exe /C= 50;50;100;100
-l	Prints in landscape format This parameter can be added to any parameter combination.
-infinit	Indicates that there is no connection to the WinCC project and that no key combination has been defined, for example, on the web client. The parameter must be used in combination with "hotkey". If the parameter is used in connection with the parameters "hotkey" and "/C= left;top;right;bottom", PrtScr is started and then waits for the key combination. If the key combination is pressed, the hardcopy of the screen area "left;top;right;bottom" is output.
-hotkey="x"	Designation of the key combination. The following key combinations are permitted: { <ALT>, <SHIFT>,<CTRL>} + {0-9, A-Z, 0xXX} The parameters must be written using capital characters. The keys <ALT>, <SHIFT> and <CTRL> can be combined with each other, but this is not a requirement. By means of the hexadecimal value 0xXX, all virtual key codes can be expressed for XX. The "Virtual Key Codes" can be taken from the Online Help of the DeveloperStudio. Example: hotkey="<CTRL>+P" key combination "CTRL" und P hotkey="0x2C" PRT SCR key ("Print-Screen") hotkey="<ALT>+0x2C" key combination "ALT" and "PRT SCR"

The parameters must be separated by a space. In addition, the parameters are case-sensitive!

Examples of Parameter Combinations for the Web Client

Hardcopy upon Key Combination	
PrtScr.exe –infinit –hotkey="<ALT>+p"	Starts PrtScr and waits for the key combination <ALT>+p. If the key combination is pressed, the entire screen is printed.
PrtScr.exe –infinit –hotkey="<ALT>+p" –C= 10;10;100;100	Starts PrtScr and waits for the key combination <ALT>+p. If the key combination is pressed, the selected section is printed.
Starting in a Script	
PrtScr.exe –nomcp	Starts PrtScr, directly triggers a hardcopy and then ends PrtScr.
PrtScr.exe –C= 10;10;100;100	Starts PrtScr, directly triggers a hardcopy of the selected section and then ends PrtScr.

4.7 WinCC/Web Navigation Interface

4.7.1 WinCC Web Navigation Interface

Introduction

The WinCC Web navigation interface combines various Web functions and makes them available to the user in a clear format.
The contents of the navigation interface can be expanded by the user.
Language switching is supported.

In the basic version of the interface, the following functions are integrated.

- "Change server" menu:

  - In the upper field you enter a new address of a Web Server directly.▷[br/]◁ The address is stored.

  - In the lower field you enter a short name for the Web server. This is shown in the navigation column under "Used servers" instead of the address.

- "Used servers" menu:
  Navigation to the Web servers previously used.◁[/p]

- Menu of the current server:

  - "Process pictures": Display or navigation to the process pictures of the current web server.

  - Report tools: Installed tools such as "DataWorkbook" for the display and analysis of current process values and historic data.

  - Analysis tools: Installed tools such as "DataView" for the display of archive data from the WinCC Central Archive Server (WinCC CAS) in tables and trends.

  - "Diagnostics": WinCC Scope and Status.html for diagnosing the WinCC project and the connection to the web server.

  - Additional tools": This menu can be expanded by the user.

  - "Download area": This is used to download documents and other files from the Web Server which have been made available there by or for the user, e.g. to download add-ins for the Web Navigator and system or to integrate additional, application-specific web components created as plug-ins with the Web Navigator Plug-In Builder.

- "Settings" menu:
  Settings for the web client, such as size adaptation of process pictures, activation of the monitor keyboard, locking key combinations.

- "Current" menu:
  Links to Web pages, such as "SIMATIC HMI", "WinCC" or "WinCC flexible".

- "Language" menu:
  Changing the language of the navigation user interface. The standard version of the program includes five languages.
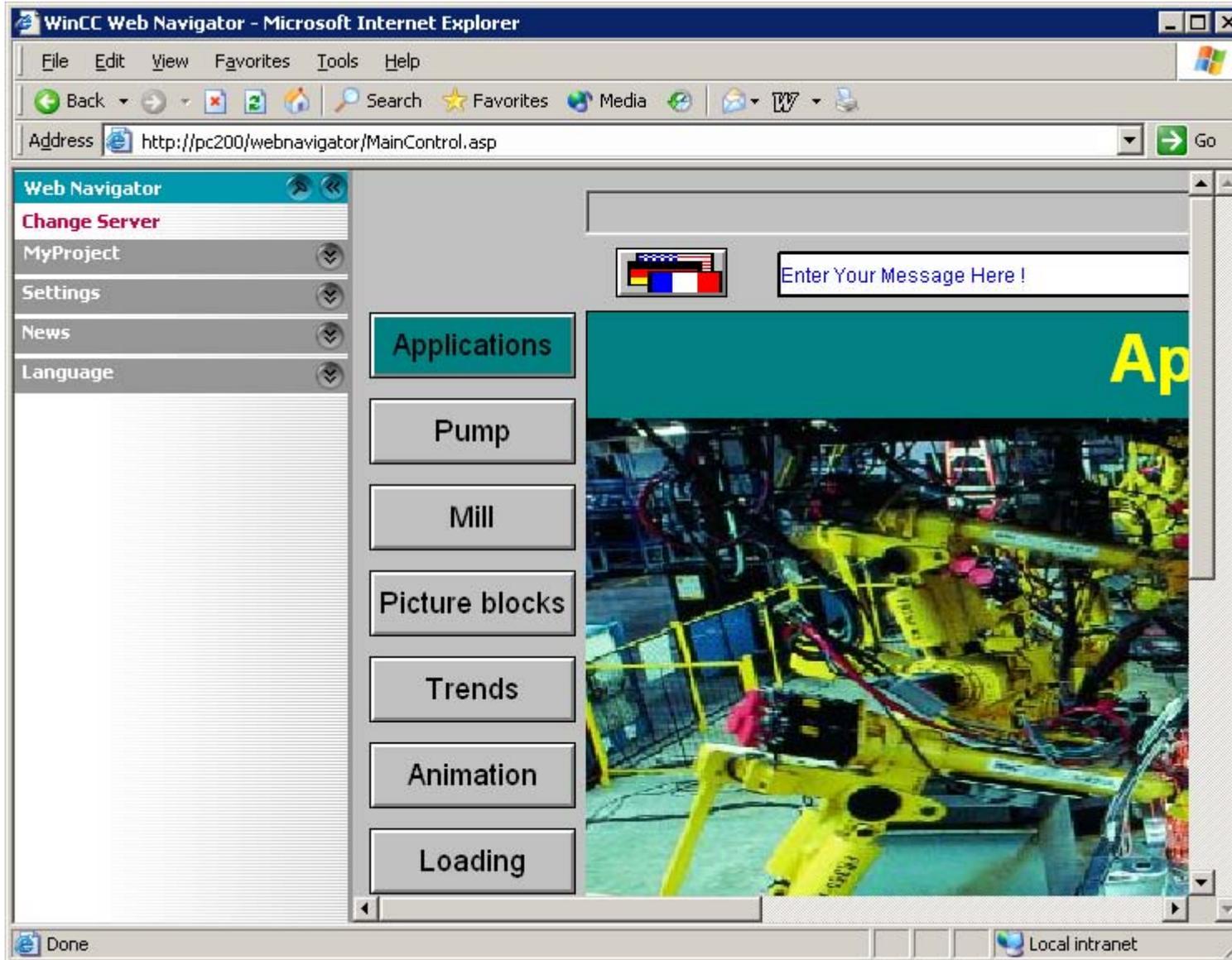
User Logon

When logging onto the web server, the user can determine - through the address entered in the Internet Explorer - whether he or she logs on via the Web navigation interface or the start page configured in the WinCC project.

- The address "http://<server_name>/webnavigator" opens the start page configured in the User Administrator following the logon.

- The address "http://<server_name>/webnavigator/maincontrol.asp" starts the Web navigation interface.

