

SIEMENS

SIMATIC HMI

WinCC Web Navigator V1.1

Manual

Web Navigator	1
Getting Started	2

Order Number: 6AV6392-1DC01-1AB0

Edition April 2001

C79000-G8276-C522-01 (A5E00109903)

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(We have checked the contents of this manual for agreement with the hardware and software described. Since deviations cannot be precluded entirely, we cannot guarantee full agreement. However, the data in this manual are reviewed regularly and any necessary corrections included in subsequent editions. Suggestions for improvement are welcomed.)

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Preface

Purpose

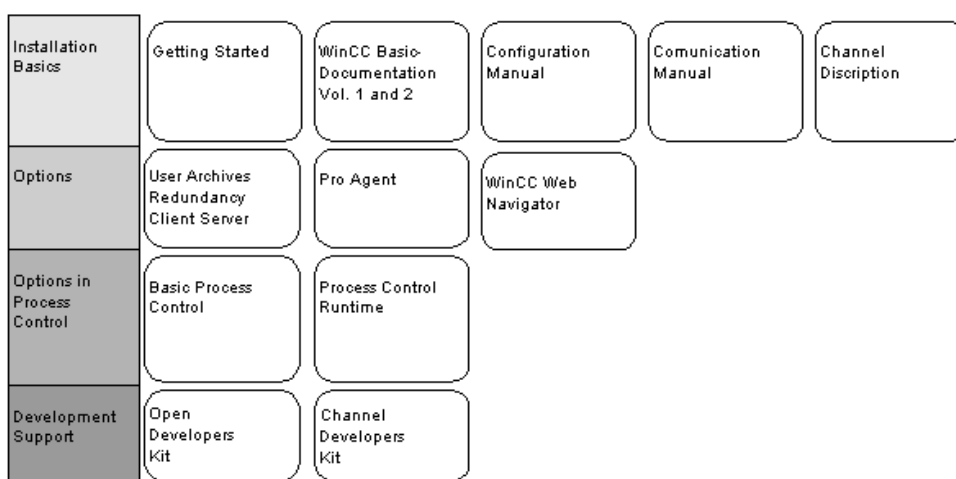
The WinCC Web Navigator user manual describes:

- the structure and operation of the WinCC Web Navigator
- the WinCC Web Navigator Server
- the WinCC Web Navigator Client
- Getting Started

The User Guide is for WinCC Web Navigator V1.1

Position within the Information Environment

The User Guide is part of the documentation on SIMATIC® HMI®. All the documentation on WinCC is listed below.



Documentation	Contents
Getting Started	Uses a configuration example to show beginners how to proceed step by step through a project, and introduces WinCC's overall functionality.
WinCC V5 Volume 1: System Overview Software Protection ControlCenter Server Data Channels Report Designer User Administrator Volume 2: Graphics Designer Alarm Logging Tag Logging Text Library Global Scripts CrossReference	<ul style="list-style-type: none"> • Supplies information • on interrelationships in WinCC • on how software protection works • on the structure, method of operation and use of WinCC Explorer • on variables and variable groups • on communication between WinCC and the process • on creating and editing layouts for printing in Report Designer • on assigning user rights in User Administrator • on generating process maps in Graphics Designer • on configuring, processing and archiving messages in Alarm Logging • on configuring, processing and archiving measured values in Tag Logging • on configuring multiple-language texts in Text Library • on compiling C functions and actions in Global Script • on generating lists of cross-references with Cross Reference •
Configuration Manual Volumes 1, 2 and 3	Supplies information <ul style="list-style-type: none"> • on configuring in WinCC, with examples for illustration • on special aspects of configuring • on the development environment for scripts, C functions and actions (C course) • on the graphics objects in Global Library
Communication Manual Volumes 1 and 2	Supplies information <ul style="list-style-type: none"> • on links to SIMATIC via PROFIBUS, Industrial Ethernet and OPC • on communication drivers and how they are configured, using examples for general links by way of illustration • on special aspects of configuring

Documentation	Contents
Channel descriptions	Supply information for communication drivers <ul style="list-style-type: none"> • on addressing variables in the automation system • on parameterizing the communication partners
WinCC Options User Archives Client Server Redundancy	Supplies information on the options <ul style="list-style-type: none"> • User Archives: creating and using user archives • Client-Server: structure and use of WinCC in a client/server system • Redundancy: structure and use of redundant systems
ProAgent	Supplies information on the ProAgent option (process diagnosis) <ul style="list-style-type: none"> • How to configure system-specific process diagnosis • How to trace process errors and identify their causes
WinCC Web Navigator	It provides information about the WinCC Web Navigator option <ul style="list-style-type: none"> • Mode of operation of the WinCC Web Navigator • Structure, function and configuration of the WinCC Web Navigator Server • via the WinCC Web Navigator Client • Configuration of a WinCC Web project by means of the Getting Started
Basic Process Control	Supplies information on the process-control options of WinCC <ul style="list-style-type: none"> • Storage • Picture Tree Manager • Split Screen Manager • Chipcard • Lifebeat Monitoring • Video • Time Synchronization
Process Control Runtime	Supplies information on the process-control options of WinCC <ul style="list-style-type: none"> • Operation at runtime

Documentation	Contents
Open Developers Kit	Explains programmers how to use WinCC's API functions and how to access the data
Channel Developers Kit	Explains how to develop communication drivers for connecting WinCC to any target system

Additional Support

Please do not hesitate to contact use if you encounter problems in operation. Call + 49 911 895-7000 if you need assistance in solving problems. Remember to have the software ID number at hand to streamline the process: this number is on the software product card.

Lost or defective authorization can be "repaired" on the phone by our Customer Support. The number to dial is + 49 911 895-7200.

Information about SIMATIC Products

SIMATIC Customer Support offers you wide-ranging additional information on SIMATIC products by way of its online services:

- You can obtain general up-to-date information
 - on the Internet at <http://www.ad.siemens.com/wincc>
 - from the fax polling no. + 49 8765 93 02 77 95 00
- Up-to-date product information and downloads which may be of assistance during operation:
 - on the Internet at <http://www.ad.siemens.de/support/html-00/Index.shtml>
 - from the Bulletin Board System in Nuremberg (SIMATIC Customer Support Mailbox): the number to dial is + 49 911 895-7100.

To dial into our mailbox, use a modem with a maximum baud rate that does not exceed 28,800 bps (i.e. up to V.34) and set its parameters to 8, N, 1, ANSI or dial yourself in via ISDN (x.75, 64 Kbit).

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Introduction

Safety Warnings

This documentation contains safety instructions that must be followed to avoid personal injury and damage to property. These instructions are highlighted by a warning triangle - shown below - depending on the degree of danger:



Danger

Will cause death, serious bodily injury or considerable property damage, if the proper precautionary measures are not taken.



Warning

Can cause death, serious bodily injury or considerable property damage, if the proper precautionary measures are not taken.



Caution

Can cause slight bodily injury or minor property damage, if the proper precautionary measures are not taken.

Caution

means that property damage may occur, if the proper precautionary measures are not taken.

Warning

Important information about the product, the handling of the product or the particular section in the documentation to which special attention should be paid.

Qualified Personnel

Startup and operation of this software must only be carried out by qualified personnel. Qualified personnel as defined by the safety instructions of this document are persons that have the qualification to apply safety standards to systems employing this software.

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We have thoroughly checked the contents of this publication for agreement with the described hardware and software. However, since deviations cannot be ruled out entirely, we cannot guarantee full agreement. The information in this description is reviewed regularly and any necessary corrections are included in future editions. We welcome any suggestions for improvement.

Siemens AG
Automation & Drives
SIMATIC Human Machine Interface
P.O. Box 4848, D-90327 Nuremberg

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Function Overview

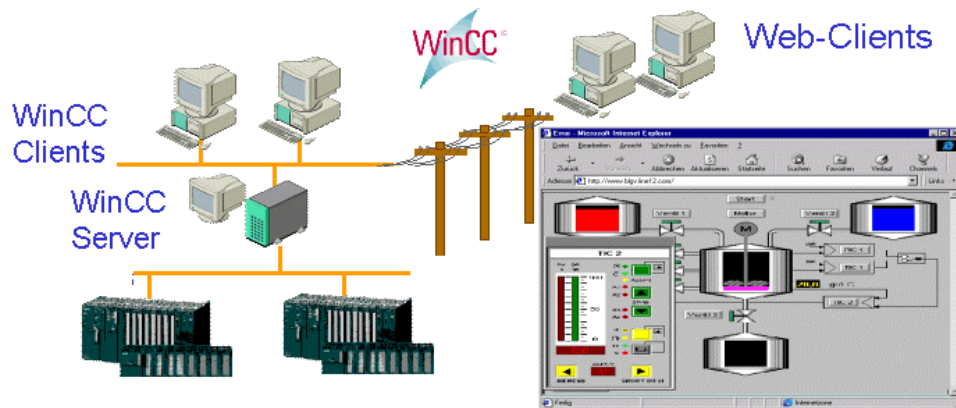
The enormous growth of the Internet in recent years has had and is having a large impact on industrial development. One of the key factors responsible for the Internet boom was the development of the World Wide Web (WWW) Internet service.

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 Web Navigator" option package to the WinCC basic system (V5.0 SP2 or higher) 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 - that employ the Intranet/Internet - can be implemented quickly and easily. The WinCC Web Navigator supports all current Internet security measures and provides Wizards to help you with the configuration.

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

The WinCC 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 are installed on the Intranet/Internet computer.



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. Thus, there is a clear separation between the visualization component on the client computer and the running WinCC project on the server computer. This makes it easy to set up Operator Stations for maintenance or diagnostic purposes.

The WinCC Web Navigator Client software runs under Windows 98, Windows ME, Windows 2000 and Windows NT 4.0 or higher. The visualization takes place in any Internet Browser that support the ActiveX technology by Microsoft such as the Internet Explorer 5.01 or higher.

The WinCC Web Navigator Client software can be installed in various ways: as usual via the CD-ROM or as a self-extracting file via the Intranet/Internet. In other words, when accessing the WinCC Web Navigator Server, it will be checked whether the client software has been installed. If the client software is missing, the user will be asked to download the file to his computer and to perform the installation. This scenario provides the WinCC Web Navigator user with a high degree of flexibility and mobility.

Another interesting and valuable aspect is the user-specific assignment of start pictures and languages. This assignment makes it possible to give different users immediate access to different areas of a project.

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 influenced from any point on earth.

Security is an essential aspect when controlling and monitoring via the Internet. Thus, the WinCC Web Navigator supports all currently known security standards (used in the banking and insurance industry) ranging from user-specific logins and passwords, firewalls, secure ID cards with PINs to RAS (Remote Access Service) and the SSL technology.

For the communication to its clients, the WinCC Web Navigator Server requires the Microsoft Internet Information Server or the Personal Web Server that is integrated into Windows 2000 or has to be installed from the supplied CD-ROM for Windows NT. For setting up the WinCC Web Navigator Server, the WinCC Web Configurator is provided, which makes the configuration easy and convenient for the user.

The Wizard is ideal for users without Internet server knowledge - after only a few inputs, the Web Server is correctly configured.

In order for a WinCC project to run on the WinCC Web Navigator, its WinCC pictures have to be adapted and converted. As before, the WinCC pictures are created and edited with the WinCC Graphics Designer.

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. In order to achieve the best possible performance, the Wizard limits itself to information that is necessary for the Web.

In connection with the "WinCC Guardian" option package, live video images can be shown via the Internet. The WinCC Guardian components are used to, among other things, display live video images of your plant within WinCC pictures.

Upgrading of the WinCC Web Navigator V1.0 to V1.1

Web Navigator Server

At the server, the deinstallation of Version 1.0 is necessary.

Following that, Version 1.1 of the Web Navigator Server can be installed.

Web Navigator Client

At the client, the so-called "Zero Administration" exists: the Web server checks the version compatibility between server and client and downloads the client component if necessary. This takes place when upgrading or downgrading.

- If a Web Navigator Client V1.0 meets a Web Navigator Server V1.1, Version 1.1 will automatically be installed on the client.
- If a "new" Web Navigator Client V1.1 meets an "old" Web Navigator Server V1.0, the communication will only operate with the functionality of Version 1.0.

1 Requirements

1.1 Hardware and Software

This chapter outlines the WinCC Web Navigator hardware, software and operating system requirements.

WinCC Web Navigator Client

Operating System:	Windows 98 or higher, Windows ME, Windows NT 4.0 or higher, Windows 2000
Software:	Internet Explorer V5.01 or higher
Minimum Hardware Requirements:	For the WinCC Web Navigator Client, no special hardware is required, however, the IE V5.01 must be able to run.
Other:	Access to Intranet/Internet

WinCC Web Navigator Server

Operating System:	Windows NT 4.0 and Service Pack 6a or higher, Windows 2000 SP1
Software:	Internet Explorer V5.01 or higher, Windows NT 4.0 Option Pack (only under Windows NT) WinCC Basic System V5.0 SP2 or higher
Minimum Hardware Requirements:	INTEL Pentium II 266 MHz, 128 MB RAM, 500 MB available Hard Drive Space, Network Interfaces
Other:	<p>If you want to publish Intranet information, the following is required:</p> <p>A network-capable computer as well as a LAN connection (LAN = Local Area Network).</p> <p>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 the server.</p> <p>If you want to publish Internet information, the following is required:</p> <p>An Internet connection and an IP address from an Internet service provider (ISP). You can only publish information on the Internet, if you possess a connection to the Internet (provided by an ISP).</p> <p>A network card that is suitable for connecting to the Internet.</p> <p>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 the server.</p>

Note

In order to have more than three clients, the Server version of NT 4.0 or Windows 2000 must be installed, since the Workstation version is limited to three clients.

1.2 License

WinCC Web Navigator Client

No license is required for the WinCC Web Navigator Client.

WinCC Web Navigator 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.

Without a license, the WinCC Web Navigator Server will run in demo mode for 30 days. For the permanent use of the WinCC Web Navigator Server, a license is required. Licenses are available for 3, 10, 25 or 50 clients that can simultaneously access the Web Server.

A message box will be displayed, if the number of licensed clients is exceeded.

Note

There are different licenses necessary for the functions of the Web Navigator Diagnostic Client. For further information see "Web Navigator Diagnostic Client".

Overview of licenses of Web Navigator Server and Client

Server	Client No License	Client with Diagnostic Client - License
WN Server license + WinCC license	WN Client Number up to maximum of the license (server)	Diagnostic Client Number unlimited
WN Gatekeeper + WinCC license	Demo Client Number unlimited	Diagnostic Client Number unlimited
WN Gatekeeper + WN Server + WinCC license	WN Client Number up to maximum of the license (server)	Diagnostic Client Number unlimited
no WN license or no WinCC license	Demo Client Number unlimited	Demo Client Number unlimited

2 Installation of the WinCC Web Navigator Server

2.1 Procedure

The WinCC Web Navigator Server requires the Windows NT Service Pack 6a (or higher) or Windows 2000 SP1 to be installed as well as WinCC V5.0 SP2 and the Windows NT 4.0 Option Pack.

Please refer to the WinCC documentation for details regarding the WinCC installation. The following description assumes that WinCC has already been installed.

Installation of the WinCC Web Navigator Server under Windows NT 4.0:

1. Installation of the Windows NT 4.0 Option Pack
2. Do not restart computer
3. Installation of the Windows NT 4.0 Service Pack 6a or higher
4. Restart computer
5. Installation of the WinCC Web Navigator Server

Installation of the WinCC Web Navigator Server under Windows 2000:

1. Only with Windows 2000 Professional: Installation of the Internet Information Server (IIS)
2. Installation of the WinCC Web Navigator Server

Note

In order to install the server component of the WinCC Web Navigator under Windows NT, write permissions to the registry database are required, i.e. you must possess administrator rights.

The Windows NT Option Pack has to be installed prior to the WinCC Web Navigator Server. The Windows NT Option Pack replaces a number of files, which could lead to problems.

Following the installation of the Windows NT Option Pack, the Windows NT Service Pack has to be installed again to ensure proper communication to the Internet.

2.2 Windows NT 4.0 Option Pack

Software Requirements:

- Windows NT 4.0 or higher
- Internet Explorer 5.01

If one of these components is missing, the setup will not be carried out.

The Windows NT Option Pack offers expanded Web and application services for Windows NT.

The Option Pack for NT Workstation comes with the Microsoft Personal Web Server (PWS) as the Internet Server, the Option Pack for NT Server with the Internet Information Server (IIS).

Note

Administrator rights are required to install the Internet Server under Windows NT.

You will be guided through the entire installation of the Windows NT Option Pack. Please follow the on-screen instructions.

For the installation of the Windows NT Option Pack, a CD-ROM titled "Option Pack" is supplied.

After inserting this CD-ROM into the CD-ROM drive, the installation will automatically be started. The following dialog box will be displayed.

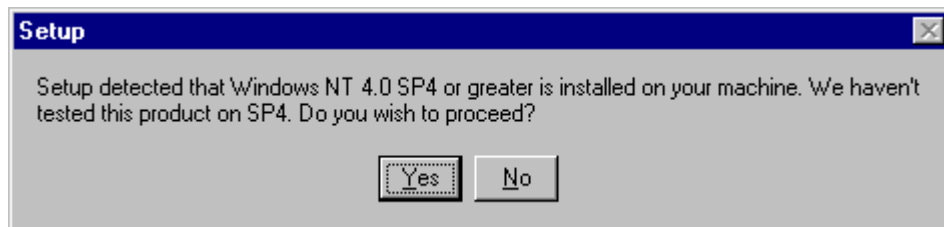


Select the "Install Software" menu command. The "Install Software" dialog will open.



Select the Option Pack that you want to install. Via the "Question Mark" icon, the corresponding help file can be accessed.

If the Windows NT Service Pack 4 or higher has been installed on the computer, the following dialog box will be displayed.



Click on "Yes" to proceed with the installation.

If a newer version of the Option Pack has already been installed on the computer, a dialog box will ask, whether the installed, newer version is to be overwritten. Select "Do not overwrite".

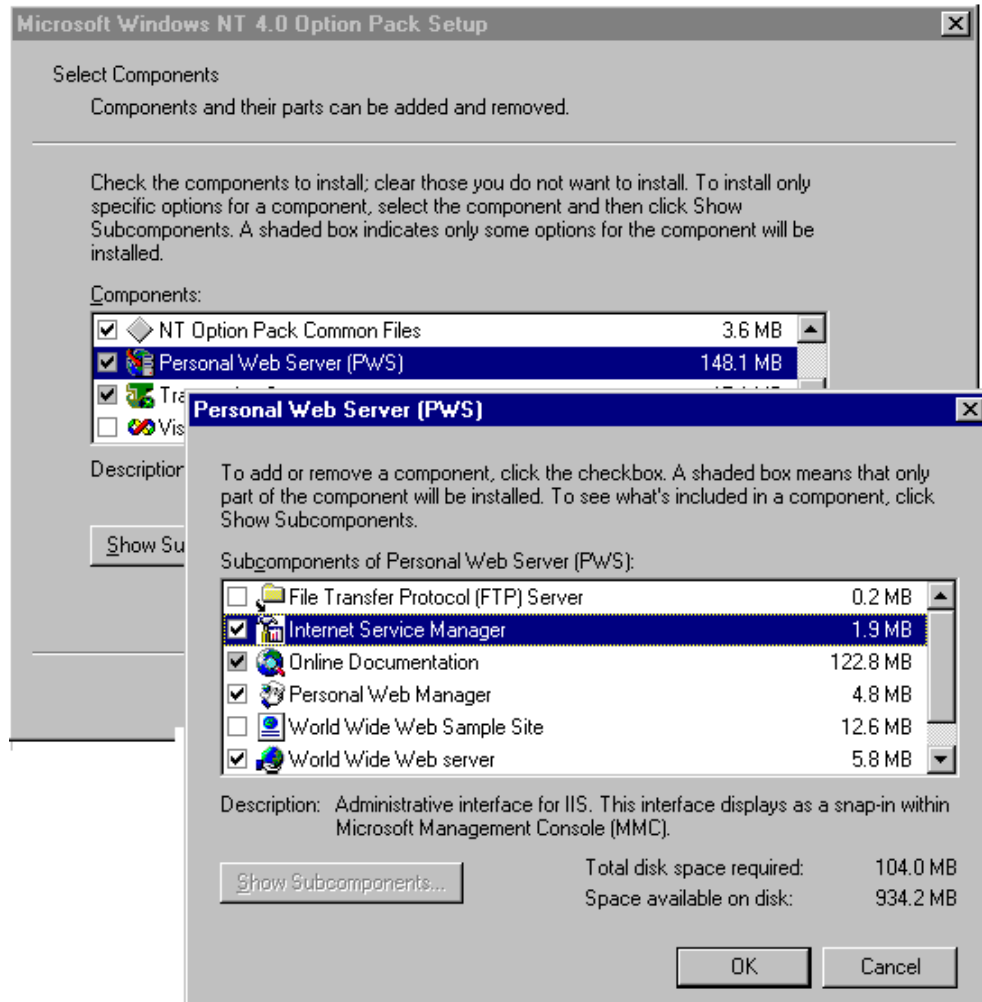
Windows NT Server

In the "Windows NT 4.0 Option Pack Setup" dialog box, click on the "Standard" button. The setup will install the necessary files and start the WWW (World Wide Web) service. This concludes the installation of the IIS.