Change of the Server

Via the menu entry "Change Server", a different server can be selected. In the upper input field, the URL of the new server is entered. Examples of possible input formats are described under "User Logon".
In the lower field, a symbolic name can be entered, which is shown in the menu as the current server. If no entry is made, the URL of the server is shown.

Expansion Options

Menu

The menu of the navigation interface can be expanded by additional menu entries and functions, for example, depending on the operational area. To do so, these expansions are configured in an XML file, which is then stored on the web server in the subfolder "_custom_data". Further information is available in the topic "Extending the Web Navigation User Interface".

Tools

The menu entry "Additional tools" can be expanded by the user to provide additional tools on the web client.

Plug-Ins

The "Download Plug-Ins" menu option provides plug-ins that have been stored on the web server in the folder "Install/Custom". In order to display the version name of a plug-in, it must have been assigned the format "Vxx.xx.xx.xx" or "xx.xx.xx.xx".

Languages

Adjustment of language options may be facilitated by adjusting the "Menu.xml" file. The languages are stored as CSV files on the web server in folder "_languages / <language_identifier>. When adding, these language files have to be referenced in the file "maincontrol.asp".

4.7.2 Expanding the WinCC Web Navigation Interface

Introduction

The menu of the Web Navigation interface may be expanded by additional menu items and functions. An expansion is configured in an XML file.

The XML file is saved on the web server in subdirectory "_custom_data". The file name may be chosen arbitrarily since all files with the extension "XML" in this directory are processed.

Example:

This example adds to menu "Server" a submenu "My Private Menu" with three additional subitems "My Link","Relative Link" and "Run Script".

Code	Description
<?xml version="1.0"?>	Version information
<menu hook-on="server">	In command "menu hook-on", the key name "server" is referenced which defines the menu "Current Server" on the Web Navigation interface.
<caption><lng>My Private Menu</lng></caption>	Line 3 defines an empty menu item.
<command> <caption>My Link</caption> <open-url target="right">http://www.msdn.com</open-url> </command>	Lines 4-7 define the menu item "My Link" with a direct link.
<command> <caption>Relative Link</caption> <open-url target="right">project.asp</open-url> </command>	Lines 8-11 define the menu item "Relative Link" with a relative link.
<command> <caption>Run Script</caption> <run-script>alert("Hallo !")</run-script> </command>	Lines 12-15 define the menu item "Run Script" which starts a script.
</menu>	Conclusion of menu.

4.8 Installation of the WinCC Plug-In Builder

4.8.1 Installation of the WinCC Plug-In Builder

Introduction

With the WinCC Plug-In Builder, a setup program can be created for the download of additional Web components by the web clients. These plug-ins can be downloaded by the user, e.g. via

the Web Navigation user interface, installed and extend the functional scope of its web clients as individually.

The individual downloading and installing mean that the resources of the web clients are not unnecessarily exposed to excessive loads. This means, for example, that a plug-in can be created for an individual or system-specific group of WinCC ActiveX Controls and then installed on certain web clients.

Using the Plug-In Builder does not require knowledge of setup technology or other development programs.

The created plug-in setup takes the form of a self-extracting EXE file, which can be made available for download to the web clients from a folder on the web server.

A Web Navigator plug-in integrates into an already installed Web Navigator Client and is also deinstalled with it.

The setup programs created with the Plug-In Builder can only be used in the Web Navigator environment.
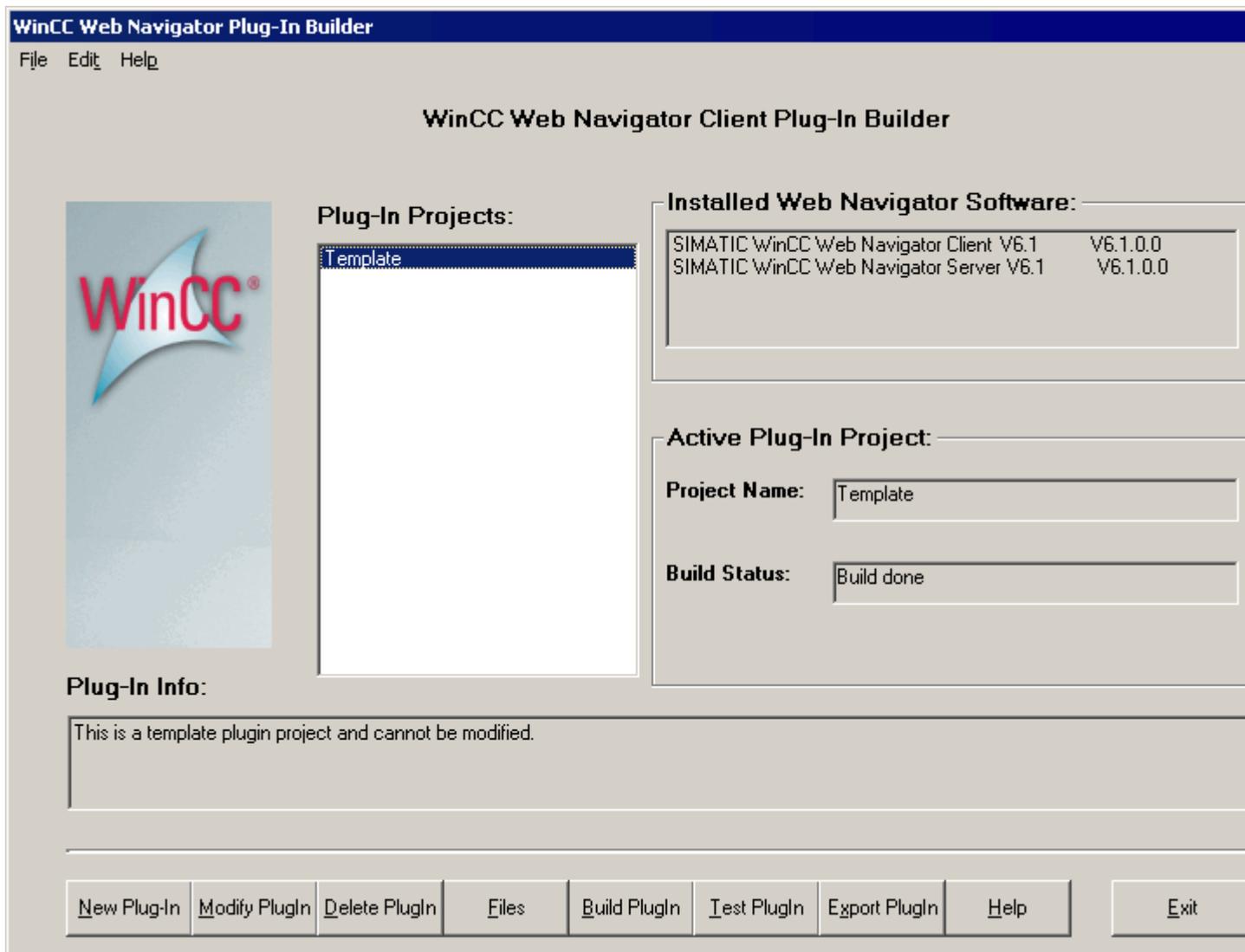
4.8.2   Installation of the Plug-In Builder

Introduction

The software for the WinCC/WebNavigator Plug-In Builder is installed on the computer from the WinCC DVD.

Procedure

1. Insert the WinCC DVD into the DVD drive. The setup program will start automatically after a few seconds, provided that the autorun functionality is not disabled.
   If you are installing from a network drive or the autorun function is deactivated, start the setup manually. This requires that you go to the Windows start menu and select "Settings > Control Panel > Software" and then click on the "Add new programs" icon. Then select the required installation medium.

2. Choose "User" for the "Installation type".

3. Select the installation of WinCC/WebNavigator-Plug-In Builder.
   The respective setup program is started.

4. Click "Next" and follow the instructions on the screen.
   The WinCC/WebNavigator Plug-In Builder is installed.

4.8.3   Plug-In: Creating, Testing and Making available for Download

Introduction

The Plug-In Builder gives you an overview of the existing plug-in projects and their status.

Buttons provide the functions for creating and testing of a plug-in. The arrangement of the buttons from left to right corresponds to the steps of creating a new plug-in.

In the field "Installed Web Navigator Software", you can see the Web Navigator components installed on the computer. Various functions of the Plug-In Builder are only available if certain Web Navigator components are present.

After the start, the Plug-In Builder checks the build versions of the already created plug-ins located on the computer. If a later version of the Plug-In Builder is installed, earlier plug-ins may loose their validity and have to be regenerated.

All plug-ins that are no longer valid or have not yet been generated is displayed in a list.

The Plug-In Builder contains a template for the version information, from which the version information for all other plug-ins can be derived from. This template cannot be changed.

Note

The version information of a plug-in should not contain any umlauts.

For the file selection, the window "Common Files registered" can only accept self-registering files (*.EXE, *.OCX, *.DLL.). Other files are rejected by the Plug-In Builder. However, the system does not check whether the stored files are self-registering.
Also note that the files introduced may cause registration problems during the plug-in installation, since the registration function is carried out independently by the file. The user is responsible for the specific registration. The user is responsible for the specific registration.

Requirements

- The function "Test Plug-In" requires the installation of the Web Navigator Client.

- The function "Export Plug-In" requires the installation of the Web Navigator Server.

Creating a Plug-In

1. Start the Plug-In Builder in the Windows Start menu by selecting "SIMATIC" > "WinCC" > "Web Navigator" > "Web Navigator Plug-In Builder". Proceed by clicking the "Next" button.
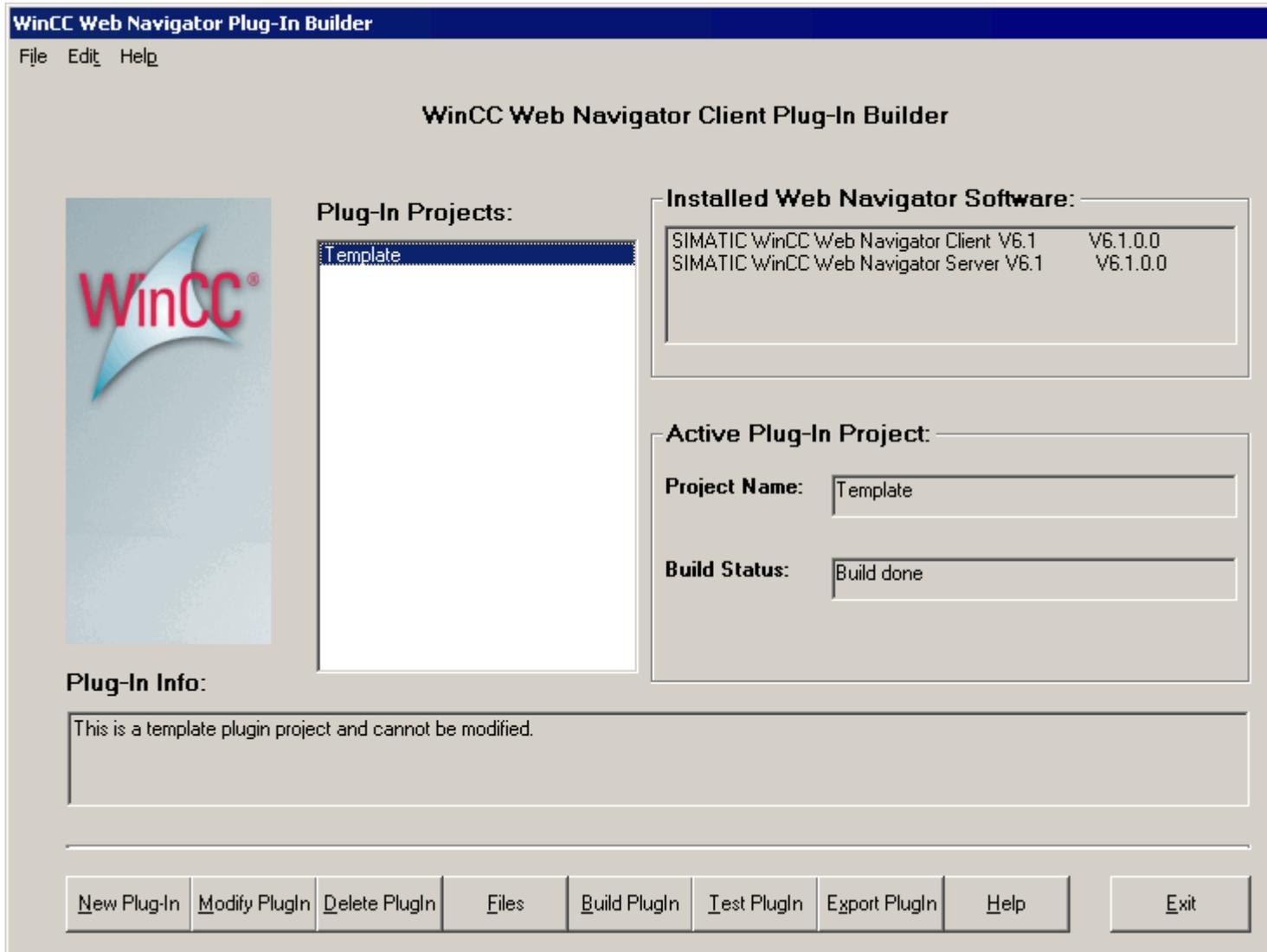
1. Click the "New Plug-In" button. The "New Plug-In" dialog opens to enter various plug-in version information. Enter the data and complete the input by clicking "OK". Confirm the following prompts to apply the new plug-in or modifications.
   If you require a template for the version information, select the "Template" project in the "Plug-In Projects" window and then click the "Modify Plug-In" button. The template is displayed but cannot be edited.
   Following the creation, this project is shown in the field "Plug-In Projects".

2. Click the "Files" button. The "Files" dialog opens in which to select the files integrated in the plug-in. In the area "Source Path", select the drive and the path in which the desired files are located.
   The files can be copied with drag&drop in the "Common Files" or "Common Files registered" window. The "Common Files" window is used for any file, the window "Common Files registered" for self-registering files (*.EXE, *.OCX, *.DLL).
   To delete a file from one of the two windows, drag it to the recycle bin at the bottom of the dialog.
   Click the "OK" button to conclude the file selection.

3. Select the newly created plug-in project from the project list and click the "Build Plug-In" button. The "Build Plug-In" dialog opens. The project title and the path for the generated plug-in are displayed.
   Clicking "OK" closes the dialog without performing the generation.
   Start generating the plug-in by clicking the "Start" button. The progress of the building process is displayed. Following the conclusion of the generation, clicking "Logfile" displays the corresponding log file.
   Click "OK" to close the dialog. The completed generation is indicated in the field "Build Status" with "Build done".

4. To test the plug-in, click the "Test Plug-In" button. This function can only be called when the Web Navigator Client is installed. The "Test Plug-In" dialog is opened. The project title, the path and the status of the plug-in are displayed.
   Start the installation by clicking the "Install" button. Completion of the test is indicated in the "Status" field by the "Setup completed" message.
   Click "OK" to close the dialog.

5. To export the plug-in to the web server, click the "Export Plug-In" button. This function can only be called when the Web Navigator Server is installed. The "Export Plug-In" dialog is opened. The project title, the path and the status of the plug-in are displayed. Start the export process by clicking the "Export" button. Completion of the test is indicated in the "Status" field displaying the path specification of the exported plug-ins.
   Click "OK" to close the dialog.

6. Close the Plug-In Builder by clicking "Exit".

4.8.4 Installation and Deinstallation of a Plug-In on a Web Client

Installation of a Plug-In

A plug-in is an expansion of the web client and is usually offered and installed via the Internet.

In the Web navigation interface, the available plug-ins can be selected and installed via the menu entry "Download Plug-Ins".