Windows NT Workstation

In the "Windows NT 4.0 Option Pack Setup" dialog box, click on the "User-defined" button.

In the following dialog box, select the "Personal Web Server (PWS)" entry. Click on the "Show Sub-Components" button.



In the "Personal Web Server (PWS)" dialog box, activate the "Internet Service Manager" check-box. Confirm all dialog boxes. The setup will install the necessary files and start the WWW (World Wide Web) service. This concludes the installation of the PWS.

After installing the IIS/PWS, do not restart the computer.

Install the Service Pack 6a or higher without the deinstallation folder option.

Restart the computer.

Detailed help pertaining to the individual components of the Windows NT Option Pack can be found in the accompanying documentation. In the appendix to the Internet Information Server, you will find information about the Reliability and an Overview of the Highlights.

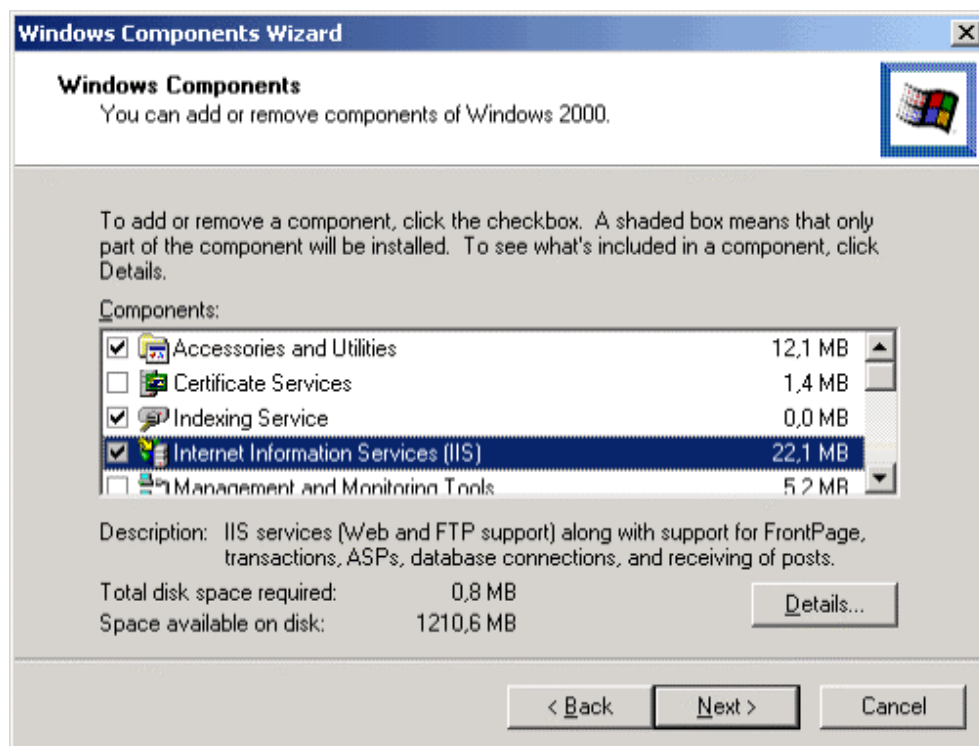
2.3 Installation of the Internet Information Server (IIS) with Windows 2000 Professional

When using Windows 2000 Professional, the Internet Information Server (IIS) must be installed prior to the WinCC Web Navigator Server. When using Windows 2000 Server, this manual installation is not necessary.

Note

In order to install the Internet Information Server under Windows 2000 Professional, write permissions to the registry database are required, i.e. you must possess administrator rights.

- Insert the Windows 2000 CD-ROM into the CD-ROM drive.
- From the Windows 2000 start menu, select the "Settings" → "Control Panel" entries and then click on the "Add/Remove Programs" icon.
- In the "Add/Remove Programs" dialog box, click on the "Add/Remove Windows Components" icon. The following dialog box will open.



- In the selection window, activate the check-box before the "Internet Information Services (IIS)" entry.
- Click on "Next".

Windows will then start with the transfer of the files and continue to guide you through the installation.

2.4 WinCC Web Navigator Server

Note

In order to install the server component of the WinCC Web Navigator under Windows NT, write permissions to the registry database are required, i.e. you must possess administrator rights.

Prior to installing the WinCC Web Navigator Server, the Windows NT 4.0 Option Pack has to be installed. Following the installation of the Windows NT Option Pack, the Windows NT Service Pack has to be installed again to ensure proper communication to the Internet.

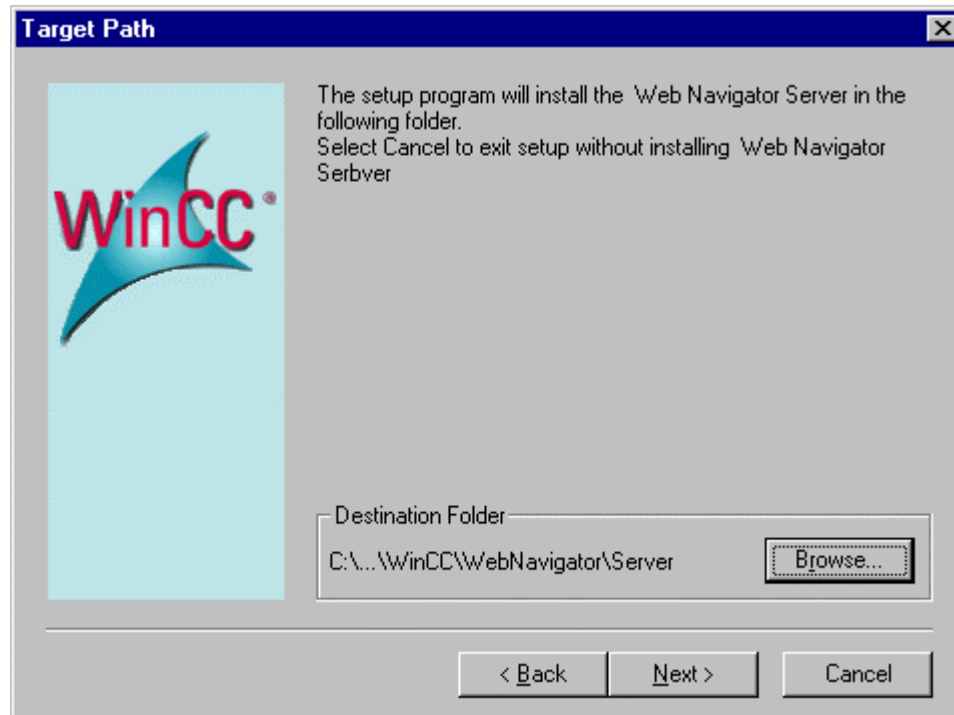
- Insert the WinCC Web Navigator CD-ROM into the CD-ROM drive.
- The setup program will start automatically after a few seconds, provided that the autorun functionality has not been deactivated.
- The setup can also be started manually in case the CD-ROM has already been inserted into the CD-ROM drive, the installation is performed from a network drive or the autorun function has been deactivated. To do so, access the Windows NT 4.0 start menu and select "Settings" → "Control Panel" → "Add/Remove Programs" and then click on the "Install" button in the "Install/Uninstall" tab. Under Windows 2000, access the start menu and select "Settings" → "Control Panel" → "Add/Remove Programs" and then click on the "Add new Programs" button.
- The following dialog box will be displayed.



To view additional information about the WinCC Web Navigator, click on the "Welcome", "Read first", "Display CD-ROM Contents", "Install Software" and "Language Selection" entries.

To install the WinCC Web Navigator, click on the "Install Software" entry.

In the following dialog box, select the "Server" component.

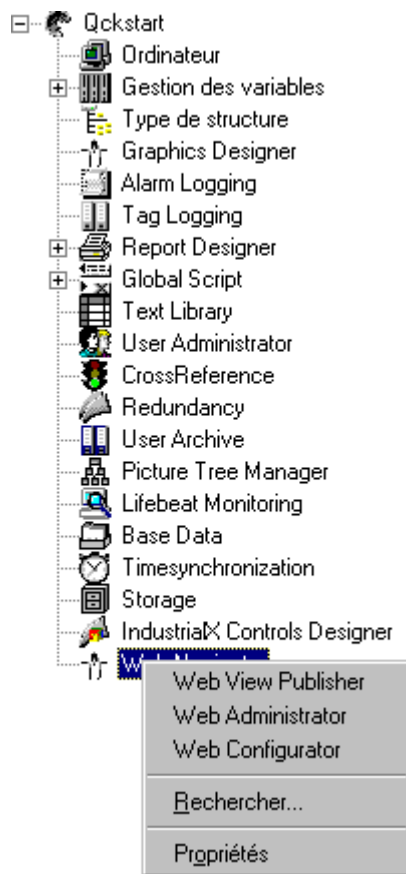


- Click on the "Next" button.
- Confirm your inputs in the next dialog box by clicking on the "Next" button.
- The "Authorization" dialog box will display a list of the required authorizations based on the components selected. Select the "Yes, the authorization should be performed during the installation" radio-button and insert the authorization floppy disk into drive "A:".

The WinCC Web Navigator Server will then begin with the transfer of the files. Following the installation, you can read the "Setting up an IIS Example Web Site" file.

If older versions of system files were located on your computer, the setup program may ask you to restart your computer.

The WinCC Web Navigator Server icon will be added to the project navigation window of the WinCC Explorer.



WinCC Web Navigator has already been installed:

The setup program will recognize, if a WinCC Web Navigator Server software has already been installed. The following dialog box will be displayed.



Click on "Yes" to uninstall the existing version. Following that, the installation of the WinCC Web Navigator Server will be carried out.

3 Wizard-supported Web setup: WinCC Web Configurator

3.1 Use

The WinCC Web Configurator guides you through the management and setup of the Microsoft Internet Information Server/Personal Web Server in an uncomplicated and easy-to-follow manner. The Configurator is, thus, ideal for all users who have no knowledge of Web servers. This setup and configuration is necessary in order to make the WinCC Server accessible over the intra-/Internet. Additional information on the Microsoft Internet Information Server can be obtained from Microsoft.

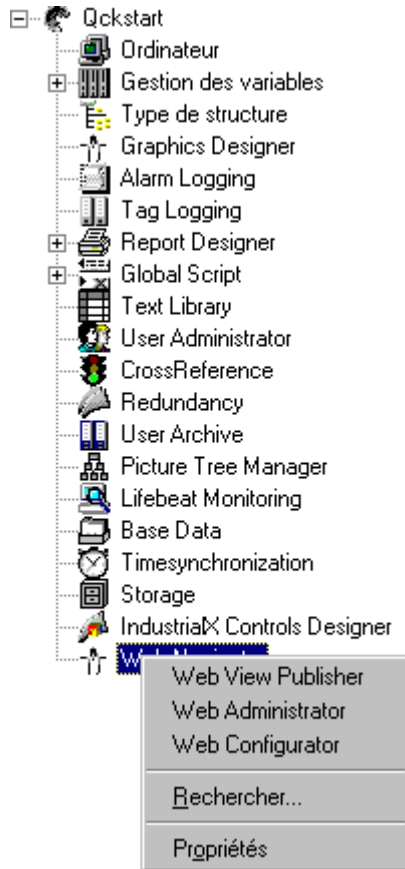


Notice

The Internet Information Server/Personal Web Server and the WinCC Web Navigator Server must be installed. The wizard will otherwise not be executed.

How to Start the WinCC Web Configurator

1. In the project navigation window of the WinCC Explorer, select the Web Navigator and activate its pop-up menu



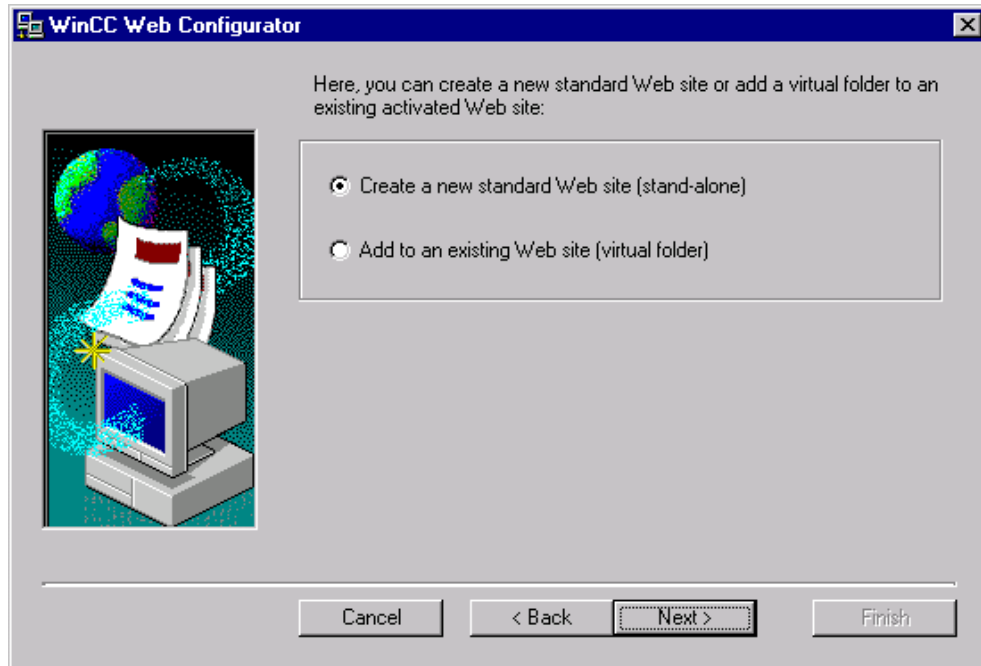
2. In the pop-up menu, select the menu item "Web Configurator".

Note

If you have questions or encounter difficulties with the following settings, contact the intra-/Internet administrator in your department.

Initial configuration of the WinCC Web Navigator Server

In the first dialog box of the WinCC Web Configurator, you can specify whether a new standard Web site or a new virtual folder is to be created. The next step is contingent on which option is selected.



- If you only operate the WinCC Web Navigator Web on your server, activate the option "Create a new standard Web site (stand alone)"
- If the WinCC Web Navigator Web is to be added as a subfolder to your existing Web, activate the option "Add to an existing Web (virtual folder)".

Editing the configuration

If the IIS/PWS has already been configured, you can use the WinCC Web Configurator to change the settings of the existing Web server or of the virtual folder.

Option "Add to an existing Web (virtual folder)"

Note

Included in the Appendix are the settings which are performed by the WinCC Web Configurator.

If you accidentally delete the Web for the Web Navigator, restart your computer before creating a new Web with WinCC Web Configurator.

Please note, that when you perform manual changes to this Web and afterwards you are unable to communicate with your Web, the Web Configurator will automatically attempt to correctly reset these settings.

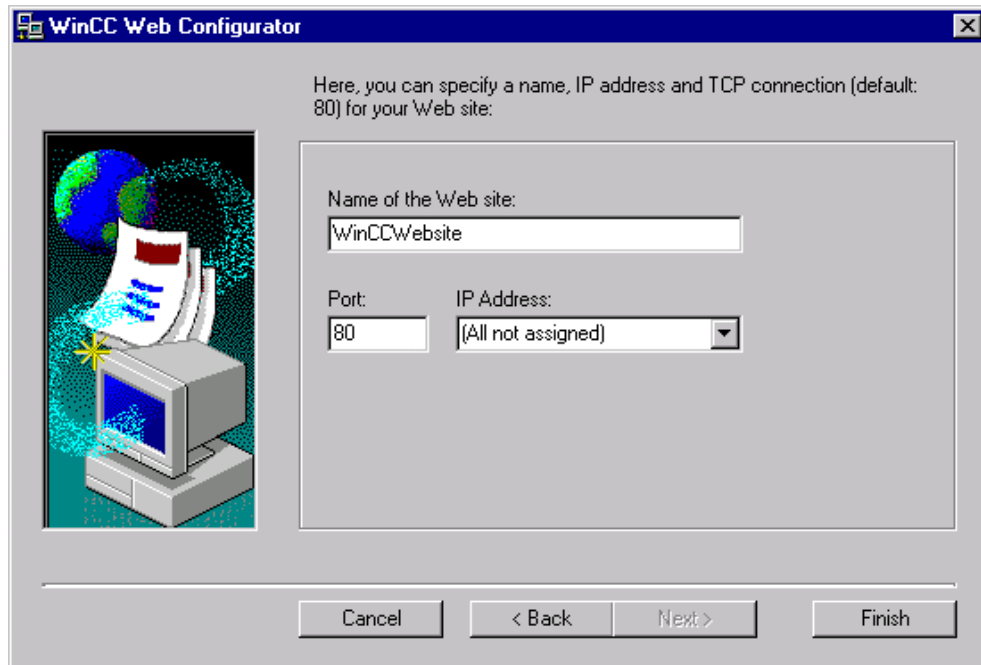
If this method does not succeed, delete the Web from the IIS, reboot your computer and use the Web Configurator to again create a new Web.

While operating the WinCC Web Navigator Server, only one Web project can be active per computer, since the Web filter is loaded to the storage of the active Web.

3.2 Web Folder Setup

3.2.1 Creating a new Standard Web Site (stand-alone)

When selecting the "Create a new standard Web site (stand-alone)" radio-button, the following dialog box will be displayed.



Name of the Web Site	Here you can specify a name for the Web site, e.g. WinCCWebSite.
Port	Here you can specify the port that will 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 default port of 80 is set.
IP Address	Each 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 only accessible on the Intranet or Internet, only 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".

Click on the "Finish" button to complete the configuration of the Server.

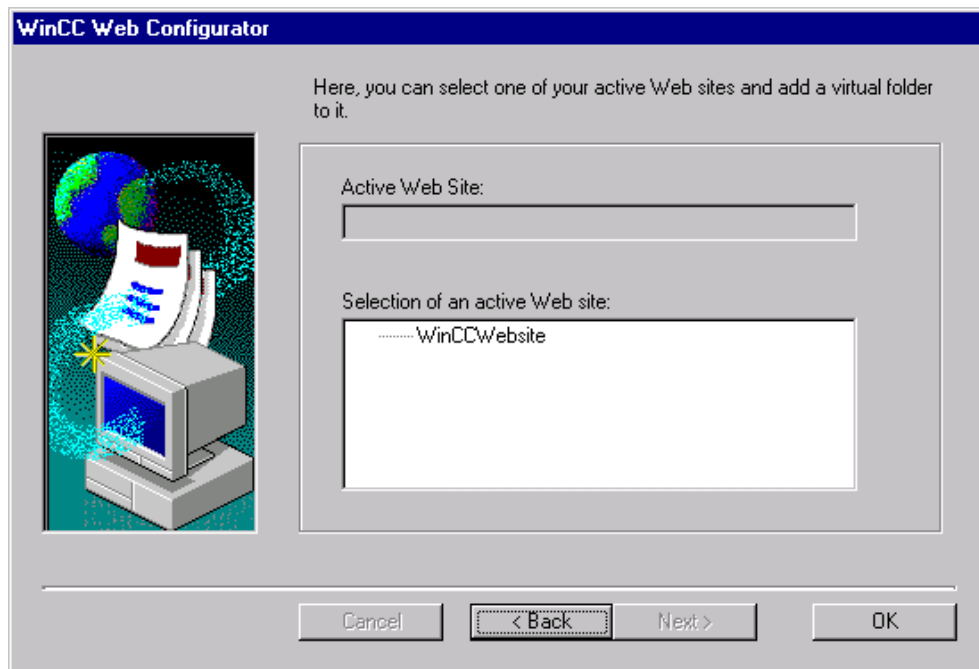


After finishing the configuration, the just created Web site (Web Navigator Web) is active.