For testing purposes, a plug-in can also be installed with the "Test Plug-In" function of the Plug-In Builder. For this, the Web Navigator Client has to be installed on the computer. The plug-in setup is then run completely autonomously.

In order to install a plug-in, at least main user rights are required.

Providing a Plug-In for Download

At the WinCC Web Navigator Server, plug-ins are stored in the subfolder "Web/Install/Custom" of the installation folder. If a web server is installed on the same computer as the Plug-In Builder, the finished plug-in can be exported directly to the Web Navigator Server.

If the Plug-In Builder and the web server are not installed on the same computer, the plug-in has to be transferred manually.

Deinstallation of a Plug-In

A plug-in is an expansion of the web client and as such does not possess its own deinstallation program.

A plug-in is not listed as an installed software by the Windows Control Panel, but instead is automatically deinstalled with the Web Navigator Client.

4.9 Diagnosis of the Connections with "Status.html"

The "Status.html" page is used for diagnosing the WinCC Web Navigator Server and its connected, active clients.

The status information is shown in blocks:

- one information block pertaining to the server

- one information block each pertaining to each connected client or Diagnose Client

The call to the site is made in Internet Explorer by using the address "http:///status.html" if Web Navigator exists as a stand-alone website. If Web Navigator was created as a virtual website, the address is "http://<server_name>/webnavigator/status.html".

The display appears in English only.

Access to this page is password-protected (users and passwords set up in the User Administrator).

Note

The displayed status information can be saved. To do this, use the "Save As" menu option in Internet Explorer and select "(*.txt)" as the file type. If "(*.htm, *.html)" are selected, the contents displayed are not saved.

Structure of the Information Block of the Web Navigator Server

Field	Description
Server Version	Displays the Web Navigator Server version (build no.)
Server File Date	reserved
Last Update	Date and time of the display's last update
Connected Clients	Number of connected clients
Connected Diagnose Clients	Number of connected Diagnose Clients
Connected View Only Clients	Number of connected View Only Clients

Structure of the Information Blocks of the Web Navigator Clients

Below the caption "Logged on Users:" the information blocks of the connected clients are listed. Each block has the name of the client as a header.

Field	Description
Login	Login name of the current user
Time	Login time of the current user or also time of the most recent automatic reconnect.
Type	Type of web client, such as Default, Demo, View Only
PID	Process ID of entity of WebNavigatorRT.exe on web server communicating with this web client.

4.10 Use of Terminal Services for WinCC/WebNavigator

4.10.1 Use of Terminal Services for WinCC/WebNavigator

Introduction

Terminal services of Windows Servers offer several Terminal Services clients the option of accessing the Desktop of such a Terminal Services Server. Various applications, such as MS Word, are carried out on Windows Servers. However, the Terminal Services only transfer the user interface of the applications to the clients. Each client's keyboard inputs and mouse operations are returned back to the server.
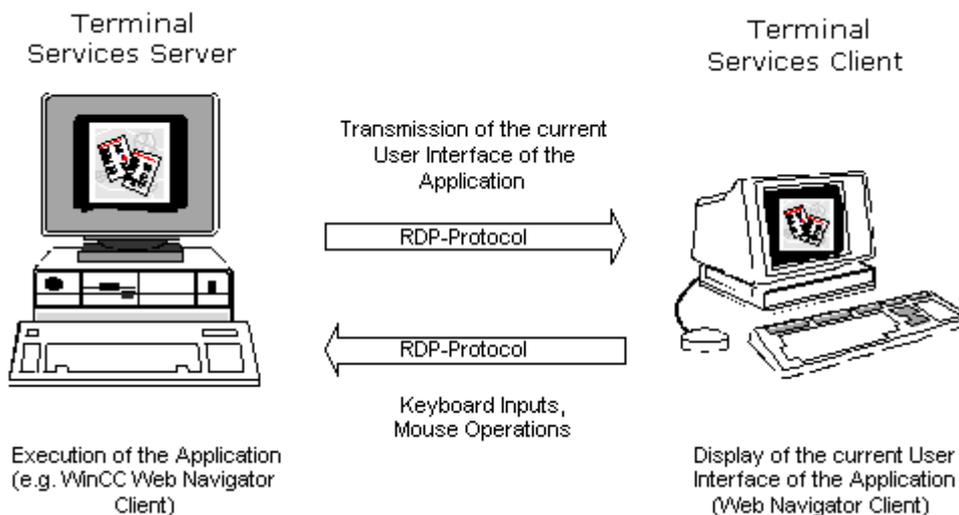
The WinCC WebNavigator Client has already been created in "THIN" architecture: It is executed multiple times on the Terminal Server and places low requirements on the hardware.

Terminal Servers have the following advantages:

- Robust hardware with low memory requirements, for example without fans and hard disk in a dusty environment, can be used as Thin Clients.

- Mobile clients with limited power consumption (such as handheld devices, palmtops) can be used as Thin Clients.

- All applications are located on the server in a secure environment.

- Easier, central administration and system maintenance.

- Various operating systems are supported: Windows CE, Windows Mobile, Windows XP, Vista, etc.

For redundant system configurations with terminal services, please consult the corresponding Microsoft documentation.

Note

The terminal services client supports only 256 colors.

Bitmaps whose size can change, "Live video", greatly strain the terminal service and should be avoided.

4.10.2   Communication Using Terminal Services

Communication Using Terminal Services

When using the web client as the terminal services client, there must not be any proxy server used between terminal services server and Web Navigator Server.

If the servers for Terminal Services and Web Navigator, to be accessed by web clients using Terminal Services, are not installed on the same computer, the web clients will not be able to access the web server via the terminal services. This problem can be solved in various ways:

- A minimal installation of the WinCC basic system without licenses is installed on the terminal services servers.

- After installing the web client, the file "CCEClient_service.vbs" is executed once on the terminal services server. The file is available in the "Updates\WebNavigator" folder of the WinCC DVD. The Windows user right "Administrators" is required to execute the VBS file.

Access of Web Client and WinCC clients to the web server

If a Web client should access the Web server using Terminal Services, the Web client (Terminal Services Client) no Windows desktops may be opened during its session if WinCC clients should also have access to this Web server.

To ensure the Windows desktop is not opened on the Web client when beginning a session, enter Internet Explorer as the start program either direct in the Terminal Services configuration (for all users) or in the computer management (for individual users).

4.10.3   WinCCViewerRT

Introduction

The Web Viewer is solely a display program for Web projects that is installed with the WebNavigator Client. The particularly thin "THIN" Terminal Service application "WinCCViewerRT.exe" is carried out on the WebNavigator client instead of the Internet Explorer. In the Web Viewer you specify the Web Server address and the settings for the Graphics Runtime.

The settings are stored by default in the configuration file "WinCCViewerRT.xml". You can modify the name, for example "Operator1.xml". Alternatively you can start the Web Viewer by using the command line and specifying a user-specific configuration file: "WinCCViewerRT.exe Bediener1.xml". This allows different configurations to be used, depending in the logged-on user. The interface language of the Web View is taken from WinCC.

Load distribution with load balancing is not supported

The "load balancing" function is not supported by the "WinCCViewerRT.exe" application.

The load distribution using Load Balancing is controlled through a Web page. Since clients do not select Web pages via WinCCViewerRT, participating in Load Balancing is not possible.

NOTICE
If you disable a shortcut or hide the "Close" button, it is no longer possible to close Web Viewer. The project shown in the Web Viewer cannot be operated.

Setup
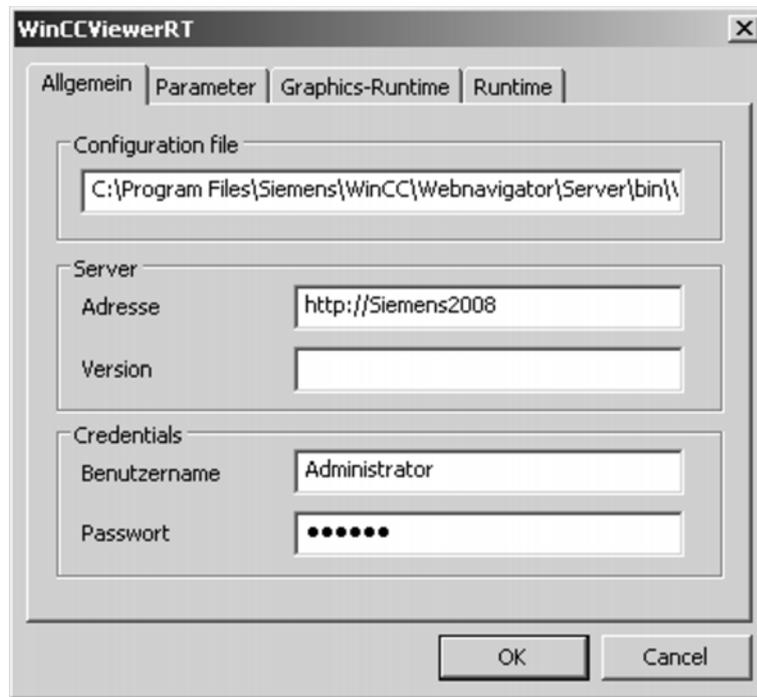
1. Double-click "WinCCViewerRT.exe" in the installation directory "Siemens\WinCC \Webnavigator\Client\bin".

2. Enter the data for logging on at the Web Server in the "General" tab: Server address, user name and password. The "Version" field is optionally used to connect to a WebNavigator Server running a previous version for example "V 6.1".

3. In the "Parameters" tab specify the Runtime language and whether shortcuts which the user uses to change to other programs are to be disabled.

4. Define the WinCC Runtime properties in the "Graphics Runtime" tab:
   - Start Picture
   - Configuration file for picture navigation
   - Window Attributes
   - Impermissible user actions

5. Define additional user actions in the "Runtime" tab.
   - Automatic logout
   - Enable monitor keyboard.
   - Use <Ctrl+Alt+Del> to switch to the Task-Manager and the operating system.
   - Call the Web-Viewer with key combination. You can change the default key combination of <Ctrl+Alt+P>.

6. Close the dialog with the "OK" button. The connection to the Web Server is established.

4.10.4 Terminal Services Setup

Introduction

The following chapters explain how to set up the terminal services for a simple example in connection with the WinCC Web Navigator Client.

Requirements

WinCC Basis and WinCC Web Navigator Server must not run under the terminal services and, as a result, must be installed on the server before activating the terminal services with the following configuration steps.

Configuration steps

1. Activation of the terminal services (terminal services server).

2. Installation of the application, e.g. WinCC Web Navigator Client (terminal services server). This issue is not described here. Information pertaining to the installation can be found in the corresponding documentation and the Online Help.

3. Setting up of client data carrier (terminal services server).

4. User setup for the access via the terminal services (terminal services server).

5. Installation of a client (client computer).

6. Configuration of the terminal services connections (client computer).

7. Start of the application on the client.

Additional information may be found under the topic "Terminal Services" in online help of Windows 2000 Server and Windows Server 2003, respectively.

4.10.5 Activation of Terminal Services on Windows Server

The terminal services can be activated in two different modes.

1. Remote Administration Mode: In this mode, the terminal services allow a remote access to a server from any location on the network. In this mode, the programs to be used can be installed before or after activating the terminal services. The terminal services licensing needs not to be activated.

2. Application Server Mode: In this mode, Windows programs may be distributed safely and effectively using a network server. The programs to be used with the terminal services should be installed after activating the terminal services, since the terminal services register these programs for multi-user access and provide improved management.

For this example, the application server mode is required, which is activated as follows:

- Insert the CD-ROM labeled "Windows 2000 Server" or "Windows Server 2003" into the CD-ROM drive of the server.

- From the start menu of Windows, select menu item "Settings" > "Control Panel" and click the "Add or remove programs" icon.

- Open the "Add or Remove Programs" dialog and click "Add or Remove Windows Components". The "Windows Components Wizard" dialog opens.

- In the components selection window, activate the check-boxes of the "Terminal Services" and "Terminal Services Licensing" options and then click "Next".

- Select the "Application Server Mode" option.

- Click "Next".

- In the "Setup of the Terminal Services" dialog, activate the "With Windows 2000 users compatible rights" check-box and then click "Next".

- In the dialog showing the applications, click "Next".

Note

This dialog may show applications that cannot be executed properly upon the activation of the terminal services. These applications have to be reinstalled via the Control Panel's "Add or Remove Programs" dialog after activating the terminal services.

- In the "Terminal Services Licensing - Setup" dialog, select the "Your domain or workgroup" option and specify the folder for the licensing database of the server.

- Click Next" and then on "Finish".

This starts the file copying process. After a restart of the computer, the copied server software becomes available.

Note

The terminal services have to be installed on the server before the installation of the actual applications. The installation of the applications on the server has to be performed via the "Add or Remove Programs" dialog of the Control Panel. Since this dialog uses the server installation mode, the configuration of the applications is later possible for all users and not just for the user, who installed the application.

4.10.6   Setting Up a User with Access Rights to the Terminal Services Server

For the access to the terminal services server, a user has to be set up on the server. The user administration and the settings of Windows also apply to the terminal services.

- From the start menu of Windows, select the "Settings" > "Control Panel" entries and then click the "Administrative Tools" icon. Click the "Computer Management" icon.

- In the "Computer Management" dialog, click the "System Tools" > "Local Users and Groups" folders.

- Right-click the "Users" folder and select the "New User" menu command from the displayed pop-up menu.

- In the "New User" dialog, enter a user name and a password.

- Activate the "Password never expires" check box.

- Click "Create".

- Close the dialog.

Note

The user created here on the terminal services server is also needed for the configuration of the connection on the terminal services client. For more information, refer to "Configuration of the Connection".

4.10.7 Starting the Terminal Serves Server Applications on the Client Computer

After installing the terminal services client on the client computer and creating a connection file, an application of the terminal services server can be started on the terminal services client.

- From the start menu of Windows, select the "Settings" > "Control Panel" entries and then click "Terminal Services Client" > "Client Connection Manager" icon.

- click the connection that has been assigned to the terminal services server.

- In the "Log On" dialog, enter the password and confirm it by clicking "OK".

- The connection is established. Once the terminal services server's desktop is displayed, its applications can be started, e.g. the Web Navigator Client via the Internet Explorer.

4.11 Appendix

4.11.1 Troubleshooting

No Communication Between WinCC Web Navigator Server and Client

If a provider (participating proxy, firewall) has activated Content Filtering for an Internet connection, Web Navigator communication is no longer possible. With content filtering, only certain contents of HTML pages are permitted. In this case communication is is effected via a defined port to an IP address.

- Deactivate smart filtering at the WinCC Web Navigator Server for its IP address.

Connection Abort

In an Internet environment, aborted connections, delays and communication fluctuations may occur.
If the communication between the web client and web server is defect, the user receives a message on the web client.

The web client then automatically tries to establishing a connection in order to restore the connection.

The delay between attempts to establish a connection can be configured on the web server in the Web Configurator. If the value "0" is set, the web client does not attempt to reconnect automatically. In this case a message appears on the web client asking you whether the connection is to be reestablished.

Confirm this query to reestablish the connection.

For further information see the topic "Using the WinCC Web Navigator Client > Functions and General Properties of the Web Client > Automatic Connection Establishment (Reconnect) of the Web Client in Case of Connection Faults".

No Pictures are Displayed

Make sure the correct web site is activated on the computer running the WinCC Web Navigator Server. For more information see the chapter "Checking the Activated Website".

Wrong Startup Picture

You have edited a new picture in the Graphics Designer.

- Start Web View Publisher to publish the new picture thus making it available to the Internet.
- Delete the temporary Internet files in the Internet Explorer via "Tools" > "Internet Options".
- Delete the Firewall cache.
- You can assign an individual startup picture to each operator in the user administration.