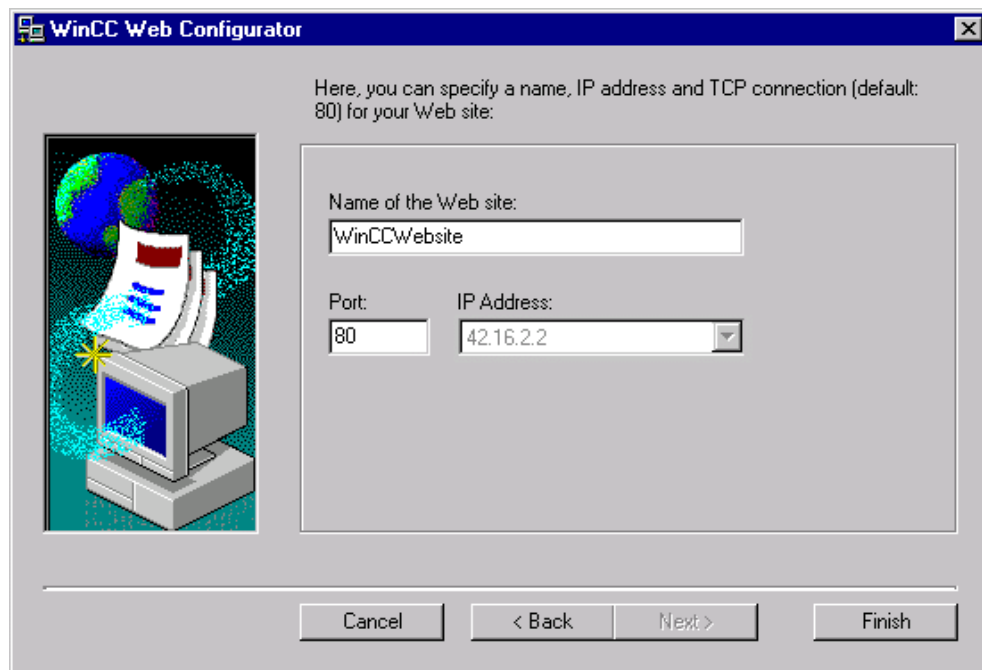
3.2.2 Creating a virtual Folder

If you selected the "Add (virtual Folder) to an existing Web Site" radio-button, click on the "Browse" button.

In the following dialog box, select the active Web site to which the virtual folder is to be added.



After selecting the active Web site, click on the "OK" button, which will bring you back to the previous dialog box. Click on the "Next" button to go to the next dialog box.



Name of the virtual
Folder

Here you can specify the name of your virtual folder,
which will be added to the active Web site.

Port and IP Address

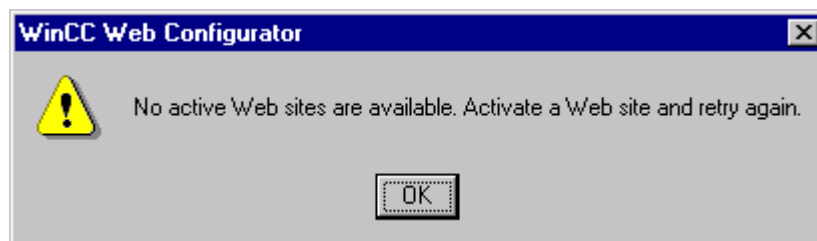
The port and the IP address are predefined and cannot
be edited. The WinCC Web Configurator reads the data
of the active WinCC Web Navigator Server from the IIS.

Click on the "Finish" button to complete the configuration.

For access of the client to the Web Navigator, the name of the virtual Web
Navigator Web must be added to the URL . (e.g. http://
WebServer/WinCCWebsite)

No active Web Site

If no active Web site is found, the Wizard aborts with the following message.



Acknowledge the message by clicking on the "OK" button.

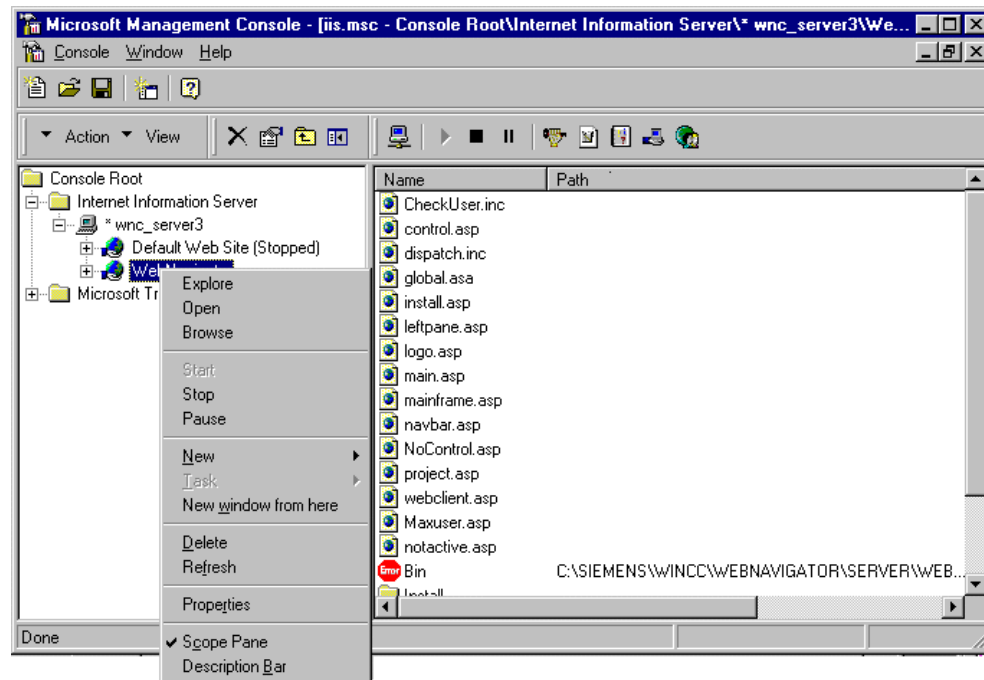
Before running the Wizard again, a Web site has to be activated first. The
procedure to do this is outlined in the "Checking the activated Web Site" chapter.

3.2.3 Checking the activated Web Site

Activation of the Internet Information Server.

- Under Windows NT 4.0, select "Programs", "Windows NT 4.0 Option Pack", "Microsoft Internet Information Server", "Service Management Console".
- Under Windows 2000, select "Programs", "Management", "Internet Service Manager".

In the navigation window, select the computer and open the folder displayed below it. The corresponding Web site will be displayed. Check the entry of the Web site. If "Stopped" is displayed next to the desired Web site, e.g. the "WinCCWebSite", the Web site needs to be started. To do so, right-click on the Web site and select "Start" from the displayed pop-up menu.



Close the dialog box.

The Web site is now activated.

4 WinCC Web Navigator Security

4.1 Overview

At present, when you connect your WinCC Web Navigator Server to another computer, you are exposing your data to certain risks.

How the connection was established plays no roll, e.g. a connection via a local network (LAN) or a dial-up connection via an Internet provider. Unauthorized persons could have access to your data. Your transmission could be intercepted, manipulated and misdirected. By providing certain directories in your system with special security layers, you can control the transmission of information.

There are several important concepts regarding a secure transaction:

Windows NT makes available powerful security functions which can be used to check users, for access checks and for monitoring purposes. The WinCC Web Navigator Server, which is based on the IIS, makes use of these Windows NT capabilities to provide security for its Internet-based services. Windows NT uses a security model which manages the security for all services through the use of a single registration process.

By creating user accounts and by setting up access authorizations for these accounts, the administrators can control which resources and services are available to the users. The central administration for the WinCC Web Navigator Server is performed via the WinCC Web Administrator.

In addition, the WinCC Web Navigator Server supports firewall technology. With the help of a firewall, you can protect your system from unauthorized access. Firewalls require that the user must constantly identify himself. This identification can be performed with the aid of company-approved IP addresses, by using user-IDs and passwords - even secure ID cards and encrypted access passwords which are changed at set intervals.

The most important components for the security of the WinCC Web Navigator Server are: Secure Socket Layer (SSL), secure HTTP (HTTPS), WinCC Web Administrator, firewall, secure ID card.

4.2 SSL

SSL is a protocol which guarantees the data security between HTTP and TCP/IP. The standard for the security of WWW browsers and servers is defined by the W3C (World Wide Web Consortium). The W3C was established to create standard normatives for the WWW. Additional information can be found in the Internet under <http://www.w3c.org>.

The SSL performs a security check before a TCP/IP connection is established. This check determines the security level on which the client and the server agree and over it, the necessary authenticity operations for the connection are performed.

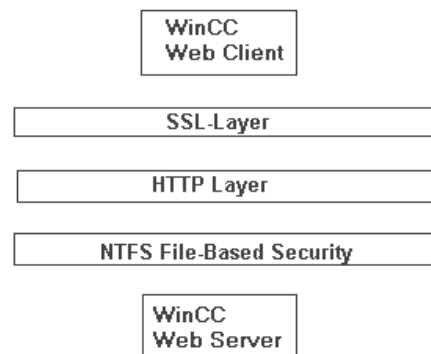
SSL performs the encryption and decryption of the data stream of the used protocol (e.g. HTTP = Hyper Text Transfer Protocol) as long as the connection exists. All information, requests as well as responses, are encrypted. This includes the information used for the authenticity check of the HTTP access (user name/password) as well as all data transferred from the server to the client.

In order to use SSL, you require as system operator a certificate from a certification provider, e.g. VeriSign

Requests for a VeriSign certificate for the Microsoft Server can be found at <http://www.verisign.com>.

4.3 HTTPS

HTTPS is an extension of the HTTP protocol. The SSL protocol is used to establish a secure connection between two computers, while HTTPS sends individual messages securely. The communication between the WinCC Web Navigator Server and Client is performed here using the HTTPS protocol.



4.4 WinCC Web Administrator

The WinCC Web Administrator allocates and controls access privileges for the users of the Web site. This is achieved by assigning access privileges during user setup

When a user logs into the system, the WinCC Web Navigator Server checks whether the user is registered and whether the maximum number of Web Navigator Clients has been reached.

4.5 Secure ID Card

Remote Access Service (RAS) is a service which can be used, for example, to log into a network directly from home. This is performed via the remote communications network. You are prompted to enter your card ID and PIN number by the RAS server. The RAS server checks the entries and, if necessary, calls you back. This method ensures that only users with valid access information are able to access the server.

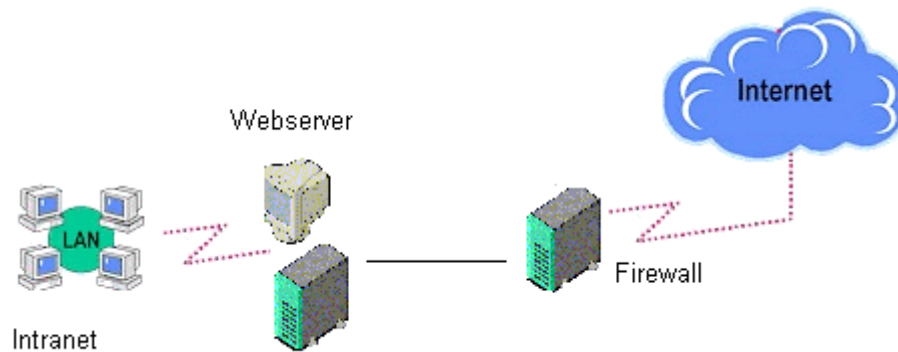
4.6 Firewall

4.6.1 General Information

A firewall is a system consisting of hardware and software that is installed at a point between two networks and only lets authorized communication traffic pass through. Improper actions are rejected and detected unauthorized use attempts can be recorded. Thus, firewall systems are suitable to enforce defined rules with regard to security (security policy). Firewalls are often used when connecting to the Internet, protecting the internal network from the dangers of the Internet.

4.6.2 Principle of Operation

One computer with installed routing software and two interfaces (two network adapters). The Internet is connected to one interface, the Intranet to the other.



This results in two different networks sharing one computer and provides exceptional security against attacks from the Internet.

4.6.3 Firewall Types

Among others, there are the following types of firewalls:

- Filter Firewall
- Proxy Server

Filter Firewall

A filter firewall controls the data stream based on a data package's origin, destination, port and package type information. This information is contained in every data package. Only selected network traffic can pass through the firewall.

Package filters are IT systems (Information Technology Systems) with special software that filter the information (IP packages) on the transport layer, i.e. they either let the information pass through or intercept it according to defined rules. The rules can operate by means of the source or target address as well as the source or destination port that is typical for the respective Internet service. Many routers can also be employed as package filters. Unlike static package filters, dynamic package filters do not possess a defined set of rules, instead, the firewall modifies the filter in response to certain events.

Proxy Server

Proxy servers permit indirect access to the Internet through the firewall. A proxy is an application for network services that is executed depending on the communication of the service and from system to system. The service program of the user does not communicate directly with the target system, but with the proxy server of the firewall. The proxy evaluates the request and determines whether to establish or deny the connection.

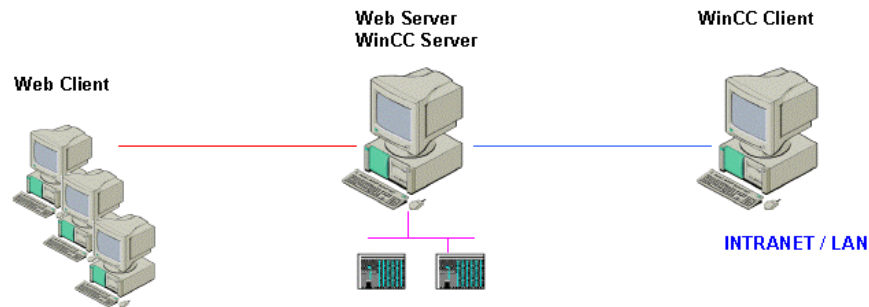
Proxy servers provide user authentication and integrity during the transfer of data between client and server. The hypertext transfer protocol (http) proxy intercepts connections from every Web Browser and directs the requests to the configured Web Server.

Proxy servers support content filtering. With content filtering, only certain contents of HTML pages are permitted. In this case, the communication is rerouted via a defined port to an IP address such as the address of the WinCC server. If content filtering is active, the Web Navigator communication will no longer function. In this case, the use of SSL is recommended.

5 Establishing a Connection with the WinCC Web Navigator Server

Before you connect your WinCC Web Server to the intranet or Internet, you must establish a concept which takes into consideration relevant security and system issues.

5.1 Island solution

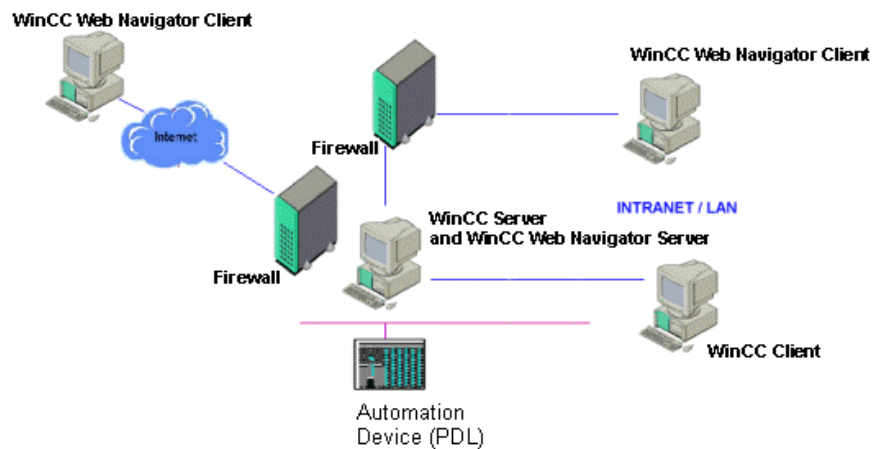


In the figure shown above, the Web Clients are not connected to the intranet, but are rather used only to operate and observe the running WinCC project. You can, in this way, economically set up computer stations which can, for example, be used for monitoring or maintenance purposes.

5.2 Navigator Server on the WinCC Server

The WinCC Server and the server components of the WinCC Web Navigator are installed on one computer. The WinCC Web Navigator client can be used to operate and/or observe the running WinCC project over both the intranet and the Internet. A client/server system can be expanded through the use of WinCC Web Navigator Clients.

Firewalls are used to protect against attacks from the Internet. The first firewall protects the WinCC Web Navigator Server from attacks originating in the Internet, the second firewall provides additional protection for the intranet.



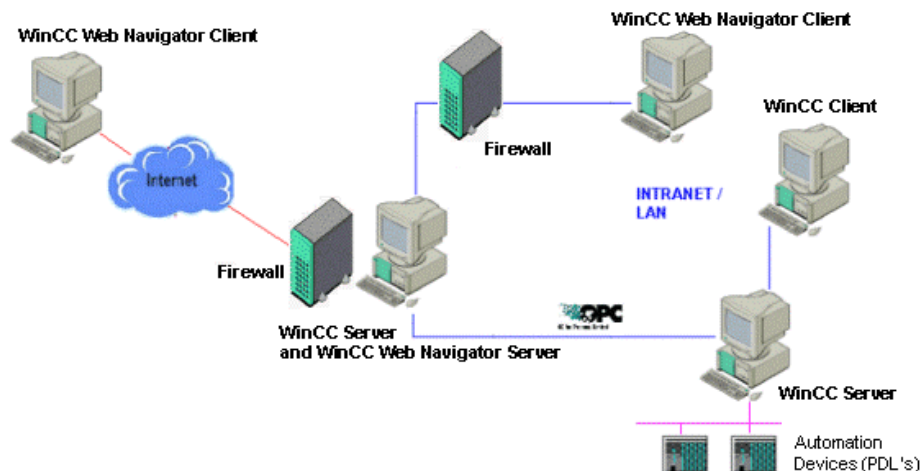
5.3 Separation of WinCC Server and WinCC Web Navigator Server

Communication via a channel

The WinCC Server is assigned a group of automation devices. The project is composed of all data, including programs, configuration data and other settings. The WinCC project is mirrored 1:1 on the computer with the WinCC Server and WinCC Web Navigator Server and is not connected to the automation devices.

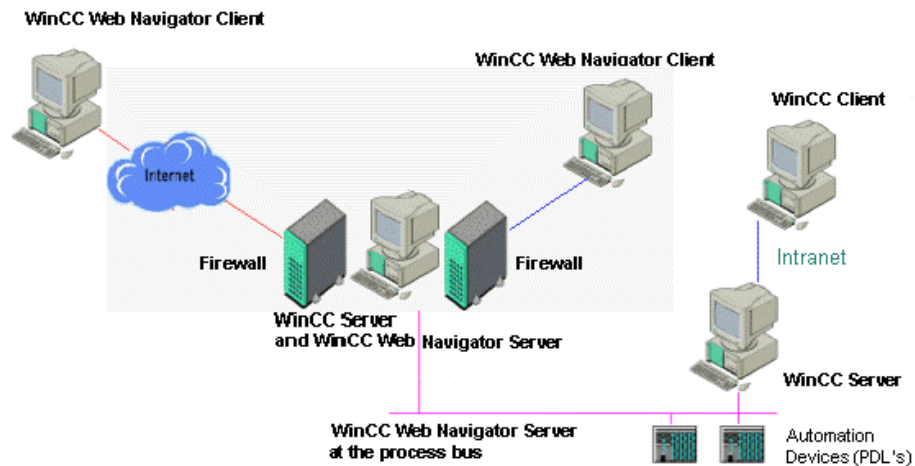
The data matching is performed via the OPC channel (OPC = OLE Process Control). The WinCC Web Navigator Server requires for this purpose a license for the number of OPC tags.

Two firewalls are used here as well to protect the system from unauthorized access. The first firewall protects the WinCC Web Navigator server from attacks originating in the Internet, the second firewall provides additional protection for the intranet.



Communication via the process bus

As illustrated in the above picture, two firewalls are used to protect the system from unauthorized access. The WinCC project is mirrored 1:1 on the computer with the WinCC Server and WinCC Web Navigator Server. The data matching is performed via the process bus.



6 Installing the WinCC Web Navigator Client

The WinCC Web Navigator Client software can be installed not only from CD, but it can also be installed over the intra-/Internet. This allows you to flexibly and quickly install any number of clients. In order to perform the installation over the intra-/Internet, you must be registered as a user in the WinCC Web Administrator.

6.1 Installation from CD

Insert the CD-ROM with the WinCC Web Navigator in the CD-ROM drive.

The setup program automatically starts within a few seconds, provided that the automatic execution of autorun file has not been disabled.

If a CD is already in your drive, you are installing from a network or autorun has been disabled, you can also start the setup manually. To do this, select in the Windows Start Menu, "Settings" → "Control Panel" → "Add/Remove Programs" and in the tab "Add/Remove", click on "Install".

The program starts with the following dialog box:



To obtain additional information about WinCC Web Navigator, click the mouse on the texts "Welcome", "Read First", "Display CD Contents", "Install Software" or "Language Selection"

To install the WinCC Web Navigator, click the left mouse button on the text "Install Software".

In the following dialog box, select the entry "WinCC Web Navigator Client"

6.2 Installation over the Internet


1. Before you dial into the Internet, make the following settings in the Internet Explorer.
2. Dial into the Internet via your Internet service provider.
3. Enter the address of the WinCC Web Navigator Server in the address bar, e.g. "http://www.name_of__server.de". If installing in a virtual folder, the address may have the following form: "http://www.name_of__server.de/WinCCWebsite/"
4. Log into the WinCC Web Navigator Server with your user name and password.
5. If you are accessing the WinCC Web Navigator Server for the first time, you will be prompted to install the WinCC Web Navigator Client. Follow the instructions on the screen.


Note

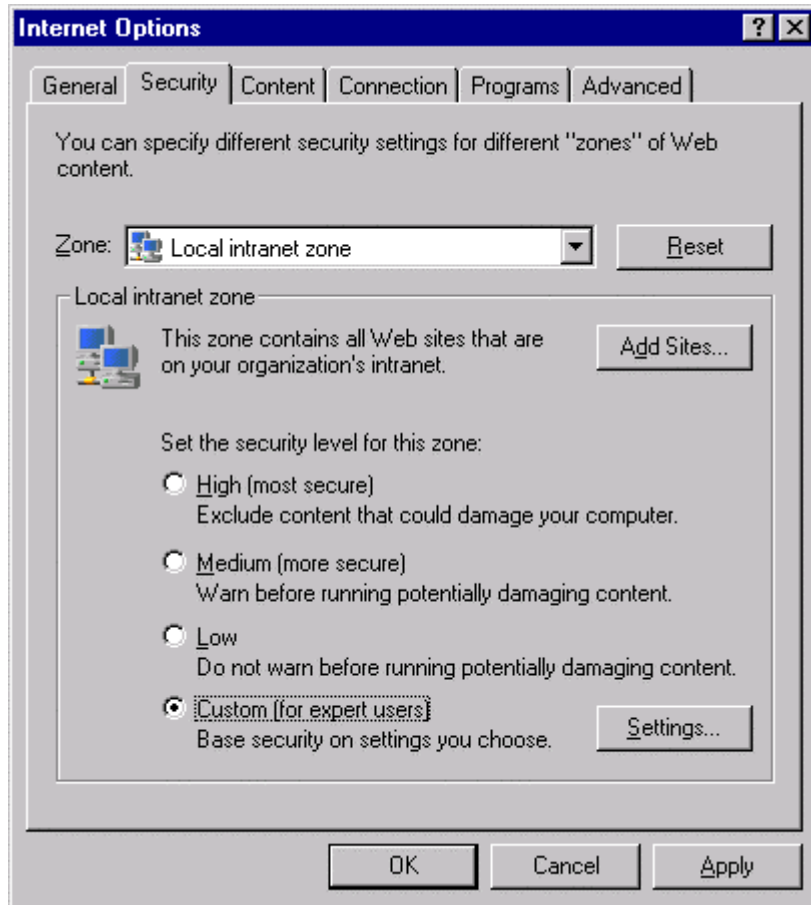
If a version of the WinCC Web Navigator Client is already located on your system, you can overwrite this software.


You are guided through the entire WinCC Web Navigator Client installation. Please follow the instructions on the screen.

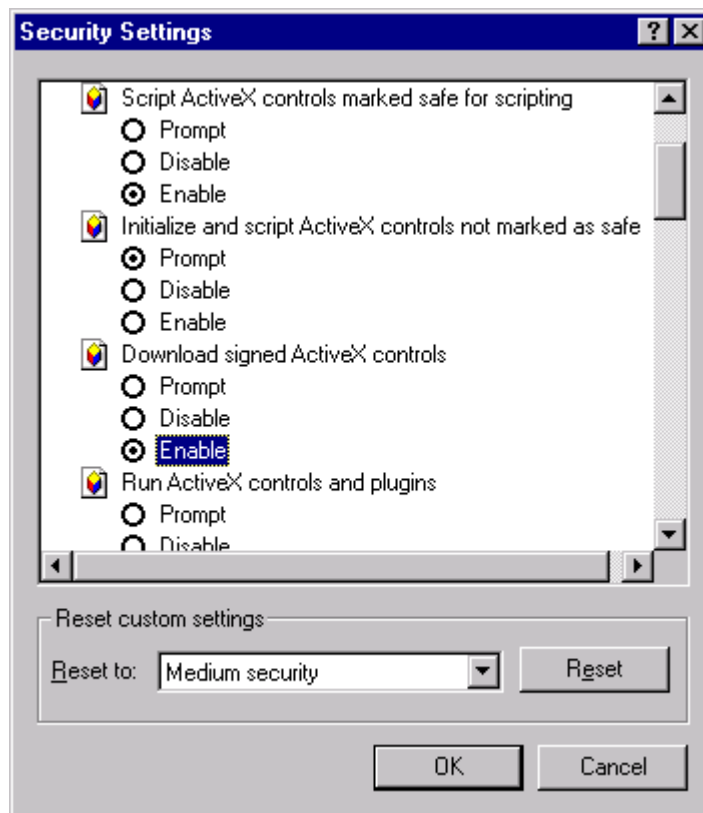
6.3 Internet Explorer Settings

 In the Internet Explorer 4.0, click on "View" → "Internet Options" and in the Internet Explorer 5 on "Tools" → "Internet Options".

 Click on the "Security" tab. Select the corresponding zone, e.g. "Local Intranet".



 Activate the "Custom (for expert users)" radio-button and click on the "Settings" button.

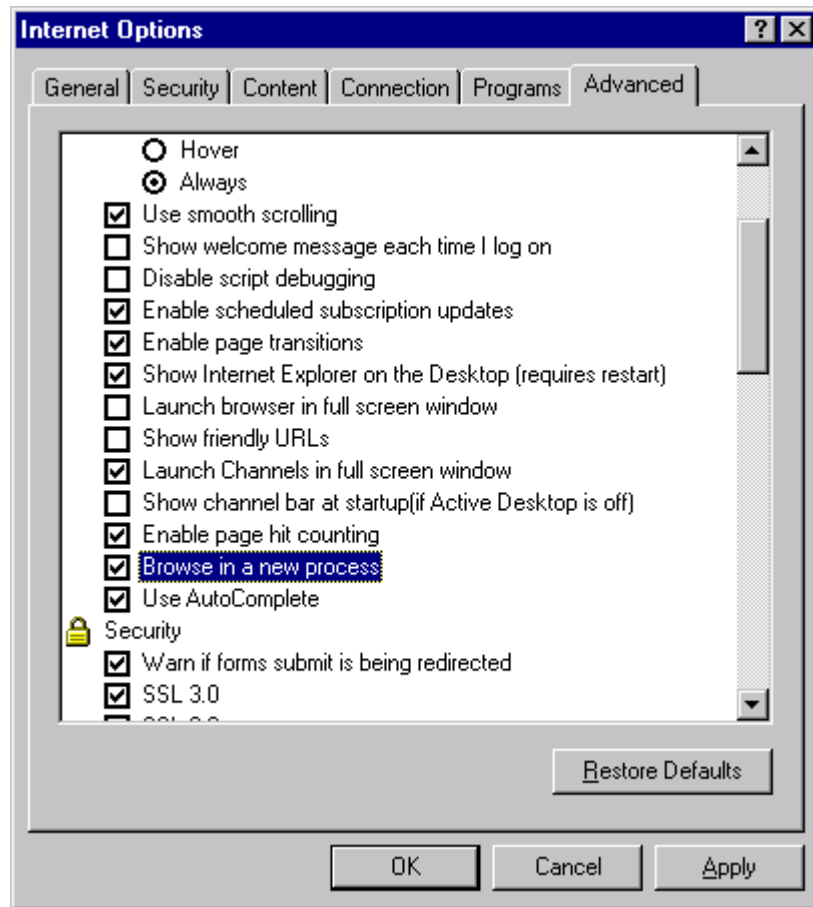



At "Script ActiveX Controls marked safe for scripting" and "Download signed ActiveX Controls", activate the "Enable" radio-button.

Click on the "OK" button.

In the "Internet Options" dialog box, click on the "Apply" button.

Click on the "Advanced" tab and activate the "Browse in a new process" (Internet Explorer 4.01 SP1) or "Open Browser window in a new process" (Internet Explorer 5, provided the option exists) check-box.



 Click on the "OK" button.

This completes all the necessary settings in the Internet Explorer.

7 Deinstallation

The WinCC Web Navigator Server and the WinCC Web Navigator Client can be deinstalled as usual from Windows. Access the Windows "Control Panel" and double-click on the "Add/Remove Programs" icon.

- Under Windows NT 4.0, highlight the "WinCC Web Navigator Server/Client" entry in the "Install/Uninstall" tab and then click on the "Add/Remove" button. Follow the displayed instructions.
- Under Windows 2000, double-click on the "Add/Remove Programs" icon. Follow the displayed instructions.

This will remove the WinCC Web Navigator Server/Client from your system.

Note

If you deinstall the WinCC Web Navigator Server, the corresponding authorization should also be deinstalled using the "AuthorsW.exe" application. The authorization can then be reused at a later time. Additional information about authorizations can be found in the WinCC software protection documentation.

8 Configuration of the User Administration

8.1 WinCC Web Administrator

The WinCC Web Administrator is used to give your Intranet/Internet users access to your WinCC project and to assign user-specific start pictures and languages. In addition, user-specific rights for controlling and monitoring the process can be assigned. The WinCC Web Administrator allows you to quickly and easily set up a secure and clear Intranet/Internet user administration for WinCC.

If a user logs on to the system, the Web Navigator Server will check, whether the user is registered and whether the maximum number of licensed Web Navigator Clients has been reached.

The tasks of the Web Navigator Administrator include:

- Creation and editing of users
- Assignment and administration of access rights
- Assignment and administration of start pictures and languages

The following access rights can be assigned to a Web Navigator Client:

None

The user rights assigned in the "User Administrator" editor will be evaluated for the user. If no authorization has been assigned in the "User Administrator" editor, the user will be able to perform this operation in runtime.

Unlimited Control and Monitoring (All)

The user is assigned the right to control and monitor the process in runtime.

How to start the WinCC Web Administrator:

1. In the project navigation window of the WinCC Explorer, right-click on the "Web Navigator" entry.
2. In the pop-up menu displayed, click on the "Web Administrator" menu command.

**Warning**

If your computer is a primary domain controller (PDC), only administrators can log on.

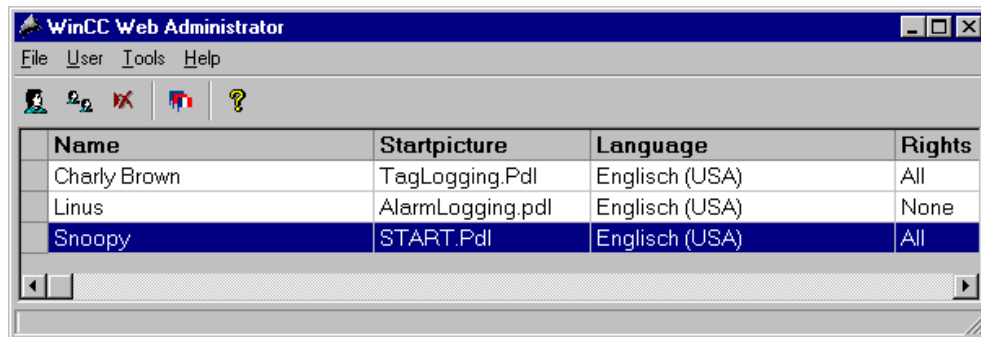
Thus, the user of the WinCC Web Navigator must receive administrator rights in the NT domain administration.

Example of a user name: WNUSR_PCNAME, where PCNAME stands for the respective PCNAME, e.g. with PC4000: WNUSR_PC4000. Due to security issues, this entry must be made manually in the NT user administration.

8.2 Structure

The user interface of the "WinCC Web Administrator" consists of:

- Menu bar
- Toolbar
- Table window



Menu bar

All of the commands available in the WinCC Web Administrator are logically divided into groups and assigned to different menus in the menu bar. In order to execute a command, open the appropriate menu, click on the command, and set the necessary parameters.

Menu	Menu Command
File	Exit
User	Create User Copy User Delete User
Tools	Languages...
Help	About WinCC Web Administrator

Note

In the following, only menu commands which vary from those found in standard Windows applications or whose functionality exceeds that to which you may be accustomed will be described in detail.

Toolbar

These icons allow you to execute actions more rapidly. You do not have to make several selections through the menus until you reach the required function.



"User" "Create User"



"User" "Copy User"



"User" "Delete User"



"Tools" "Languages"


Table window

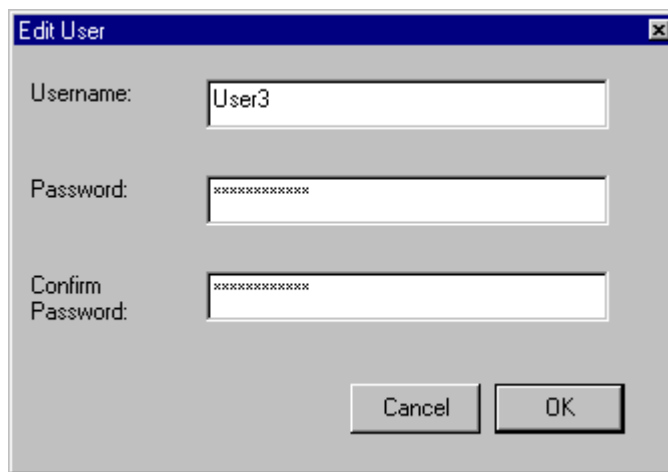
The Table window contains information about user name, start picture, language and access privileges for the WinCC Navigator clients.

8.3 Menu Bar

8.3.1 "User" Menu

8.3.1.1 Adding a User

- From the toolbar, select the  icon or the "Add User" menu command from the "User" menu.
- The "Edit User" dialog box will be displayed.



- Enter the new user name.
- Enter the new password and confirm the new password.



Important

The password has to follow the Windows NT guideline defining the use of passwords for user accounts. This includes: the minimum length of the password, how often a user has to change the password and when old passwords can be reused.

- Exit the dialog box via the "OK" or "Cancel" button.

- Specify the rights, the start picture and the language of the user in the table window of the WinCC Web Administrator.
 - The entries can be made by double-clicking on the respective column field.

Name	User name of the client with a length between 4 and 24 characters
Start Picture	Start picture that will be shown to the client when selecting the server. Length max. 26 characters inclusive extension.
Language	Language setting
Rights	Access rights: All: Unlimited control and monitoring. None: Operations for which an authorization level has been assigned in WinCC are not permitted.

Note

A user name can only be assigned once.


Only pictures that have been assigned to the WinCC Web Navigator Server with the Web View Publisher are available as start pictures.

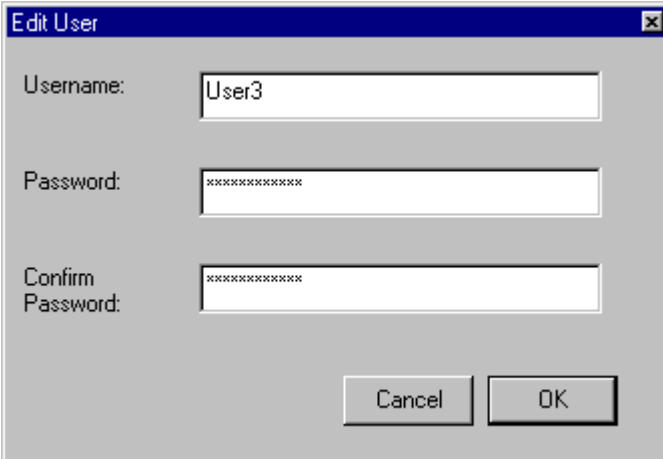
Only languages selected via the "Tools/Languages" are available.

8.3.1.2 Copying a User

With the "Copy User" menu command, a selected user can be copied.

How to copy a user:

- In the table window, select the user to be copied.
- Select the "Copy User" menu command from the "User" menu or click on the  icon.
- The "Edit User" dialog box will be displayed.




- Enter the new user name.
- Enter the new password and confirm the new password.

- Exit the dialog box via the "OK" or "Cancel" button.
- The remaining settings such as start picture, rights and language will be taken from the copied user.

8.3.1.3 Deleting a User

With the "Delete User" menu command, a selected user can be deleted.


- In the table window, select the user to be deleted.
- Select the "Delete User" menu command from the "User" menu or click on the  icon.
- The selected user will be removed.

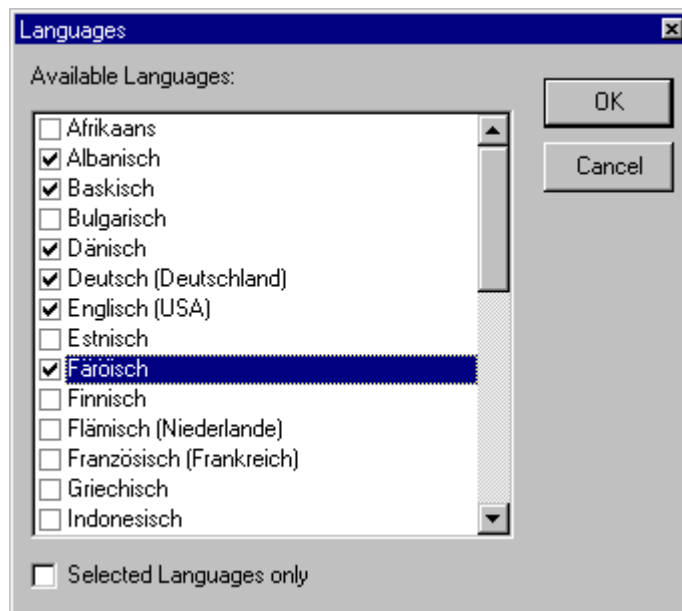
8.3.2 "Tools" Menu

8.3.2.1 Languages

Use the "Language..." menu item to open the dialog for switching the configuration language. You may select the desired language from the list displayed.

How to Change the Language:

- Select from the toolbar  or from "Tools" menu the "Language" command.
- Select the desired language from those listed and confirm the selection with OK.



9 Configuration of a Web Project

9.1 Transfer of WinCC Pictures: Web View Publisher

To run your WinCC project on the Intranet/Internet, you can create pictures with standard WinCC tools or use already created ones.

Note

Only use the WinCC Web View Publisher for projects that have been created with WinCC V 5.0 SP1 or higher.

Problems may occur with projects that have been converted from WinCC V4.02 and V4.02 SP1 to WinCC V5.0 SP1 / SP2.

Please read the corresponding chapters with regard to limitations, when using complex functions or scripts. If the project and the pictures were created with the WinCC Graphics Designer, a Wizard is available to make the pictures run on the 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.

The following conversions will be performed:

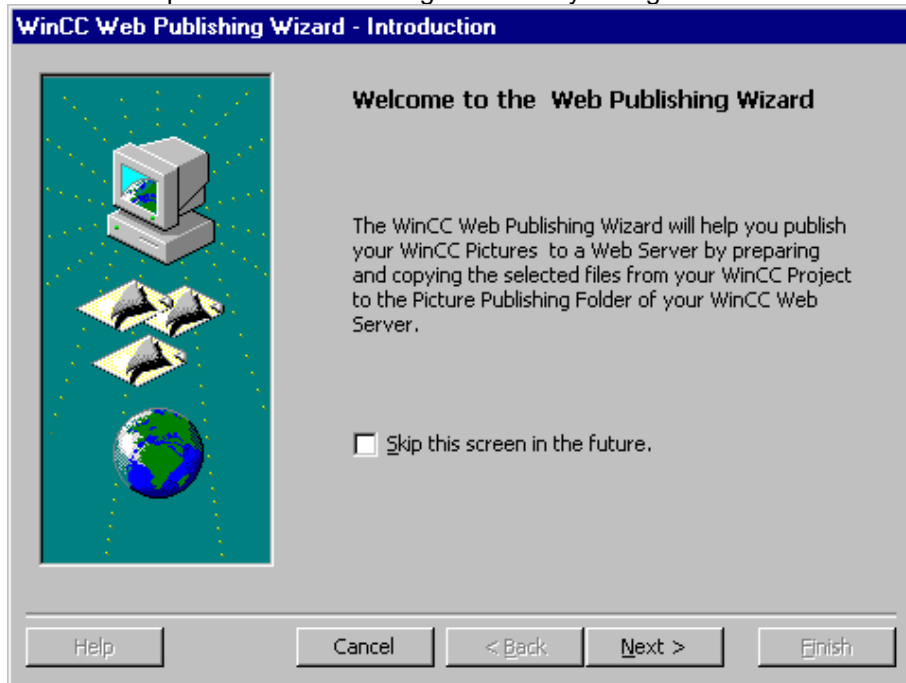
- Compression of the data to achieve the best possible performance on the Internet
- Removal of project-specific data that is unnecessary for the operation
- Conversion of picture windows into ActiveX components
- Conversion of scripts so that they can run on the WinCC Web Navigator Client

How to start the Web View Publisher:

1. In the project navigation window of the WinCC Explorer, right-click on the "Web Navigator" entry.
2. In the pop-up menu displayed, click on the "Web View Publisher" menu command.