4.11.2 Abbreviations

Overview

Abbreviation	Description
DNS	Domain Name System
HTTP	Hyper Text Transfer Protocol
HTTPS	HTTPS is an expansion of the HTTP protocol
IE	Internet Explorer
IIS	Internet Information Service
IP	Internet protocol
ISP	Internet Service Provider
IT	Information Technology
LAN	Local Area Network
OPC	OLE Process Control
PIN	Personal Identification Number
PWS	Personal Web Server
SP	Service Pack
SSL	Secure Socket Layer
TCP	Transmission Control Protocol
TCP/IP	Transmisson Control Protocol/Internet Protocol
UNC name:	Name corresponding to the Universal Naming Convention
VPN	Virtual Private Network
WWW:	World Wide Web

4.11.3 System messages

System Message No. 1012400 is output when a Web Client is logged on at the WebNavigator Server.

System Message No. 1012401 is output when a Web Client is logged off at the WebNavigator Server.

4.11.4 Functions

4.11.4.1 Supported functions

Functions

WaitForDocumentReady

Get_Focus

GetTagCharWait

GetTagChar

GetTagCharStateWait

GetTagCharState

GetPropChar

GetText

GetFontName

GetAssignments

GetInputValueChar

GetOutputFormat

GetOutputValueChar

GetLastChange

GetPictureName

GetServerName

GetBasePicture

GetFlashPicture

SetTagMultiWait

SetTagMultiStateWait

SetTagRaw

SetTagRawState

SetTagRawStateWait

GetTagMultiStateWait

GetTagMultiWait

AXC_OnBtnArcLong

AXC_OnBtnArcShort

AXC_OnBtnLoop

AXC_OnBtnMsgFirst

AXC_OnBtnMsgLast

AXC_OnBtnMsgNext

AXC_OnBtnMsgPrev

AXC_OnBtnMsgWin

AXC_OnBtnScroll

AXC_OnBtnSinglAckn

AXC_OnBtnVisibleAckn

AXC_SetFilter

AXC_OnBtnComment

AXC_OnBtnEmergAckn

AXC_OnBtnInfo

AXC_OnBtnLock

AXC_OnBtnSelect

OnBtnArcLong

OnBtnArcShort

OnBtnComment

OnBtnEmergAckn

OnBtnHornAckn

OnBtnInfo

OnBtnLanguage

OnBtnLock

OnBtnLoop

OnBtnMsgFirst

OnBtnMsgLast

OnBtnMsgNext

OnBtnMsgPrev

OnBtnMsgWin

OnBtnPrint

OnBtnScroll

OnBtnSelect

OnBtnSinglAckn

OnBtnVisibleAckn

TLGGetTemplateParameter

TLGPressToolbarButton

TlgGetColumnPosition

TlgGetNumberOfColumns

TlgGetNumberOfRows

TlgGetNumberOfTrends

TlgGetRowPosition

TlgGetRulerArchivNameTrend

TlgGetRulerTimeTrend

TlgGetRulerValueTrend

TlgGetRulerVariableNameTrend

TlgGetTextAtPos

TlgTableWindowPressFirstButton

TlgTableWindowPressLastButton

TlgTableWindowPressNextButton

TlgTableWindowPressNextItemButton

TlgTableWindowPressOpenArchiveVariableSelectionDlgButton

TlgTableWindowPressOpenItemSelectDlgButton

TlgTableWindowPressOpenTimeSelectDlgButton

TlgTableWindowPressPrevButton

TlgTableWindowPressPrevItemButton

TlgTableWindowPressStartStopButton

TlgTrendWindowPressFirstButton

TlgTrendWindowPressLastButton

TlgTrendWindowPressLinealButton

TlgTrendWindowPressNextButton

TlgTrendWindowPressNextItemButton

TlgTrendWindowPressOneToOneButton

TlgTrendWindowPressOpenArchiveVariableSelectionDlgButton

TlgTrendWindowPressOpenDlgButton

TlgTrendWindowPressOpenItemSelectDlgButton

TlgTrendWindowPressOpenTimeSelectDlgButton

TlgTrendWindowPressPrevButton

TlgTrendWindowPressPrevItemButton

TlgTrendWindowPressStartStopButton

TlgTrendWindowPressZoomInButton

TlgTrendWindowPressZoomOutButton

SetLink

GetLink

SetLanguage

GetLanguage

GetServerTagPrefix

OpenPicture

GetLinkedVariable

GetLocalPicture

GetParentPicture

GetParentPictureWindow

SetPictureDeactivated

SetPictureDown

SetPictureUp

fopen

freopen

fflush

fclose

remove

rename

setvbuf

setbuf

fprintf

printf

sprintf

vprintf

vfprintf

vsprintf

fscanf

scanf

sscanf

fgetc

fgets

fputc

fputs

getc

getchar

gets

putc

putchar

puts

ungetc

 fread

fwrite

fseek

ftell

rewind

fgetpos

fsetpos

clearerr

feof

ferror

perror

atof

atoi

atol

strtod

strtol

strtoul

rand

srand

calloc

malloc

SysMalloc

realloc

free

abort

exit

atexit

system

getenv

bsearch

qsort

abs

labs

div

ldiv

_splitpath

_makepath

strcpy

strncpy

strcat

strncat

strcmp

strncmp

strchr

strrchr

strspn

strcspn

strpbrk

strstr

strlen

strerror

strtok

memcpy

memmove

memcmp

memchr

memset

clock

time

difftime

mktime

asctime

ctime

gmtime

localtime

strftime

Check

ProgramExecute

GetPropBOOL

GetPropDouble

GetPropLong

GetPropWord

GetMax

GetMin

GetAlignment

GetAxisSection

GetExponent

GetLeftComma

GetLongStrokesBold

GetLongStrokesOnly

GetLongStrokesSize

GetLongStrokesTextEach

GetRightComma

GetScaling

GetScalingType

GetScaleTicks

GetBackColor

GetBackColor2

GetBackColor3

GetBackColorBottom

GetBackColorTop

GetBorderBackColor

GetBorderColor

GetBorderColorBottom

GetBorderColorTop

GetButtonColor

GetColorBottom

GetColorTop

GetFillColor

GetForeColor

GetGridColor

GetItemBorderBackColor

GetItemBorderColor

GetScaleColor

GetSelBGColor

GetSelTextColor

GetTrendColor

GetUnselBGColor

GetUnselTextColor

GetFilling

GetFillingIndex

GetBorderFlashColorOff

GetBorderFlashColorOn

GetBackFlashColorOff

GetBackFlashColorOn

GetForeFlashColorOff

GetForeFlashColorOn

GetFlashBackColor

GetFlashBorderColor

GetFlashForeColor

GetFlashRateBackColor

GetFlashRateBorderColor

GetFlashRateForeColor

GetAlignmentLeft

GetAlignmentTop

GetFontBold

GetFontItalic

GetFontSize

GetFontUnderline

GetOrientation

GetLayer

GetActualPointLeft

GetActualPointTop

GetBoxCount

GetDirection

GetEndAngle

GetGrid

GetGridHeight

GetGridWidth

GetHeight

GetLeft

GetPointCount

GetRadiusHeight

GetRadius

GetRadiusWidth

GetRotationAngle

GetRoundCornerHeight

GetRoundCornerWidth

GetReferenceRotationLeft

GetReferenceRotationTop

GetStartAngle

GetTop

GetWidth

GetZeroPoint

GetAssumeOnExit

GetAssumeOnFull

GetBitNumber

GetClearOnError

GetClearOnNew

GetDataFormat

GetHiddenInput

GetListType

GetNumberLines

GetAlarmHigh

GetAlarmLow

GetColorAlarmHigh

GetColorAlarmLow

GetCheckAlarmHigh

GetCheckAlarmLow

GetCheckLimitHigh4

GetCheckLimitHigh5

GetCheckLimitLow4

GetCheckLimitLow5