Web View Publishing Wizard

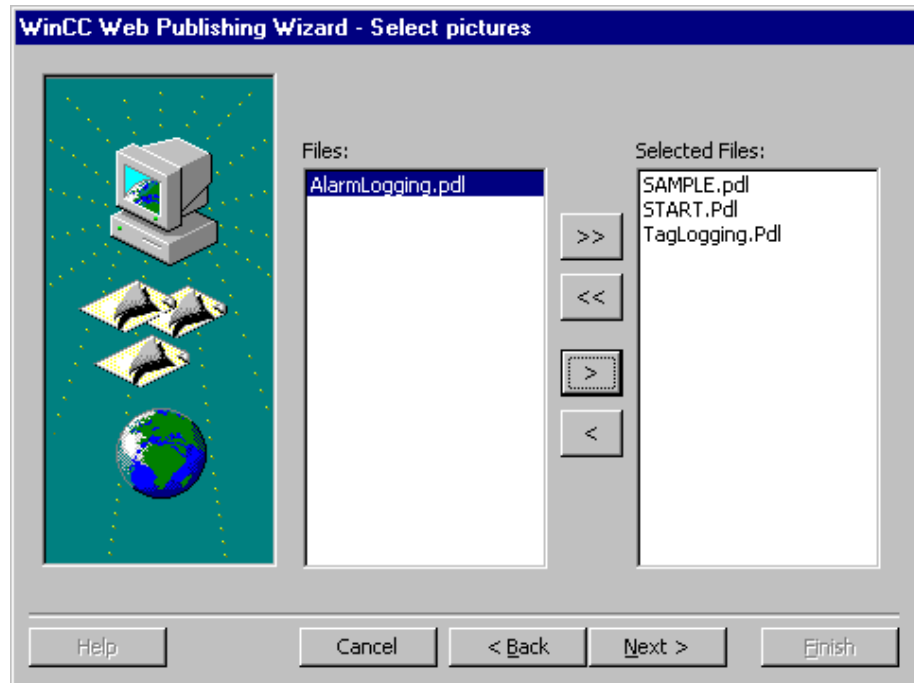
1. The Wizard opens with the following introductory dialog box.



2. Click on the "Next" button to go to the next dialog box.



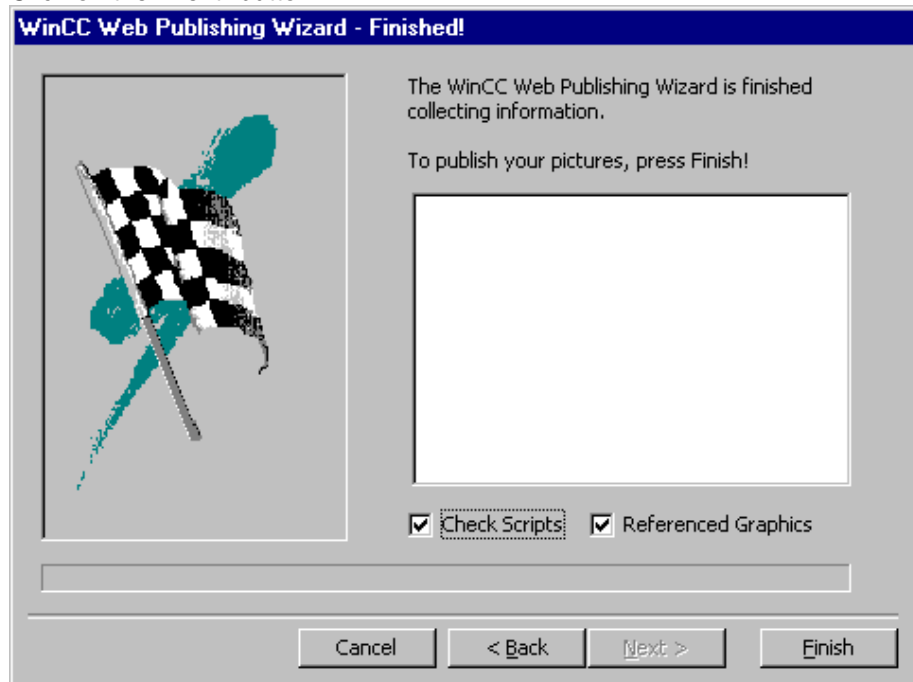
3. In the dialog box, select the folder in which the pictures of WinCC are located, e.g. "...\\Siemens\\WinCC\\WinCCProjects\\GraCS", and the folder in which the converted pictures are to be stored. For the runtime of the Web Navigator, the suggested default folder within the WinCC project folder has to be kept as the storage folder for the converted pictures. The path should only be changed, if pictures are to be transferred, for example, to another project.
4. Click on the "Next" button.
5. In the following dialog box, select the pictures that are to be published on the WinCC Web Navigator Server.



6. Click on the "Next" button.



7. Use the "" button to select the project functions that are to be published.
8. Click on the "Next" button.



9. Set the check-boxes. "Check Scripts" activates the conversion of scripts so that they can run on the client. If "Referenced Graphics" is activated, graphics (e.g. bitmaps) referenced in the pictures (*.PDL) will be transferred as well.

10. Click on the "Finish" button to start the conversion of the pictures. The progress bar will indicate the progress of the conversion.
11. After the completion of the conversion, a dialog box will be displayed. Acknowledge this dialog box to exit the operation.



9.2 Transfer, Adaptation of existing Projects

You can use already existing projects that have been created with WinCC and make them accessible via the Internet or Intranet.

Essentially, this requires the conversion of the already created WinCC pictures with the WinCC Web View Publisher into the WinCC Web folder and the setup of the Web users with the WinCC Web Administrator.

Note

Only use the WinCC Web View Publisher for projects that have been created with WinCC V 5.0 SP1 or higher.

Problems may occur with projects that have been converted from WinCC V4.02 and V4.02 SP1 to WinCC V5.0 SP1 / SP2.

Version 1.1 of the WinCC Web Navigator has some functionality limitations and as a "thin client" solution does not support all functions that are offered by the standard WinCC basic system.

Thus, check your existing WinCC configuration with regard to the following points and limitations, and adapt it if necessary.

If scripts are used in pictures, objects addressed by scripts must not contain blank spaces or special characters in their names.

For example: The object named "Button 1" is to change its background color, if a certain value changes. If this is implemented via a script, the object name must be changed from "Button 1" to "Button1" (no blank space). The reason for this is that the script interpreter software used by the Web Navigator Client does not support blank spaces and special characters in object names.



Warning

In V1.1 of the WinCC Web Navigator, the available functions and standard functions that can be used on the WinCC Web Navigator Client are limited to approximately 600. A list of functions supported/not supported by the WinCC Web Navigator Client can be found in the appendix.

9.3 Limitations

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

Among others, the following WinCC options or functions are not available on the WinCC Web Navigator V1.1 via the Intranet/Internet:

- 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.
- ODK functions are not supported on the WinCC Web Navigator Client. A list of functions supported/not supported by the WinCC Web Navigator Client can be found in the appendix.
- The PCS7 options do not support the current version of the WinCC Web Navigator Client.
- The WinCC Report Designer is an integrated reporting system for the time- or event-triggered documentation of alarm messages, operations and archive contents. The reporting system is not supported via the Intranet/Internet. Thus, the output of reports is not possible on the Web Client.
- WinCC User Archives are not available via the Intranet/Internet.
- Operator messages are not supported by the current version of the WinCC Web Navigator Client.
- No separate archive system is running on the WinCC Web Navigator Client. The message archive or message system can only be controlled and monitored.
- If scripts are used in pictures, objects addressed by scripts must not contain blank spaces or special characters in their names. This is especially important for projects that have been converted from WinCC V4.02 and V4.02 SP1 to WinCC V5.0 SP1 /SP2. The following special character in object names is supported: "_". The object name "Tank 1" must be changed to "Tank_1" ("_Tank1" needs not to be changed, "Tank.1" is not supported).
- The indirect addressing of tags is not supported.
- Global Scripts running locally on the client are not supported. Global Scripts running on the server are supported.
- The redundancy switch is not supported.

When using functions that are not supported, the user will be informed about this in runtime via clear text messages.

9.4 Using Scripts

Global Script

The WinCC Web Navigator Client only provides a view to the project. The configuration of scripts takes place in the server project of the WinCC server. For this reason, the "Global Script" editor is not offered on the WinCC Web Navigator.

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
```

Actions

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



Warning

Since the CISS compiler used for the interpretation of scripts/functions in pictures is conforming to ANSI-C, no anonymous structures and unions are used. In the VARIANT2 structure compatible to VARIANT, the stored union is named "vdata".

```
VARIANT2 vTest;
VariantInit((VARIANT*) &vTest);
vTest.vt=VT_I4;
vTest.vdata.lVal=1024;
VariantClear((VARIANT*) &vTest);
```

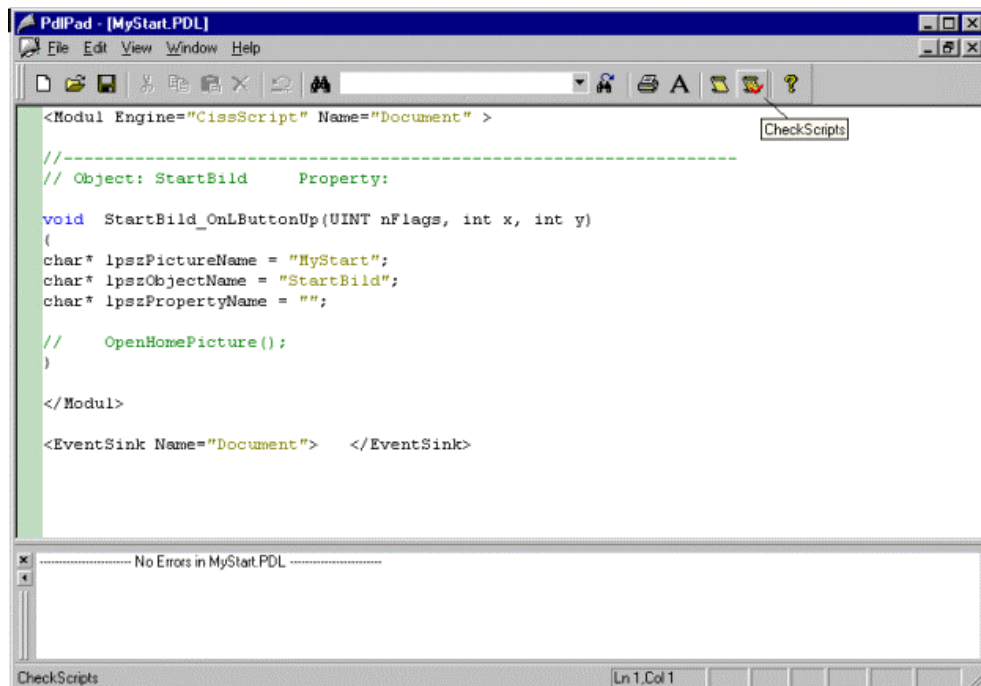
The names of objects used in WinCC pictures and addressed by scripts must not contain blank spaces or special characters. Also, object names are case-sensitive.

9.5 The "PdIPad" Tool

Installing the WinCC Web Navigator Server will also install the "PdIPad" tool, which can be accessed from the Windows start menu under

SIMATIC\WinCC\WebNavigator\Server\Bin.

The Web View Publisher automatically made the necessary changes to your pictures so that they can run on the WinCC Web Navigator Client via the Intranet/Internet. These pictures can be found in the WinCC project path under **...\WebNavigator\Pictures**. Please also see the "WebNavigator.CHM" chapter of the documentation under "Transfer of WinCC Pictures: Web View Publisher". With the help of the "PdIPad" tool, the scripts used in the pictures can be checked. To do so, open the WinCC picture in the PdIPad and click on the "Check Scripts" icon.



9.6 Differences to the WinCC Base System

9.6.1 Script Execution

Contrary to the WinCC base system, event-triggered scripts (OnClick, etc.) are executed in the same process space as the picture display, namely in the context of the Internet Explorer.

Consider this, when working with delays in scripts (e.g. Sleep(3000)). In this case, the displayed picture will not be operational for the time period set.

9.6.2 Opening a Picture

The Web Navigator downloads a WinCC picture from the Internet in an asynchronous manner. Because of this, a picture change is not performed synchronously as in the base system, but asynchronously. This fact has to be considered in scripts that trigger a picture change.

The following applies:

If a picture window is selected within a script, then the same script will not be able to access the objects of the new picture, since the picture is not yet loaded at the time. In this case, a delay (e.g. Sleep(2000)) will not help either, since the script and with it the Internet Explorer as well are waiting.

A better solution is to execute the subsequent script sections at the "OpenPicture" event, which is triggered once the picture has been loaded.

9.6.3 Scripting

Preprocessor Definition:

Especially for the Web Navigator, the scripting possesses a preprocessor definition:

`RUN_ON_WEBNAVIGATOR`

The code that follows this preprocessor definition will be executed by the Web Navigator. Thus, it is possible to write scripts that behave differently under the Web Navigator than under the base system.

Example:

```
void OnOpenPicture (char* lpszPictureName, char*
lpszObjectName, char* lpszPropertyName)
{
#ifdef RUN_ON_WEBNAVIGATOR
// add the code applying to the Web Navigator only
}
#else
// add the code applying to the base system only
#endif
}
```

9.6.4 Addressing of Objects in other Pictures

If the objects of a picture are to be accessed from another picture via a script (e.g. objects in a parent picture or a picture window), this can only be achieved by employing relative addressing (unlike in the base system).

All C-script functions that access the objects of a picture, request the picture name as the first parameter.

For example: `SetPropChar ("Start Picture", "Text1", "Text", "Hello, here is a text");`

When accessing objects that are not located in the same picture, the Web Navigator provides specially defined picture names that specify the addressing of the pictures relative to the current picture.

Addressing of an Object in the Basic Picture

If there is no ambiguity, specifying the picture name suffices (just like in the base system):

```
SetPropChar ("Start Picture", "Text1", "Text", "Hello, here
is a text");
```

Otherwise, the addressing can be performed independent of the picture name either with an empty string or `lpszPictureName = "/"`.

Example:

```
SetPropChar ("", "Text1", "Text", "Hello, here is a text");
or
SetPropChar ("/", "Text1", "Text", "Hello, here is a text");
```

Addressing of an Object in the Parent Picture

If there is no ambiguity, specifying the parent picture name suffices (just like in the base system):

```
SetPropChar ("Picture1", "Text1", "Text", "Hello, here is a text");
```

Otherwise, the addressing can be performed independent of the picture name with `lpzPictureName = "../"`.

Example:

```
SetPropChar ("../", "Text1", "Text", "Hello, here is a text");
```

Picture in a Picture Window

If the object to be addressed is located in the picture of a picture window ("Picture Window1"), it can be addressed relative to the current picture as follows:

```
SetPropChar ("./Picture Window1", "Text1", "Text", "Hello, here is a text");
```

or, if the Picture Window1 is located in the parent picture:

```
SetPropChar ("../Picture Window1", "Text1", "Text", "Hello, here is a text");
```

or, if the Picture Window1 is located in the basic picture:

```
SetPropChar ("/Picture Window1", "Text1", "Text", "Hello, here is a text");
```

9.6.5 Synchronous Script Functions

Exercise caution when dealing with synchronous script functions such as "SetTagCharStateWait" that synchronously write a tag and then wait for the result. Since these calls go to the server in a synchronous manner, frequently calling these script functions negatively impacts the performance of the client. Through an Internet connection, such a call may even take several seconds.

Script functions that manipulate objects in the displayed picture are safe, since a round trip to the server does not take place.

9.6.6 Defining Script Tags local to a Picture

To store picture-specific data in scripts, you should refrain from using data manager tags in the Web Navigator. These tags - when read or written in scripts - always cause a round trip to the server, which is costly in the Internet.

There are several ways to store picture-specific data:

Configuring "invisible" Graphic Objects

By creating invisible graphic objects, you will be able to use the properties of these invisible objects as picture-specific tags.

An additional advantage is that actions can be performed upon the change of these stored values.

Example:

Creation of an invisible Text Field

In this case, any text can be conveniently stored in the text property, which can then be read or written to by any script handler.

In the color properties of the text field, for example, colors can be stored, which are read or written to by scripts and thus can influence the status of the picture without requiring a round trip to the server.

10 Using the WinCC Web Navigator Client

With the WinCC Web Navigator Client, a WinCC project which is running on the WinCC Server can be viewed, operated and observed. For this reason, it is not possible to configure the server project

The following functions are available on the WinCC Web Navigator Client:

Displaying WinCC pictures over the intra-/Internet

The Graphics Designer is used to create process images in WinCC. The Web View Publisher automatically performs the necessary adaptation of the project data (conversion of WinCC pictures, scripts). The pictures are then capable of running in the WinCC Web Navigator Client.

The communication between the WinCC Web Navigator Server and Client is possible here using the HTTPS protocol. In order to protect the system from unauthorized access, HTTPS should be used.

Accessing Process Tags

Process Tags can be read and written as in WinCC. The process image is supplied with tag values via the WinCC Explorer. Depending on the user's access privileges in the WinCC Web Administrator, he can either observe or both operate and observe.

Displaying messages

The existing WinCC message archive and/or message system of the WinCC Server can be operated and observed on the WinCC Web Navigator Client via the WinCC Alarm Control. It is not possible to execute the "Loop in Alarm" function.

Displaying process values in trends and tables

It is possible to display the process values in trends and tables via the WinCC Online Trend Control and WinCC Online Table Control from the WinCC Web Navigator Client. Changes, with regard to the Trend and Table windows, are possible. It is, however, not possible to configure an individual archive on the Web Navigator Client as the process value data come exclusively from the archive system on the WinCC Server.

Language switch

It is possible to switch languages on the WinCC Web Navigator Client as well.

If a text from the text library is changed on the WinCC Server while in runtime, it may, under certain circumstances, not automatically be detected by the WinCC Web Navigator Client. The Internet Explorer stores the pictures in its cache. The cache is a special memory area in which the contents of frequently used objects, e.g. Internet pages, are stored. In order to update the displayed pictures, the picture must be reloaded by using the Reload icon.

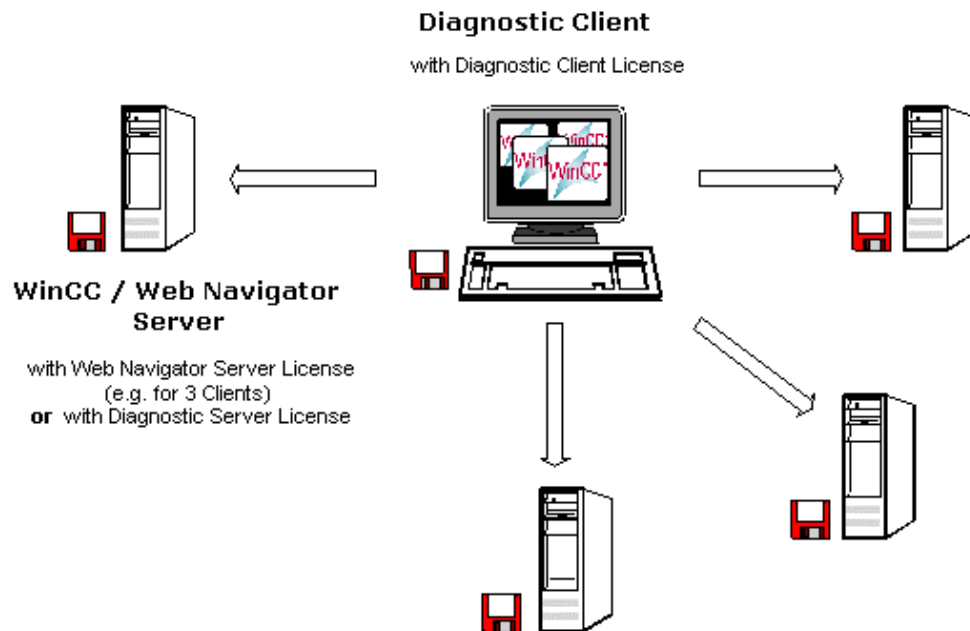
11 WinCC Web Navigator Diagnostic Client

Introduction

With the Web Navigator Diagnosis Client from WinCC, it is possible to cost-effectively access a number of servers. In this case, multiple Diagnosis Clients and regular Clients can simultaneously be employed. For this operation, a Web Navigator Server license is not required - the licensing takes place on the Client.

Possible applications include:

- Remote Maintenance: With the Diagnostic Client, different WinCC systems are accessed for service and maintenance.
- Central Control Room: With the Diagnostic Client, multiple servers are accessed simultaneously.



11.1 Requirements

This chapter outlines the hardware, software and operating system requirements for the application of the Web Navigator Diagnostic Client.

Operating System:	Windows NT 4.0 or higher, Windows 2000
Software:	Internet Explorer 5.01 or higher
Other:	Access to Intranet/Internet

11.2 License

WinCC Web Navigator Diagnostic Client

For the Diagnostic Client, a license on the client computer is required.

If a Web Navigator Server or Web Navigator Diagnostic Server license is installed on the server computer, the Diagnostic Client will have access even if the maximum number of clients has been exceeded (guaranteed access).

WinCC Web Navigator Diagnostic Server

This license gives Web Navigator Diagnostic Clients access to the server.

11.3 Installation of the WinCC Web Navigator Diagnostic Client

The Web Navigator Diagnostic Client software is installed on the client computer of a CD-ROM.

- Insert the WinCC Web Navigator CD-ROM into the CD-ROM drive.
- The setup program will start automatically after a few seconds, provided that the autorun functionality has not been deactivated.
- The setup can also be started manually in case the CD-ROM has already been inserted into the CD-ROM drive, the installation is performed from a network drive or the autorun function has been deactivated. To do so, access the Windows NT 4.0 start menu and select "Settings" → "Control Panel" → "Add/Remove Programs" and then click on the "Install" button in the "Install/Uninstall" tab. Under Windows 2000, access the start menu and select "Settings" → "Control Panel" → "Add/Remove Programs" and then click on the "Add new Programs" button.
- The following dialog box will be displayed.



To view additional information about the WinCC Web Navigator, click on the "Welcome", "Read first", "Display CD-ROM Contents", "Install Software" and "Language Selection" entries.

- To install the WinCC Web Navigator Diagnostic Client, click on the "Install Software" entry.
- In the following dialog box, select the "WinCC Web Navigator Diagnostic Client" component.
- Follow the instructions of the setup program.

12 Diagnosis of the Connections with "Status.html"

The page "Status.html" 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 Diagnostic Client

The page is accessed from the Internet Explorer with the address "http://server_name/status.html". The page is displayed in English only.

The access to this page is protected by users and passwords of the Web Administrator.

WinCC Web Navigator Server

Server Version	1.1.84.2	Server Filedate	0.0.0.0
----------------	----------	-----------------	---------

Connection Summary

Last Update	15.3.2001 13:6:11.579
Connected Clients	2
Connected Diagnose Clients	0

Logged on Users:

123.123.123.123				
Login	Name	q	Time	15.3.2001 13:4:0.771
Connection	Identifier	0x00050000 (327680)		
Requests	Count	1	Last	15.3.2001 13:4:1.733
Packages	Received	0	Sent	14
Total Bytes	Sent	2702	Last Sent	15.3.2001 13:6:11.199
Queue	Current	0	Maximum	500
Synchronous Request	Last State	OK	Last Duration	3765
Synchronous Request	Last Identification	-5		

Structure of the Information Block pertaining to 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 page's last update
Connected Clients	Quantity of connected Clients
Connected Diagnostic Clients	Quantity of connected Diagnostic Clients

Structure of the Information Blocks pertaining to the Web Navigator Clients

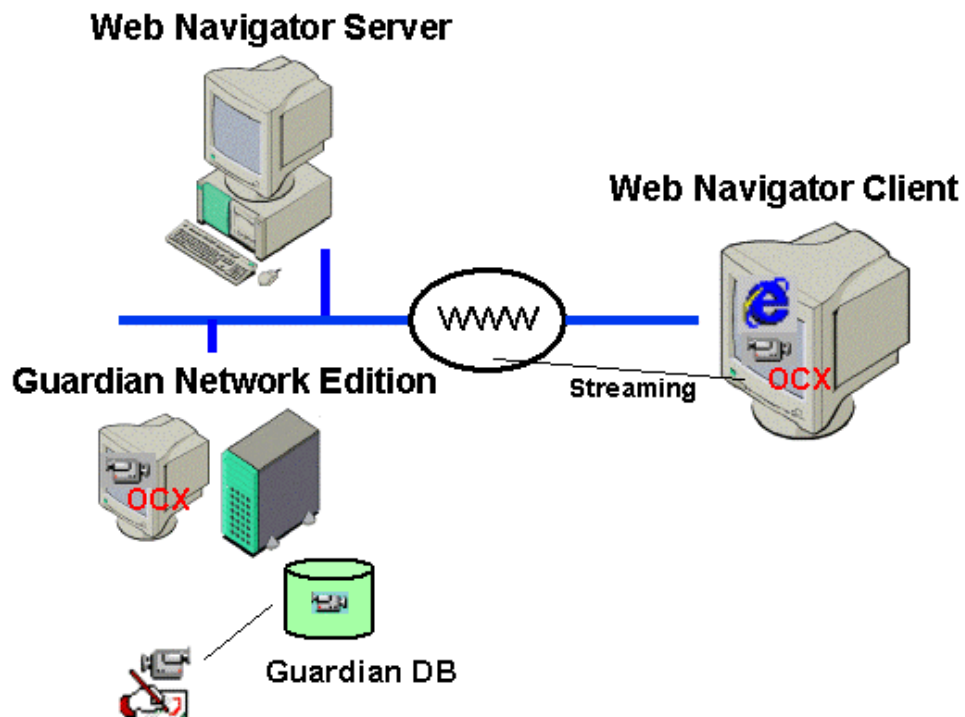
Below the caption "Logged on Users:", the information blocks of the connected Clients are listed. The title of each block contains the IP address of the client.

Field	Description
Login Name	Login name of the current user
Time	Login time of the current user
Connection Identifier	Identification of the connection (for internal diagnostic purposes)
Requests Count	Quantity of requests made to the Server
Last	Time of the last request made to the Server
Packages Received	Quantity of the received packages
Sent	Quantity of the sent packages
Total Bytes Sent	Total amount of data transmitted
Last Sent	Time of the last data transmission
Queue Current	Current quantity of entries (= shows the load level of the connection)
Maximum	Maximum quantity of entries
Synchronous Request Last State	Shows the status of the synchronous requests
Last Duration	Server processing time for the last request
Synchronous Request Last Identification	Identification number of the last request

13 WinCC Web Navigator and WinCC Guardian

The "WinCC Guardian" option package is used, among other things, to show live video images of your automation system within WinCC pictures.

These live video images can also be shown on remote computer stations by employing streaming technology. When combining both option packages, it is possible to show streaming images via the Intranet/Internet.



For configuration details, please refer to the WinCC Guardian documentation.

Important for the WinCC Web Navigator Server is the creation of a Web folder named "WinCCMediaShare". In this folder, the Guardian media files (bitmaps, AVIs) are stored.

During the installation of the WinCC Guardian Network Edition, this folder is created automatically. When running the WinCC Web Navigator, make sure that this virtual folder is set up in the Web folder of the WinCC Web Navigator and is activated.

In order to show streaming video images, the WinCC Web Navigator Client requires the Camera Viewer setup of the WinCC Guardian to be run.

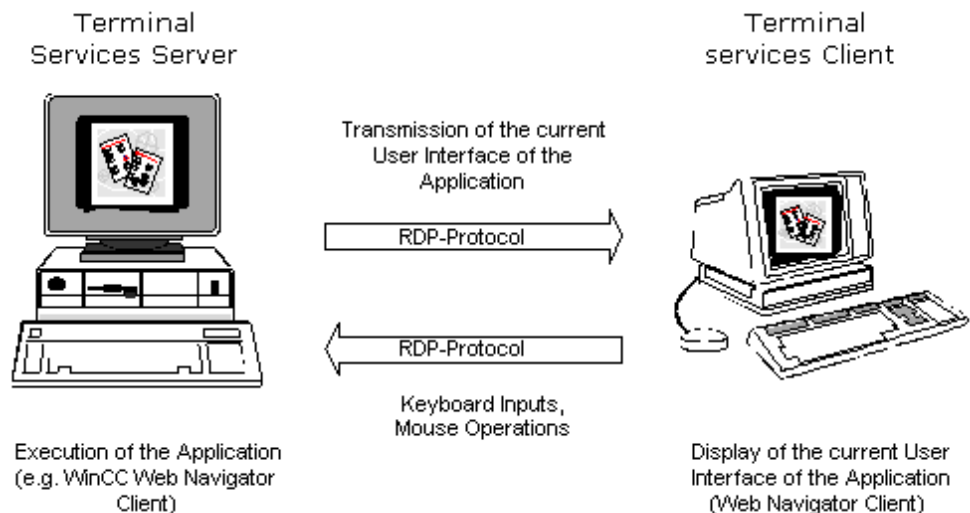
14 Using the Terminal Services for the WinCC Web Navigator

Introduction

The terminal services of Windows 2000 Server give multiple thin clients access to the desktop of a Windows 2000 server. On the server, various applications such as WinCC are run. With the terminal services, only the user interface of the application is transmitted to the clients. Each client's keyboard inputs and mouse operations are returned back to the server.

The advantages of this method include:

- Using a robust hardware for the clients, without fan or harddisk, e.g. in dusty environment.
- Using mobile clients with limited power supply (Handhelds, Palmtops).
- All applications are running on the server in a save environment.
- Easier and more centralized administration and system maintenance.
- Support of different operating systems (e.g. Windows CE, Linux, Windows 3.1).



Web Navigator Client V1.1 is released for Windows 2000 Terminal Services with a maximum of 25 sessions each terminal server.

The Web Navigator Client is build in a "THIN²"-structure. That means, that the application, which is multiple executed on the terminal server (e.g. Web Navigator) is "thin" with respect to demands for the hardware.

Terminal services are performed on the server in two modes:

- In the application server mode, the terminal services are used to forward Windows programs and the desktop to a network server. In this case, the terminal services can also transmit desktop applications to computers that normally do not run Windows.
- In the remote administration mode, the terminal services allow a server to be managed from any location on the network.

14.1 Requirements for Using the Terminal Services

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

Terminal Server

Operating System/Software:	Windows 2000 Server Applications that are to be carried out on the clients have to be callable and executable in multiple instances.
Minimum Hardware Requirements:	min. 700 Mhz Pentium III 256 MB RAM plus additional RAM for each client The processor and memory requirements grow linearly, i.e. when using twice the number of clients, the number of processors (max. 4) and the amount of memory (approx. 40 MB per client) need to be doubled as well.
Other:	If many users access the server, a high-performance network card should be employed. ISA bus systems should not be used, but instead EIDE or PCI.

Terminal Services Clients

Client minimum Requirements:	Network Card with TCP/IP Terminal Client RDP 5.0 Display/Monitor Pointing Device
------------------------------	---

Recommended for use as clients are MOBIC T8 (Industrial Handheld) or MP370 Thin Client (12" TFT Touch Panel).

Note

For clients not running on Windows 2000 computers, the Terminal Client Access licenses by Microsoft are required. Additional information pertaining to terminal client licensing can be found under:

[//www.microsoft.com/GERMANY/ms/serversuiten/lizenziierung/w2k_tsfaq.htm](http://www.microsoft.com/GERMANY/ms/serversuiten/lizenziierung/w2k_tsfaq.htm)

14.2 Terminal Services Setup

In the following chapters, the setup of the terminal services for a simple example in connection with the WinCC Web Navigator Client is shown.

1. Activation of the terminal services (terminal services server).
2. Installation of the application, e.g. WinCC Web Navigator Client (terminal services server). This point will not be described. Information pertaining to the installation can be found in the corresponding documentation and the Online Help.
3. Creation of the 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 can be found under "Terminal Services" in the Online Help of Windows 2000 Server.

14.2.1 Activation of the Terminal Services on Windows 2000 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 can 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 "Windows 2000 Server" CD-ROM into the CD-ROM drive of the server.
- From the Windows 2000 start menu, select the "Settings" → "Control Panel" entries and then click on the "Add/Remove Programs" icon.
- In the "Add/Remove Programs" dialog box, click on the "Add/Remove Windows Components" icon. The "Windows Components Wizard" dialog box will open.
- In the components selection window, activate the check-boxes of the "Terminal Services" and "Terminal Services Licensing" options and then click on the "Next" button.
- Select the "Application Server Mode" option.
- Click on the "Next" button.
- In the "Setup of the Terminal Services" dialog box, activate the "With Windows 2000 users compatible rights" check-box and then click on the "Next" button.
- In the dialog box showing the applications, click on the "Next" button.

Note

This dialog box 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/Remove Programs" dialog box after activating the terminal services.

-
- In the "Terminal Services Licensing - Setup" dialog box, select the "Your domain or workgroup" option and specify the folder for the licensing database of the server.
 - Click on the "Next" button and then on "Finish".

The files will then be copied. After a restart of the computer, the copied server software will become 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/Remove Programs" dialog box of the Control Panel. Since this dialog box 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.

14.2.2 Creation of the Client Data Carrier on the Windows 2000 Server

To set up a terminal services client, a client data carrier is first created on the Windows 2000 Server. With the help of this data carrier, the terminal services client is then installed on the computer intended as the client.

- From the Windows start menu, select the "Programs" → "Administration" entries and then click on the "Terminal Services - Client Installation" icon.
- In the "Create Installation Disks" dialog box, select the 32-Bit version as the terminal services client type to be created. Check the target drive setting and correct it if necessary.
- The dialog will indicate the number of needed data carriers. Keep this number at hand. Insert one data carrier and then click on the "OK" button .
- Follow the displayed instructions.
- Close the dialog box after the copy process has completed.

Note

The "16-Bit" client data carrier type is needed for client computers running 16-Bit operating systems.

14.2.3 User Setup for the Access to the Terminal Services Server

For the access to the terminal services server, a user has to be created on the server. The user administration and the settings of Windows 2000 also apply to the terminal services.

- From the Windows 2000 start menu, select the "Settings" → "Control Panel" entries and then click on the "Administrative Tools" icon. Click on the "Computer Management" icon.
- In the "Computer Management" dialog box, click on the "System Tools" → "Local Users and Groups" folders.
- Right-click on the "Users" folder and select the "New User" menu command from the displayed pop-up menu.
- In the "New User" dialog box, enter a user name and a password.
- Activate the "Password never expires" check-box.
- Click on the "Create" button.
- Close the dialog box.

Note

The user created here on the terminal services server is also needed for the configuration of the connection on the terminal services client. Additional information can be found under "Configuration of the Connection".

14.2.4 Installation of a Terminal Services Client on the Client Computer

After creating a client data carrier on the Windows 2000 Server, the data carrier will be used to install the terminal services client on the computer intended as the client.

- Insert the client data carrier into the drive and enter "[Drive Name]:SETUP" in the input dialog box. Start the setup program by hitting the "Enter" key.
- In the "Welcome" dialog box, click on the "Next" button.
- Fill in the "Name" and "Organization" fields. Click on the "OK" button.
- In the "License Agreement" dialog box, read the displayed agreement and click on the "I agree" button.
- In the "Terminal Services Client - Setup" dialog box, start the installation by clicking on the application button.
- In the "Select Program Group" dialog box, click on the "Next" button.
- Follow the displayed instructions.
- Click on the "OK" button to finish the installation.

14.2.5 Configuration of the Connection

After installing the terminal services client on the client computer, the properties of the connection need to be configured.

- From the Windows 2000 start menu, select the "Programs" → "Terminal Services Client" → "Client Connection Manager" entries.
- In the "Client Connection Manager" dialog box, select the "New Connection" menu command from the "File" menu. This will start the Connection Wizard.
- In the "Welcome" dialog box, click on the "Next" button.
- In the "Create a Connection" dialog box, enter a connection name and the name of the terminal services server. Click on the "Next" button.
- In the "Activate automatically" dialog box, activate the "Log on automatically with this Information" check-box.
- Enter the user name and the corresponding password that has been assigned on the terminal services server.
- In the "Domain" field, enter the name of the terminal services server, if the terminal services server and the terminal services client are located in the same domain. If they are not located in the same domain, enter the domain name of the terminal services servers.
- Click on the "Next" button.
- In the "Display Options" dialog box, set the resolution for the client, e.g. "800 x 600", and then click on the "Next" button.
- In the "Connection Properties" dialog box, click on the "Next" button.
- In the "Start Program" dialog box, click on the "Next" button.
- In the "Icon and Program Group" dialog box, click on the "Next" button.
- In the final dialog box, click on the "Finish" button.
- Close the "Client Connection Manager".

14.2.6 Starting the Application of the Terminal Services Server 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 Windows 2000 start menu, select the "Programs" → "Terminal Services Client" → "Client Connection Manager" entries.
- Click on the connection that has been assigned to the terminal services server.
- In the "Log On" dialog box, enter the password and confirm it by clicking on the "OK" button.
- The connection will then be established. Following the display of the terminal services server's desktop, its applications can be started, e.g. the Web Navigator Client via the Internet Explorer.

14.2.7 Configuring the "Auto Logon" Function for the Terminal Services Client

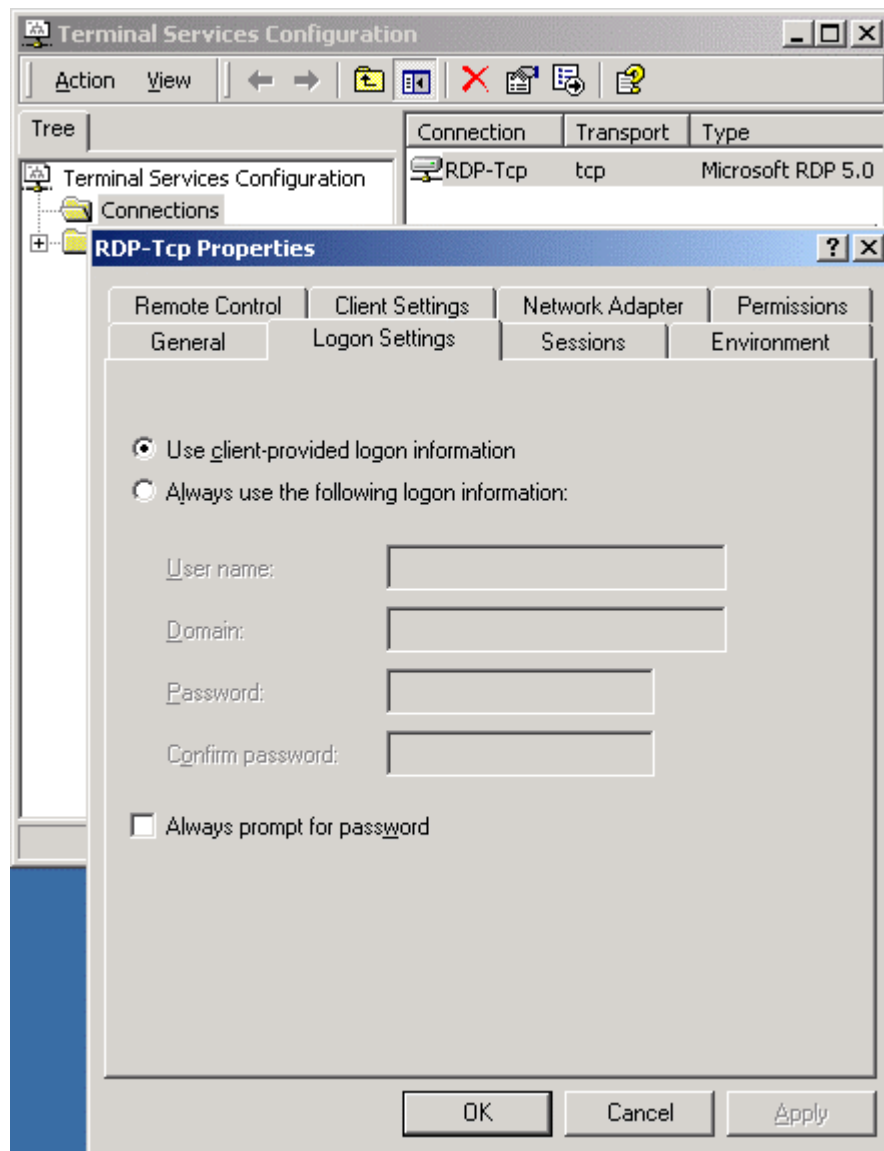
With the terminal services it is possible to automatically establish the connection and start the Web Navigator Client when starting up the client. This requires the following configurations on the terminal services server and client.

Note

The following description of the configurations on the client computer applies to a Windows 2000 system.

The language setting in the dialog boxes is "English". Thus, the names of menu commands, dialogs, etc. used in this description may differ, depending on the language used by the actual computer.

- From the Windows 2000 "Start" menu of the terminal services server, select the menu entries "Programs" → "Administrative Tools" → "Terminal Services Configuration".
- In the navigation window, select the folder "Connections". The data window to the right will display all associated connections. Select the entry "RDP-TCP". From its pop-up menu, select the menu command "Properties".

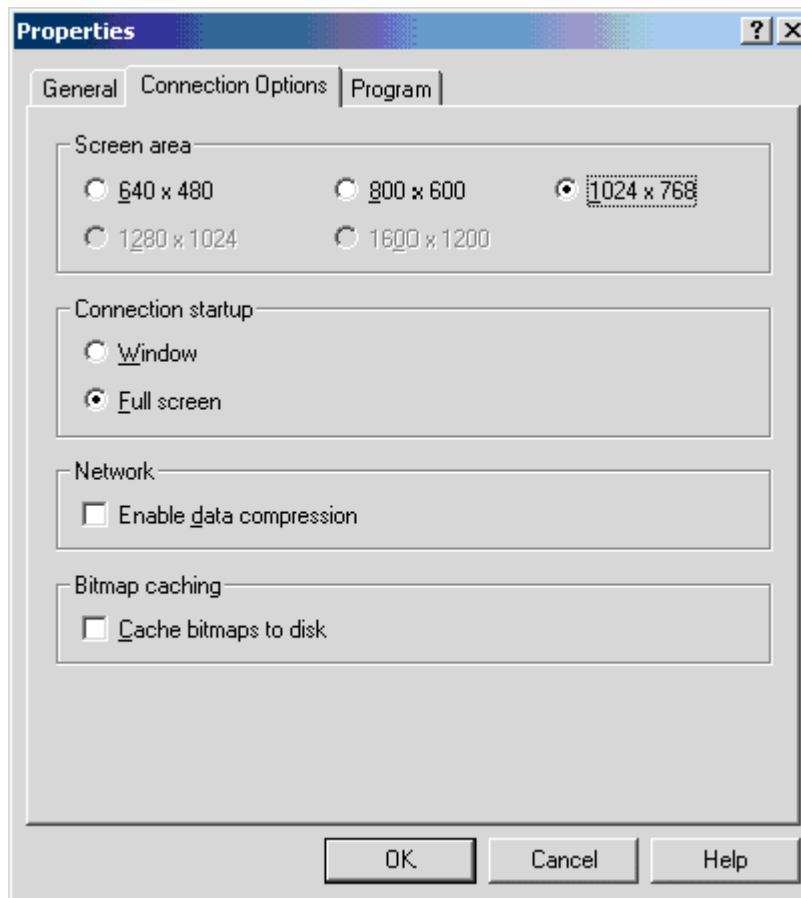


- In the dialog "RDP-TCP Properties", select the tab "Logon Settings". Deactivate the check-box "Always prompt for password". Close the dialog by clicking on "OK".
- In the autostart folder of the desired user, specify the link to the Internet Explorer. To do so, select the menu entry "Programs" from the Windows "Start" menu. Access the pop-up menu of the entry "Internet Explorer" and select the menu command "Copy".
- In the Windows Explorer, select the folder "Documents and Settings" located in the Windows installation drive and open it with a double-click. Select the folder with the desired user name and access the folder "Start Menu" → "Programs" → "Startup". From the pop-up menu of the folder, select the command "Paste". A link to the Internet Explorer will be inserted.
- Under Windows, log on as this user. This will automatically start the Internet Explorer.

- Specify the start page for the Internet Explorer. From the menu "Tools", select the entry "Internet Options". In the field "Address" of the tab "General", enter the desired start page. Close the dialog.
- From the Windows 2000 "Start" menu of the terminal services client, select the menu entries "Programs" → "Terminal Services Client" → "Client Connection Manager".
- Select an existing connection to the above configured server or create a new one. Additional information can be found under "Configuring the Connection". When using an existing connection, select the menu command "Properties" from the pop-up menu.
- In the tab "General", check the name of the user. This name has to be identical to the user name assigned on the terminal services server. If necessary, change the name and enter the associated password.

The screenshot shows a Windows-style dialog box titled "Properties". It has three tabs: "General", "Connection Options", and "Program". The "General" tab is active. Inside the dialog, there are two main sections. The first section, labeled "Connection", contains a text field for "Connection name" with the value "connection1", and another text field for "Server name or IP address" with the value "servername". To the right of the second field is a "Browse..." button. The second section, labeled "Logon information", contains a checked checkbox for "Log on automatically with this information." Below this are three text fields: "User name" with the value "User", "Password" with the value "xxxxxx", and "Domain" with the value "domain_name". At the bottom of the dialog are three buttons: "OK", "Cancel", and "Help".

- In the field "Domain", enter the name of the terminal services server, if the terminal services server and client are located in the same domain. If they are not located in the same domain, enter the domain name of the terminal services server.
- In the tab "Connection Options", select the resolution for the client (e.g. "1024 x 768"). Activate the radio-button "Full Screen". Close the dialog by clicking on "OK".



- In the autostart folder of the client, specify the link to the desired connection. To do so, select the desired connection from the Client Connection Manager. Access the pop-up menu and select the menu command "Copy".
- In the Windows Explorer, select the folder "Documents and Settings" located in the Windows installation drive and open it with a double-click. Select the folder with the desired user name and access the folder "Start Menu" → "Programs" → "Startup". From the pop-up menu of the folder, select the command "Paste". A link to the connection will be inserted.

The next time the user logs on at the client, the connection is automatically established and the Internet Explorer opened with the set start page.

14.2.8 Starting Applications on the Terminal Services Client in Full Screen Mode

When selecting the terminal services client on the server, the client can be started in full screen mode if a page with the following HTML lines is selected or specified as the default page in the IIS.