GetCheckToleranceHigh

GetCheckToleranceLow

GetCheckWarningHigh

GetCheckWarningLow

GetColorLimitHigh4

GetColorLimitHigh5

GetColorLimitLow4

GetColorLimitLow5

GetColorToleranceHigh

GetColorToleranceLow

GetColorWarningHigh

GetColorWarningLow

GetLimitHigh4

GetLimitHigh5

GetLimitLow4

GetLimitLow5

GetLimitMax

GetLimitMin

GetMarker

GetTypeAlarmHigh

GetTypeAlarmLow

GetToleranceHigh

GetToleranceLow

GetTypeLimitHigh4

GetTypeLimitHigh5

GetTypeLimitLow4

GetTypeLimitLow5

GetTypeToleranceHigh

GetTypeToleranceLow

GetTypeWarningHigh

GetTypeWarningLow

GetWarningHigh

GetWarningLow

GetAdaptBorder

GetAdaptPicture

GetAdaptSize

GetAverage

GetBoxType

GetCaption

GetColorChangeType

GetCloseButton

GetCursorControl

GetEditAtOnce

GetExtendedOperation

GetHotkey

GetHysteresis

GetHysteresisRange

GetLanguageSwitch

GetMaximizeButton

GetMoveable

GetOffsetLeft

GetOffsetTop

GetOnTop

GetOperation

GetOperationMessage

GetOperationReport

GetPasswordLevel

GetProcess

GetSmallChange

GetScrollBars

GetSizeable

GetTrend

GetUpdateCycle

GetVisible

GetWindowBorder

GetZeroPointValue

GetZoom

GetPosition

GetRangeMax

GetRangeMin

GetPicDeactReferenced

GetPicDeactTransparent

GetPicDeactUseTransColor

GetPicDownReferenced

GetPicDownTransparent

GetPicDownUseTransColor

GetPicReferenced

GetPicTransColor

GetPicUpReferenced

GetPicUpTransparent

GetPicUpUseTransColor

GetPicUseTransColor

GetBasePicTransColor

GetBasePicUseTransColor

GetBasePicReferenced

GetFlashFlashPicture

GetFlashPicTransColor

GetFlashPicUseTransColor

GetFlashPicReferenced

GetFlashRateFlashPic

GetIndex

GetBackBorderWidth

GetBorderEndStyle

GetBoxAlignment

GetBorderStyle

GetBorderWidth

GetFillStyle

GetFillStyle2

GetItemBorderStyle

GetItemBorderWidth

GetPressed

GetToggle

GetWindowsStyle

GetInputValueDouble

GetOutputValueDouble

GetPictureDeactivated

GetPictureUp

GetPictureDown

```
// ---------------------------------------------------------------------------------------

// --- internal Functions (SET)  ---
```

// --

SetPropBOOL

SetPropChar

SetPropDouble

SetPropWord

SetPropLong

SetAxisSection

SetLeftComma

SetLongStrokesBold

SetLongStrokesOnly

SetLongStrokesSize

SetRightComma

SetScaling

SetScalingType

SetScaleTicks

SetBackColor

SetBackColor2

SetBackColor3

SetBackColorBottom

SetBackColorTop

SetBorderBackColor

SetBorderColor

SetBorderColorBottom

SetBorderColorTop

SetButtonColor

SetColorBottom

SetColorTop

SetFillColor

SetForeColor

SetItemBorderBackColor

SetItemBorderColor

SetScaleColor

SetSelBGColor

SetSelTextColor

SetTrendColor

SetUnselBGColor

SetUnselTextColor

SetFilling

SetFillingIndex

SetBorderFlashColorOff

SetBorderFlashColorOn

SetBackFlashColorOff

SetBackFlashColorOn

SetForeFlashColorOff

SetForeFlashColorOn

SetFlashBackColor

SetFlashBorderColor

SetFlashForeColor

SetFlashRateBackColor

SetFlashRateBorderColor

SetFlashRateForeColor

Set_Focus

SetAlignmentLeft

SetAlignmentTop

SetAlignment

SetFontBold

SetFontItalic

SetFontName

SetFontSize

SetFontUnderline

SetOrientation

SetText

SetActualPointLeft

SetActualPointTop

SetBoxCount

SetDirection

SetEndAngle

SetHeight

SetLeft

SetPointCount

SetRadiusHeight

SetRadius

SetRadiusWidth

SetRotationAngle

SetRoundCornerHeight

SetRoundCornerWidth

SetReferenceRotationLeft

SetReferenceRotationTop

SetStartAngle

SetTop

SetWidth

SetZeroPoint

SetAssumeOnExit

SetAssumeOnFull

SetBitNumber

SetClearOnError

SetClearOnNew

SetHiddenInput

SetNumberLines

SetOutputValueChar

SetOutputValueDouble

SetAlarmHigh

SetAlarmLow

SetColorAlarmHigh

SetColorAlarmLow

SetCheckAlarmHigh

SetCheckAlarmLow

SetCheckLimitHigh4

SetCheckLimitHigh5

SetCheckLimitLow4

SetCheckLimitLow5

SetCheckToleranceHigh

SetCheckToleranceLow

SetCheckWarningHigh

SetCheckWarningLow

SetColorLimitHigh4

SetColorLimitHigh5

SetColorLimitLow4

SetColorLimitLow5

SetColorToleranceHigh

SetColorToleranceLow

SetColorWarningHigh

SetColorWarningLow

SetLimitHigh4

SetLimitHigh5

SetLimitLow4

SetLimitLow5

SetLimitMax

SetLimitMin

SetMarker

SetTypeAlarmLow

SetToleranceHigh

SetToleranceLow

SetTypeLimitHigh4

SetTypeLimitHigh5

SetTypeLimitLow4

SetTypeLimitLow5

SetTypeToleranceHigh

SetTypeToleranceLow

SetTypeWarningLow

SetTypeAlarmHigh

SetTypeWarningHigh

SetWarningHigh

SetWarningLow

SetAverage

SetBoxType

SetColorChangeType

SetCursorControl

SetEditAtOnce

SetExtendedOperation

SetHysteresis

SetHysteresisRange

SetMax

SetMin

SetOffsetLeft

SetOffsetTop

SetOperation

SetOperationMessage

SetOperationReport

SetPasswordLevel

SetPictureName

SetProcess

SetSmallChange

SetTrend

SetVisible

SetZeroPointValue

SetZoom

SetPosition

SetRangeMax

SetRangeMin

SetPicDeactTransparent

SetPicDeactUseTransColor

SetPicDownTransparent

SetPicDownUseTransColor

SetPicTransColor

SetPicUpTransparent

SetPicUpUseTransColor

SetPicUseTransColor

SetBasePicTransColor

SetBasePicUseTransColor

SetFlashFlashPicture

SetFlashPicTransColor

SetFlashPicUseTransColor

SetFlashRateFlashPic

SetIndex

SetBackBorderWidth

SetBorderEndStyle

SetBoxAlignment

SetBorderStyle

SetBorderWidth

SetFillStyle

SetFillStyle2

SetItemBorderStyle

SetItemBorderWidth

SetPressed

SetToggle

SetWindowsStyle

SetExponent

// ---

// --- IVAR Support ---

// ---

// Tag with Wait and State

GetTagSDWordStateWait

GetTagBitStateWait

GetTagByteStateWait

GetTagSByteStateWait

GetTagWordStateWait

GetTagSWordStateWait

GetTagDWordStateWait

GetTagRawStateWait

GetTagDoubleStateWait

GetTagFloatStateWait

// Tag without Wait, with State

GetTagSDWordState

GetTagBitState

GetTagByteState

GetTagSByteState

GetTagWordState

GetTagSWordState

GetTagDWordState

GetTagRawState

GetTagDoubleState

GetTagFloatState

// Tag with Wait (synchronous)