```
<html>
<head>
<title></title>

<SCRIPT LANGUAGE="JavaScript">
    win = window.open("webclient.asp", "", "fullscreen=1");
    win.focus();
</SCRIPT>

</head>
<body>
</body>
</html>
```

15 Appendix

15.1 Internet Information Server

15.1.1 An overview of the highlights

- Optimized system availability through failure safety (24/7/365)
- Transacted Active Server Pages (ASP) ensure that processes running in parallel do not mutually interfere with one another. Script debugging simplifies the development of such applications
- Flexible configuration
- Low operating costs through optimized administration tools
- Ensured compatibility through strict adherence to common Internet standards
- Secure information exchange through effective encryption mechanisms
- Individually configurable search functionality

15.1.2 Reliability

Reliability is a key term in modern IT management. It is one of the fundamental requirements for successful implementation of IT technologies. The possibility to integrate the Microsoft Transaction Servers into the Microsoft Internet Information Server 4.0 makes the Windows NT Server the most comprehensive platform for the development and expansion of dependable and simultaneously scalable Web applications. The Transaction Server ensures very efficient processing of all data streams between server and back-end system in a client/server environment.

The Microsoft Internet Information Server guarantees stability through 3 key points:

- **System security:** Various applications can run simultaneously on the Web Server. If applications from third parties (or even "homemade" applications) are being run, they may cause problems through incompatibility and may even result in a system crash. The Internet Information Server makes certain that such events affect neither other applications nor the system as a whole. If one of the described applications should crash, it is exited and, if necessary, restarted.
- **Transacted Active Server Pages:** This new development allows the developer to design applications which can simultaneously perform multiple actions. These actions can work towards a common cause or run entirely independently from one another. In any event, it is ensured that they do not interfere with one another and cause instability in the system operation. In particular, this can play a role in database applications.
- **Script debugging:** A special function which makes the programming of applications using Active Server Pages easier for the developer.

15.1.3 Settings on the Internet Information Server

The WinCC Web Configurator made the following settings:

- Setting up the Web folder
- Creating a new standard Web site
- Creating a virtual folder
- Setting the start page
- ISAPI filter added
- Setting the basic authentication and folder privileges
- Creating an application

Note

If you have questions or encounter difficulties with the following settings, contact the intra-/Internet administrator in your department.

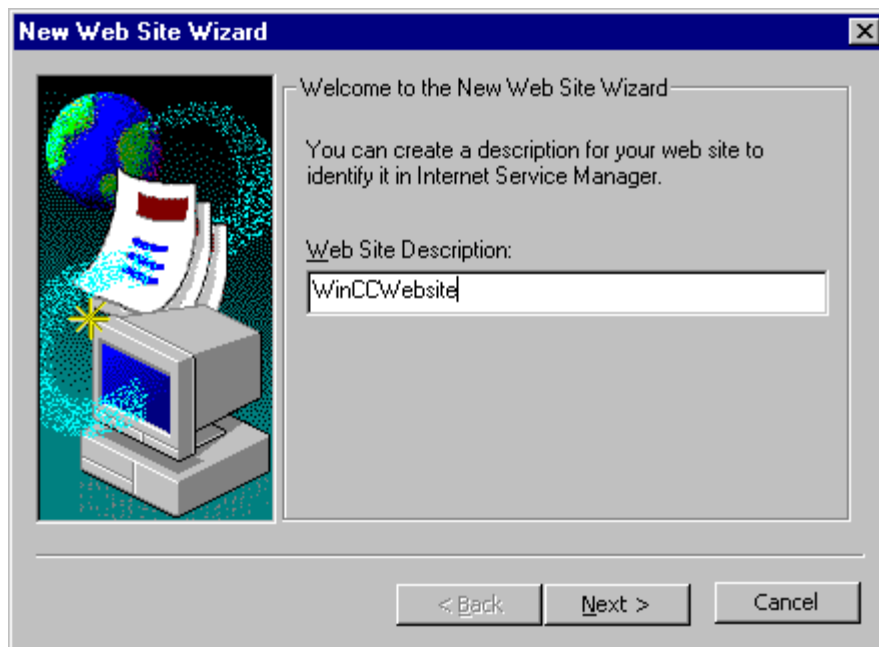
15.1.4 Web Folder Setup

15.1.4.1 Creating a new Standard Web Site

In Windows NT 4.0, activate the IIS via "Programs" → "Windows NT 4.0 Option Pack" → "Microsoft Internet Information Server" → "Internet Service Manager". In Windows 2000, this is done via "Programs" → "Administration" → "Internet Service Manager".

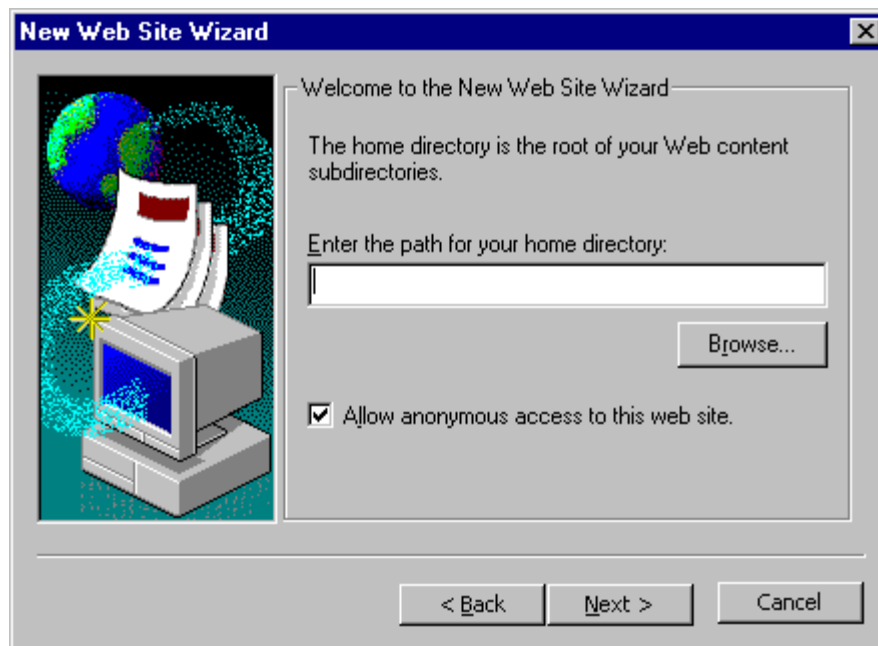
In the "Internet Service Manager" dialog box, right-click on the computer or Web site and select the "New" → "Web Site" menu commands from the displayed pop-up menu.

This will start the Web Site Wizard.

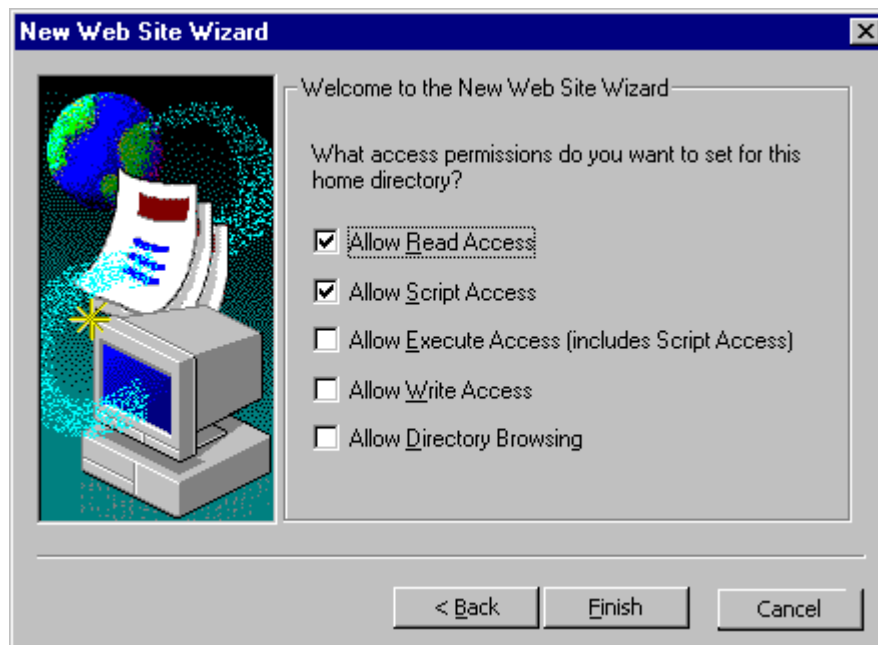


Click on the "Next" button and select the IP address and the TCP connection.

In the following dialog box, the path of the home folder is specified. Since the information concerned is sensitive, no anonymous Web site access should be allowed.



In the next dialog box, only activate the "Allow Read Access" and "Allow Script Access" check-boxes and exit the Wizard by clicking on the "Finish" button.



15.1.4.2 Virtual Folder

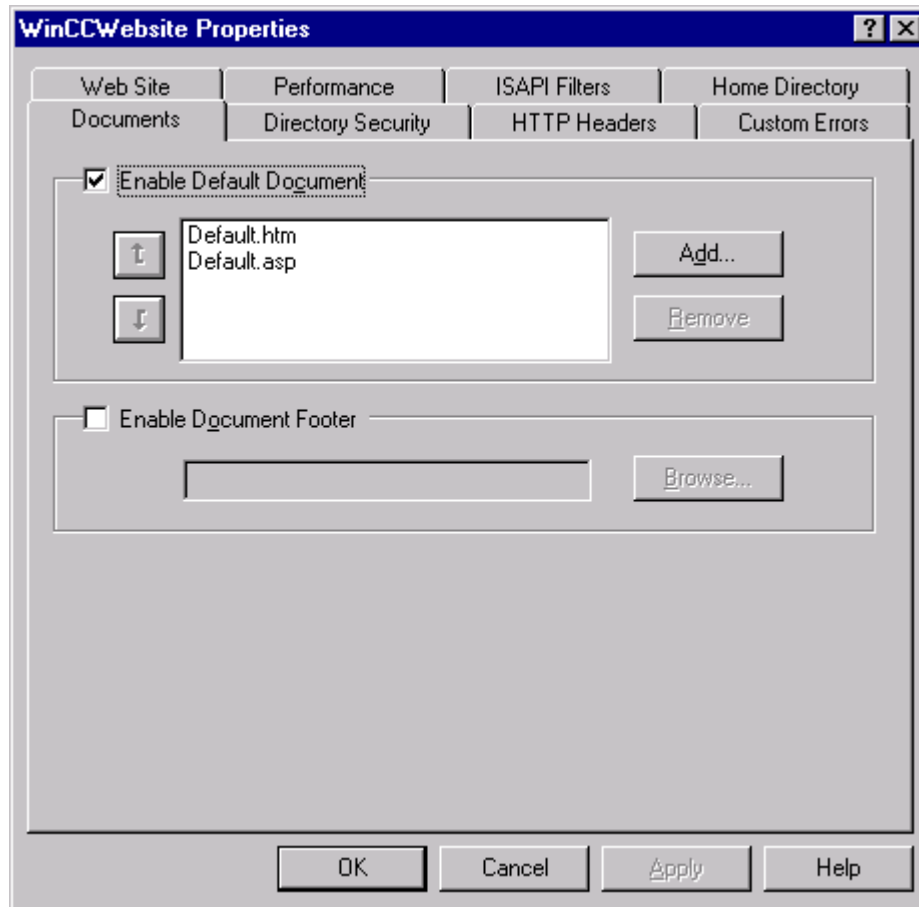
If your Web site includes files which are either not on the same drive as the root directory or are not on the same computer and are to be executed on the Internet Information Server, you must create a virtual folder to accommodate these files in your Web site. Such a folder can be located on a local drive or on another computer in the network. If you would like to use a folder on another computer, you need to specify the UNC name (UNC = Universal Naming Convention) of the folder and provide a user name and password for access authorization. An overview of all virtual folders can be found under Virtual Folders.

How to Create a Virtual Folder

1. In the Internet Services Manager, select the Web site which you would like to add to the folder.
2. Click on the Action button, point to New and then select Virtual Folder.
3. Make the actual settings for new virtual folders with the help of the wizard.

15.1.5 Setting the Start Page

The start page is the document which is opened on a browser request for data. The default page names are "index.html, index.htm, default.html, default.htm"

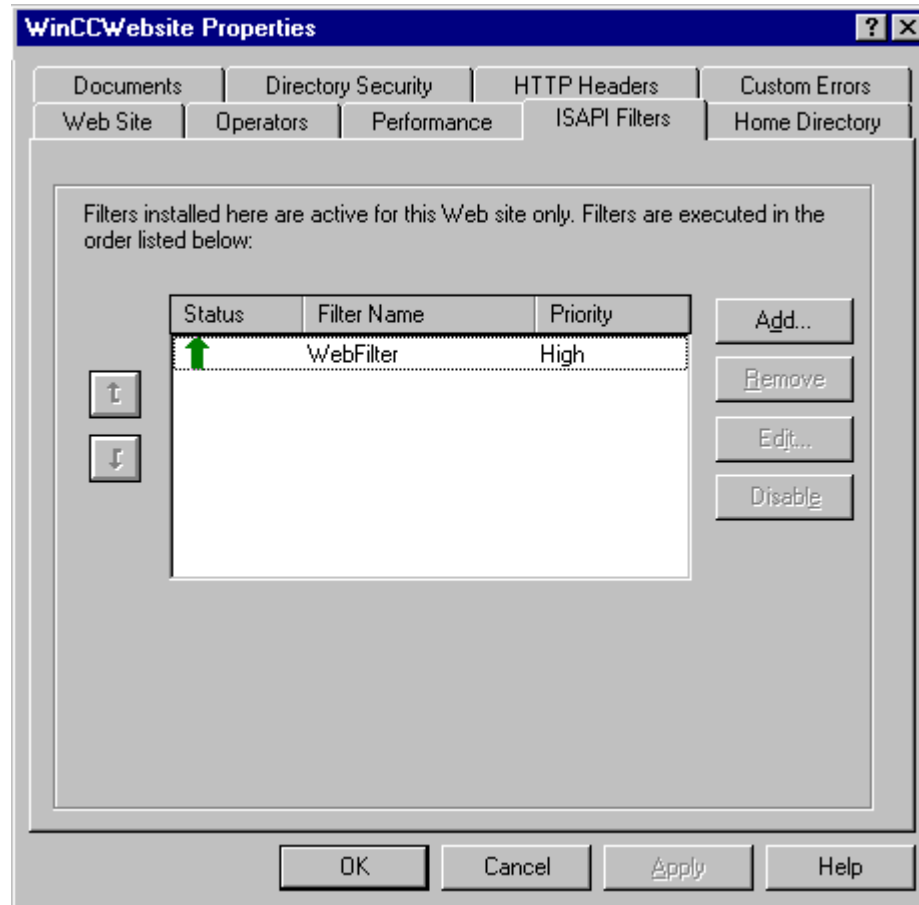


- In the Internet Services Manager, click the right mouse button on the name of the Web site, e.g. WinCCWebsite, and in the pop-up menu click on the "Properties" entry
- Click on the "Documents" tab and insert "webclient.asp" as the default document. In this case, Webclient.asp is called up on a browser request and the respective start picture displayed in the browser.

15.1.6 Adding an ISAPI Filter

An ISAPI filter is a program which reacts to events which occur during the processing of an HTTP request.

- In the Properties dialog box of the "WinCCWebsite" Web site, click on the ISAPI Filters tab.
- This table lists the states, names and priority levels of the filter.



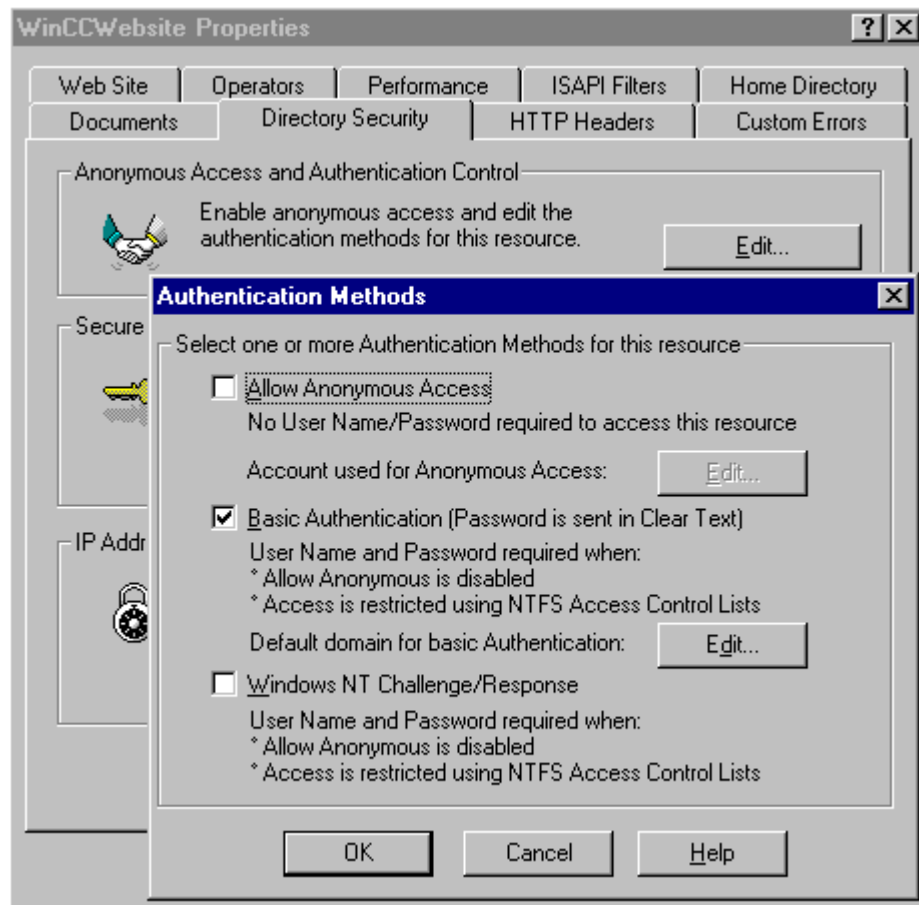
- Click on "Add" to activate the filter of the Web Navigator (Webfilter.dll). The program is located in the installation folder (..\Siemens\WinCC\WebNavigator\Server\Web\bin\..) of the WinCC Web Navigator.
- If the ISAPI filter has been changed (deleted and then relinked), the PC must be restarted or, as the case may be, the WWW Publishing Service must be exited and restarted.

Note

While operating the WinCC Web Navigator Server, only one Web project can be active per computer, since the Web filter is loaded to the storage of the active Web.

15.1.7 Setting the Default Authentication

- In the Properties dialog box of the "WinCCWebsite", click on the "Directory Security" tab. The security functions of the Web Server are set in this tab.
- In the "Enable anonymous access and edit the authentication methods for this resource" entry, click on the "Edit" button.



Activate "Basic Authentication (Password is Sent in Clear Text)". This is a commonly used method for identifying and authenticating the user in accordance with the industry standard.

During the course of the non-encrypted authenticity confirmation, the Web browser prompts the user to enter a valid user account name and the corresponding password.

Note

When SSL is used, all information, including both the request and the response, are encrypted. This includes the information for the authenticity confirmation of the HTTP access (user name/password) as well as all data which are transferred by the server to the client.

15.1.8 Application Settings

An application is defined as all folders and data contained in a folder which is defined as the starting point of the application until another starting point of an application is found. When you make the root directory of the site the starting point of an application, each virtual folder and each physical folder contained in the site can share the directory. Click on Create to make this directory a starting point of an application (thereby creating an application). To cancel a root directory's assignment to an application, click on the Remove button.

Enter the name of the application in the Name text field. This name is displayed in the Properties windows of all folders which are located within the set boundaries of the given application. Click on the Configure button to define the properties of the application.

The image shows the 'WinCC Website Properties' dialog box with the 'Application Settings' tab selected. The dialog has several tabs: Documents, Directory Security, HTTP Headers, Custom Errors, Web Site, Performance, ISAPI Filters, and Home Directory. The 'Web Site' tab is active, showing options for where content comes from (local directory, share, or URL). The 'Local Path' is set to 'C:\inetpub\wwwroot'. Below this are checkboxes for 'Read' and 'Write' permissions, and 'Log access' and 'Directory browsing allowed' under 'Content Control'. The 'Application Settings' section at the bottom has a 'Name' field set to 'Default Application', a 'Starting Point' set to '<No Application Defined>', and a 'Permissions' section with 'Script' selected. Buttons for 'Create', 'Configuration...', 'Unload', 'OK', 'Cancel', 'Apply', and 'Help' are visible.

WinCC Website Properties

Documents | Directory Security | HTTP Headers | Custom Errors
Web Site | Performance | ISAPI Filters | Home Directory

When connecting to this resource, the content should come from:

- ☒ A directory located on this computer
- ☐ A share located on another computer
- ☐ A redirection to a URL

Local Path: Browse...

Access Permissions: ☒ Read ☐ Write

Content Control: ☒ Log access ☐ Directory browsing allowed

Content Control: ☐ Index this directory ☐ FrontPage Web

Application Settings

Name: Create

Starting Point: <No Application Defined> Configuration...

☐ Run in separate memory space (isolated process)

Permissions: ☐ None ☒ Script ☐ Execute (including script)

Unload

OK Cancel Apply Help

15.2 Troubleshooting and Error Correction

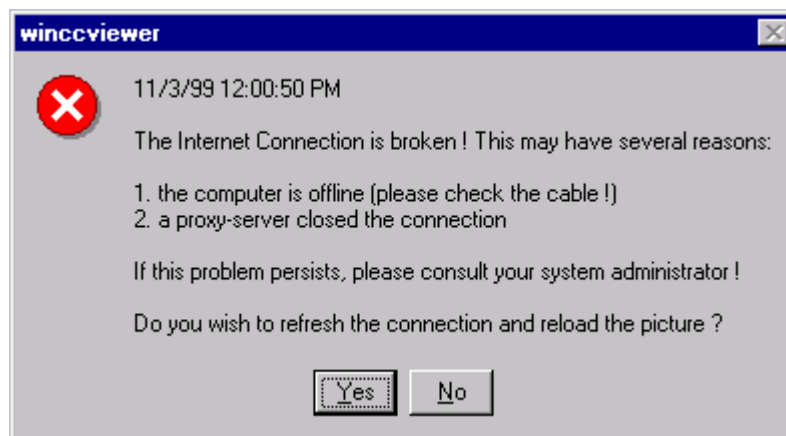
No Communication between the WinCC Web Navigator Server and the Client

If "Content Filtering" is set for an Internet connection from a provider (participating proxy, firewall), the Web Navigator communication will no longer function. With content filtering, only certain contents of HTML pages can be displayed. In this case, the communication is routed via a defined port to an IP address such as the address of the WinCC server.

- At the WinCC Web Navigator Server, its IP address must deactivate the "Smart Filtering". Filtering also makes no sense, since no viruses or HTML contents are present on the WinCC server.
- The WinCC Web Navigator Server changes the principle of the communication - the client calls in a defined interval via the registered tags.