GetTagSDWordWait

GetTagBitWait

GetTagByteWait

GetTagSByteWait

GetTagWordWait

GetTagSWordWait

GetTagDWordWait

GetTagRawWait

GetTagDoubleWait

GetTagFloatWait

// Tag without Wait. (SCRIvar maps those to the respective Wait functions)

GetTagSDWord

GetTagBit

GetTagByte

GetTagSByte

GetTagWord

GetTagSWord

GetTagDWord

GetTagRaw

GetTagDouble

GetTagFloat

// Set with WriteVar, returns the State

SetTagBitStateWait

SetTagByteStateWait

SetTagCharStateWait

SetTagDoubleStateWait

SetTagDWordStateWait

SetTagFloatStateWait

SetTagSByteStateWait

SetTagSDWordStateWait

SetTagSWordStateWait

SetTagWordStateWait

// Set with WriteVarasync and Ignore the Callbacks

SetTagBitState

SetTagByteState

SetTagCharState

SetTagDoubleState

SetTagDWordState

SetTagFloatState

SetTagSByteState

SetTagSDWordState

SetTagSWordState

SetTagWordState

// Set Values with WriteVar

SetTagBitWait

SetTagByteWait

SetTagCharWait

SetTagDoubleWait

SetTagDWordWait

SetTagFloatWait

SetTagSByteWait

SetTagSDWordWait

SetTagSWordWait

SetTagWordWait

// Set Values with WriteVarAsync(), ignore the Callback

SetTagBit

SetTagByte

SetTagChar

SetTagDouble

SetTagDWord

SetTagFloat

SetTagSByte

SetTagSDWord

SetTagSWord

SetTagWord

strcpy

strncpy

strcat

strncat

strcmp

strncmp

strchr

strrchr

strspn

strcspn

strpbrk

strstr

strlen

strerror

strtok

memcpy

memmove

memcmp

memchr

memset

Supported ODK Functions

PWRTCheckPermission

PWRTCheckPermissionOnPicture   // Only "permlevel" parameter is evaluated !

MSRTStartMsgService

MSRTStopMsgService

MSRTCreateMsg

MSRTCreateMsgInstanceWithComment

MSRTSetComment

PDLRTGetLink

PDLRTSetLink

PDLRTGetPropEx

PDLRTSetPropEx

Supported User Archives Functions

uaArchiveClose

uaArchiveDelete

uaArchiveExport

uaArchiveGetCount

uaArchiveGetFieldLength

uaArchiveGetFieldName

uaArchiveGetFields

uaArchiveGetFieldType

uaArchiveGetFieldValueDate

uaArchiveGetFieldValueFloat

uaArchiveGetFieldValueDouble

uaArchiveGetFieldValueLong

uaArchiveGetFieldValueString

uaArchiveGetFilter

uaArchiveGetID

uaArchiveGetName

uaArchiveGetSort

uaArchiveImport

uaArchiveInsert

uaArchiveMoveFirst

uaArchiveMoveLast

uaArchiveMoveNext

uaArchiveMovePrevious

uaArchiveOpen

uaArchiveReadTagValues

uaArchiveReadTagValuesByName

uaArchiveRequery

uaArchiveSetFieldValueDate

uaArchiveSetFieldValueFloat

uaArchiveSetFieldValueDouble

uaArchiveSetFieldValueLong

uaArchiveSetFieldValueString

uaArchiveSetFilter

uaArchiveSetSort

uaArchiveUpdate

uaArchiveWriteTagValues

uaArchiveWriteTagValuesByName

uaConnect

uaDisconnect

uaGetLastError

uaGetLastHResult

uaQueryArchive

uaQueryArchiveByName

uaReleaseArchive

Note

User archive functions must always be configured to start with "ua" in lower case. If they are configured with "UA..." in upper case, then this is an ODK function and they are not supported in the Web client.

Supported MBCS Functions

_ismbcalnum

_ismbcalpha

_ismbcdigit

_ismbcgraph

_ismbcprint

_ismbcpunct

_ismbcspace

_ismbclower

_ismbcupper

_mbscpy

_mbsncpy

_mbscat

_mbsncat

_mbscmp

_mbsncmp

_mbschr

_mbsrchr

_mbsspn

_mbscspn

_mbspbrk

_mbsstr

_mbstok

_mbslen

_mbsinc

_mbsdec

_mbsicmp

_mbsnicmp

_mbclen

_mbctolower

_mbctoupper

4.11.4.2   int WaitForDocumentReady(LPCSTR lpszPictureWindow)

Function

The function opens the specified picture window. The function terminates when the picture window has been loaded.

NOTICE
The function is only available in the WebNavigator and must therefore be enclosed by: • #ifdef RUN_ON_WEBNAVIGATOR   … • #endif

A difference must be made in the scripts of graphics displays or project functions between the WinCC Runtime environment or the WebNavigator Client. The following Compiler commands exist to this purpose:

- #ifdef RUN_ON_WEBNAVIGATOR

- #ifndef RUN_ON_WEBNAVIGATOR (the negation)

This allows the following configuration differentiations between WinCC and WebNavigator Client:

- Script delay with "WaitForDocumentReady"

- Differing picture addressing

- Differing function names at control system functions

- Functions that are not supported in the Web Client

Syntax

int WaitForDocumentReady(LPCSTR lpszPictureWindow)

Parameters

lpszPictureWindow

Pointer to the name of the picture window that is opened in the WebNavigator Client.

The following addressings are possible:

- Picture window xxx in the current screen: `./xxx`

- Picture window yyy in the child screen xxx: `./xxx/yyy`

- etc.

- Picture window xxx in the parent screen: `../xxx`

- Picture window xxx in the parent screen of the parent screen: `../../xxx`

- etc.

- Absolute path compatible with WinCC

Return value

TRUE

The picture window has been found and the status checked.

FALSE

The picture window has not been found.

Example

```
#ifdef RUN_ON_WEBNAVIGATOR
SetPropChar("../", "View", "PictureName", szViewName);
WaitForDocumentReady("../View");
#else
SetPropChar(lpszParent, "View", "PictureName", szViewName);
#endif
```

Note

The syntax of the code part for the WebNavigator is not checked when the WinCC script is compiled, but only when the pictures are published.

4.11.4.3 Unsupported Functions

The following list is only an excerpt of the unsupported functions and includes those functions, whose missing support is to be explicitly pointed out.

Functions

ReportJob

RPTJobPreview

RPTJobPrint

RptShowError

GetHWDiag

GetHWDiagLevel

GetKopFupAwl

GetKopFupAwlLevel

OnDeactivateExecute

OnErrorExecute

OnTime

VBScript functions

HMIRuntime.Stop: Terminates the Internet Explorer and WinCCViewerRT, but not WinCC Runtime

AlarmLogs Object

DataLogs Object

Logging Object

Project Object

Functions That Are not Required:

ExitWinCC

DeactivateRTProject: Terminates the Internet Explorer and WinCCViewerRT, but not WinCC Runtime

InquireLanguage

FillDiagnoseInTags

TraceText

TraceTime

Other Functions

Note
These functions are included to ensure a faultless compilation on the Web Navigator Client, but are not supported by the web client.

GmsgFunction

MSRTMsgWinCommand

AXC_OnBtnHornAckn

AXC_OnBtnPrint

AXC_OnBtnProtocol

TlgTableWindowPressHelpButton

GetCursorMode

SetCursorMode

Index

A

AXC_OnBtnSortDlg, 200

C

Creating process pictures
Process picture, 72

E

Error Report, 42

G

Gadget, 114

I

Installation, 31
Power user, 31
WinCC/WebNavigator client, 31
WinCC/WebNavigator server, 31

L

License Conditions, 7

P

Power user, 31
Installation, 31
Process picture, 72
Creating process pictures, 72

S

Sidebar Gadget, 114
Software Information Service, 7
Support, 43
Internet, 43
Queries, 43
Support Request, 42

W

WebNavigator, 31
Installation, 31
WinCC WebNavigator, 31
Demo Project, 7
DVD contents, 7
WinCC/WebNavigator
Installation, 31