- If the customer uses the SSL technology, the "Content Smart Filtering" is not possible, since the data is transmitted encrypted.

Connection Termination

In the case of connection terminations, delays or communication fluctuations - which occur intermittently in the Internet environment - it may happen that the connection to the WinCC Web Server gets severed. In that case, the following dialog box would be displayed.



Click on the "Yes" button to reestablish the connection and to update the picture.

No pictures are being displayed

In the Internet Explorer, check whether the following setting has been activated:

- Internet Explorer 4.0: Menu commands "View"/"Internet Options", tab: "Advanced"/"Browse in a new process"
- Internet Explorer 5: Menu commands "Tools"/"Internet Options", tab: "Advanced"/"Open Browser window in a new process" (provided that the option is available)

On the WinCC Web Navigator Server computer, check whether the correct Web site has been activated. Additional information can be found in the "Checking the activated Web Site" chapter.

Incorrect Start Picture

The start picture displayed by the Internet Explorer does not match the picture you have just edited.

- Start the Web View Publisher to make the new picture available to the Internet.
- Delete the temporary Internet files. Internet Explorer 4.0: under "View"/"Internet Options"; Internet Explorer 5.0: under "Tools"/"Internet Options".

Used Abbreviations

Abbreviation	Description
DNS	Domain Name System
HTTP	Hyper Text Transfer Protocol
HTTPS	HTTPS is an extension of the HTTP protocol
IE	Internet Explorer
IIS	Internet Information Server
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	Transmission Control Protocol/Internet Protocol
UNC - Name	A name which meets the requirements of the Universal Naming Convention
WWW	World Wide Web

15.3 Tested Components

The WinCC Web Navigator has been tested with the following software components:

- Microsoft Visual Studio 6
- Microsoft Office 97
- Microsoft Office 2000
- Visio 4
- Migrografix Publisher

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WinCC Web Navigator V1.1

Manual

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(We have checked the contents of this manual for agreement with the hardware and software described. Since deviations cannot be precluded entirely, we cannot guarantee full agreement. However, the data in this manual are reviewed regularly and any necessary corrections included in subsequent editions. Suggestions for improvement are welcomed.)

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Introduction

Welcome to the WinCC Web Navigator.







WinCC is the first HMI (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. This makes it possible to control and monitor the project running on the server computer from any location on earth.

Notation

This document uses the following notation:

Symbol	Description
	indicates a left mouse-button click
 R	indicates a right mouse-button click
 D	indicates a double-click with the left mouse-button
 H	indicates an input while keeping the left mouse-button pressed
	indicates an inputs via the keyboard
 "File" → "New"	all menus and input fields that have to be selected are enclosed in quotation marks
#1	In the texts accompanying the screenshots, the number "#n" determines the order in which the operating steps are to be performed.



1 Installation and Deinstallation

This chapter outlines the WinCC Web Navigator hardware and operating system requirements, the installation procedure of the CD-ROM and the setup of the work environment.

WinCC Web Navigator Client

Operating System:	Windows 98 or higher, Windows ME, Windows NT 4.0 or higher, Windows 2000
Software:	Internet Explorer V5.01 or higher
Minimum Hardware Requirements:	For the WinCC Web Navigator Client, no special hardware is required, however, the IE V5.01 must be able to run.
Other:	Access to Intranet/Internet

WinCC Web Navigator Server

Operating System:	Windows NT 4.0 and Service Pack 6a or higher, Windows 2000 SP1
Software:	Internet Explorer V5.01 or higher, Windows NT 4.0 Service Pack 6a, Windows NT 4.0 Option Pack, WinCC Basic System V5.0 SP2 or higher
Minimum Hardware Requirements:	Pentium II 266 MHz, 128 MB RAM, 500 MB available Hard Drive Space, Network Interfaces
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 the server.

If you want to publish Internet information, the following is required:

An Internet connection and an IP address from an Internet service provider (ISP). You can only publish information on the Internet, if you possess a connection to the Internet (provided by an ISP).

A 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 the server.

Note

In order to have more than three clients, the Server version of NT 4.0 or Windows 2000 must be installed, since the Workstation version is limited to three clients.

1.1 Installation

1.1.1 Procedure

The WinCC Web Navigator Server requires the Windows NT Service Pack 6a (or higher) or Windows 2000 SP1 to be installed as well as WinCC V5.0 SP2 and the Windows NT 4.0 Option Pack.

Please refer to the WinCC documentation for details regarding the WinCC installation. The following description assumes that WinCC has already been installed.

Installation of the WinCC Web Navigator Server under Windows NT 4.0:

1. Installation of the Windows NT 4.0 Option Pack
2. Do not restart computer
3. Installation of the Windows NT 4.0 Service Pack 6a or higher
4. Restart computer
5. Installation of the WinCC Web Navigator Server

Installation of the WinCC Web Navigator Server under Windows 2000:

1. Only with Windows 2000 Professional: Installation of the Internet Information Server (IIS)
2. Installation of the WinCC Web Navigator Server

1.1.2 Installation of the Windows NT 4.0 Option Pack

Software Requirements:

- Windows NT 4.0 or higher
- Internet Explorer 5.01

If one of these components is missing, the setup will not be carried out.

The Windows NT Option Pack offers expanded Web and application services for Windows NT.

The Option Pack for NT Workstation comes with the Microsoft Personal Web Server (PWS) as the Internet Server, the Option Pack for NT Server with the Internet Information Server (IIS).

Note


Administrator rights are required to install the Internet Server under Windows NT.

You will be guided through the entire installation of the Windows NT Option Pack. Please follow the on-screen instructions.

For the installation of the Windows NT Option Pack, a CD-ROM titled "Option Pack" is supplied.

After inserting this CD-ROM into the CD-ROM drive, the installation will automatically be started. The following dialog box will be displayed.

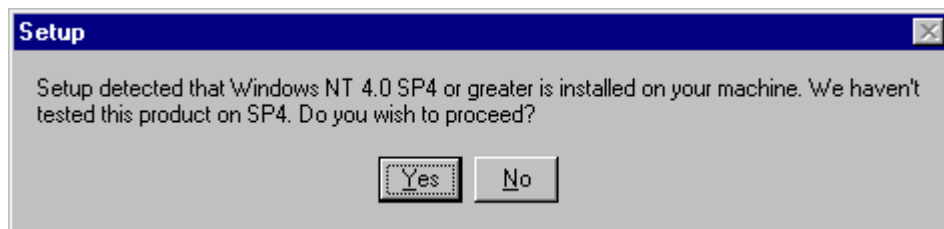


 Select the "Install Software" menu command. The "Install Software" dialog will open.



Select the Option Pack that you want to install. Via the "Question Mark" icon, the corresponding help file can be accessed.

If the Windows NT Service Pack 4 or higher has been installed on the computer, the following dialog box will be displayed.




Click on "Yes" to proceed with the installation.


If a newer version of the Option Pack has already been installed on the computer, a dialog box will ask, whether the installed, newer version is to be overwritten. Select "Do not overwrite".

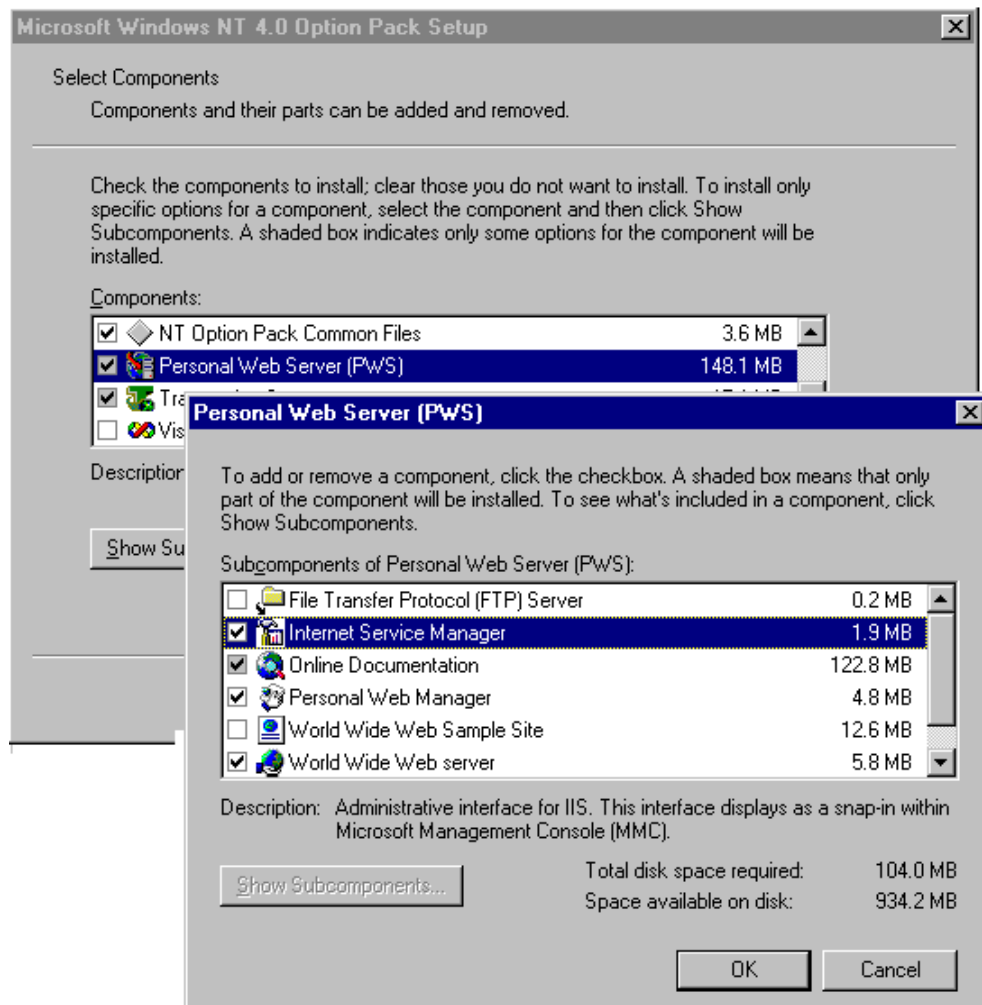
Windows NT Server


In the "Windows NT 4.0 Option Pack Setup" dialog box, click on the "Standard" button. The setup will install the necessary files and start the WWW (World Wide Web) service. This concludes the installation of the IIS.

Windows NT Workstation

 In the "Windows NT 4.0 Option Pack Setup" dialog box, click on the "User-defined" button.

 In the following dialog box, select the "Personal Web Server (PWS)" entry. Click on "Show Sub-Components" button.



 In the "Personal Web Server (PWS)" dialog box, activate the "Internet Service Manager" check-box. Confirm all dialog boxes. The setup will install the necessary files and start the WWW (World Wide Web) service. This concludes the installation of the PWS.

 After installing the IIS/PWS, do not restart the computer.



Install the Service Pack 6a or higher without the deinstallation folder option.



Restart the computer.

Detailed help pertaining to the individual components of the Windows NT Option Pack can be found in the accompanying documentation.

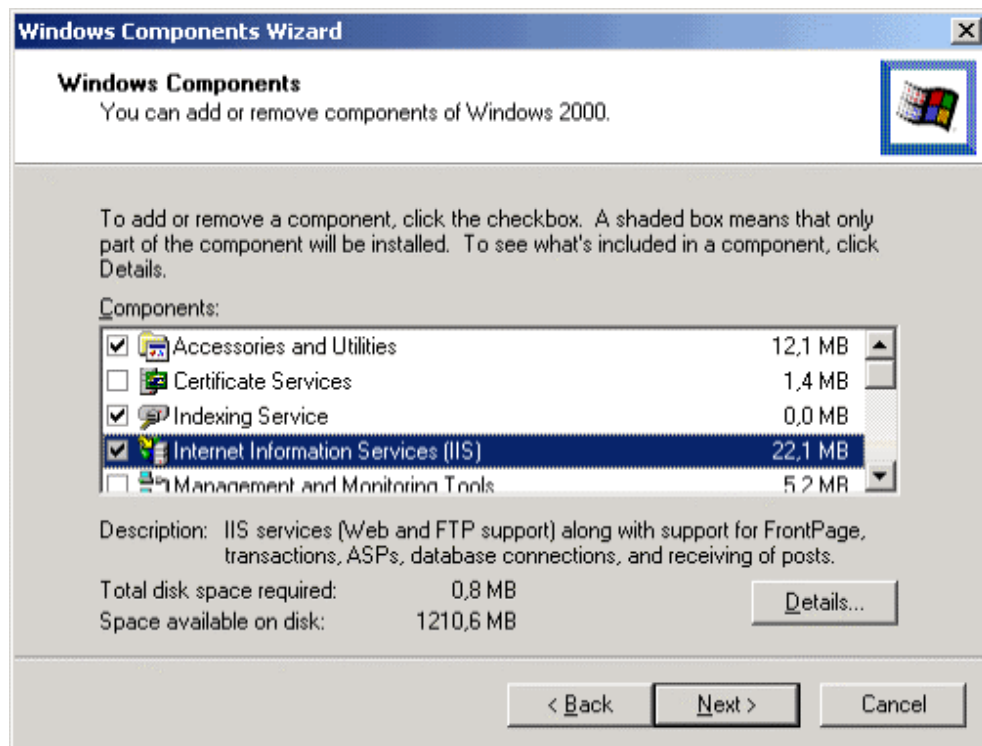
1.1.3 Installation of the Internet Information Server (IIS) with Windows 2000 Professional

When using Windows 2000 Professional, the Internet Information Server (IIS) must be installed prior to the WinCC Web Navigator Server. When using Windows 2000 Server, this manual installation is not necessary.

Note

In order to install the Internet Information Server under Windows 2000 Professional, write permissions to the registry database are required, i.e. you must possess administrator rights.

- Insert the Windows 2000 CD-ROM into the CD-ROM drive.
- From the Windows 2000 start menu, select the "Settings" → "Control Panel" entries and then click on the "Add/Remove Programs" icon.
- In the "Add/Remove Programs" dialog box, click on the "Add/Remove Windows Components" icon. The following dialog box will open.



- In the selection window, activate the check-box before the "Internet Information Services (IIS)" entry.
- Click on "Next".

Windows will then start with the transfer of the files and continue to guide you through the installation.

1.1.4 Installation of the WinCC Web Navigator Server

Note


In order to install the server component of the WinCC Web Navigator under Windows NT, write permissions to the registry database are required, i.e. you must possess administrator rights.

Prior to installing the WinCC Web Navigator Server, the Windows NT 4.0 Option Pack has to be installed. Following the installation of the Windows NT Option Pack, the Windows NT Service Pack has to be installed again to ensure proper communication to the Internet.

- Insert the WinCC Web Navigator CD-ROM into the CD-ROM drive.
- The setup program will start automatically after a few seconds, provided that the autorun functionality has not been deactivated.
- The setup can also be started manually in case the CD-ROM has already been inserted into the CD-ROM drive, the installation is performed from a network drive or the autorun function has been deactivated. To do so, access the Windows NT 4.0 start menu and select "Settings" → "Control Panel" → "Add/Remove Programs" and then click on the "Install" button in the "Install/Uninstall" tab. Under Windows 2000, access the start menu and select "Settings" → "Control Panel" → "Add/Remove Programs".
- The following installation dialog box will be displayed.



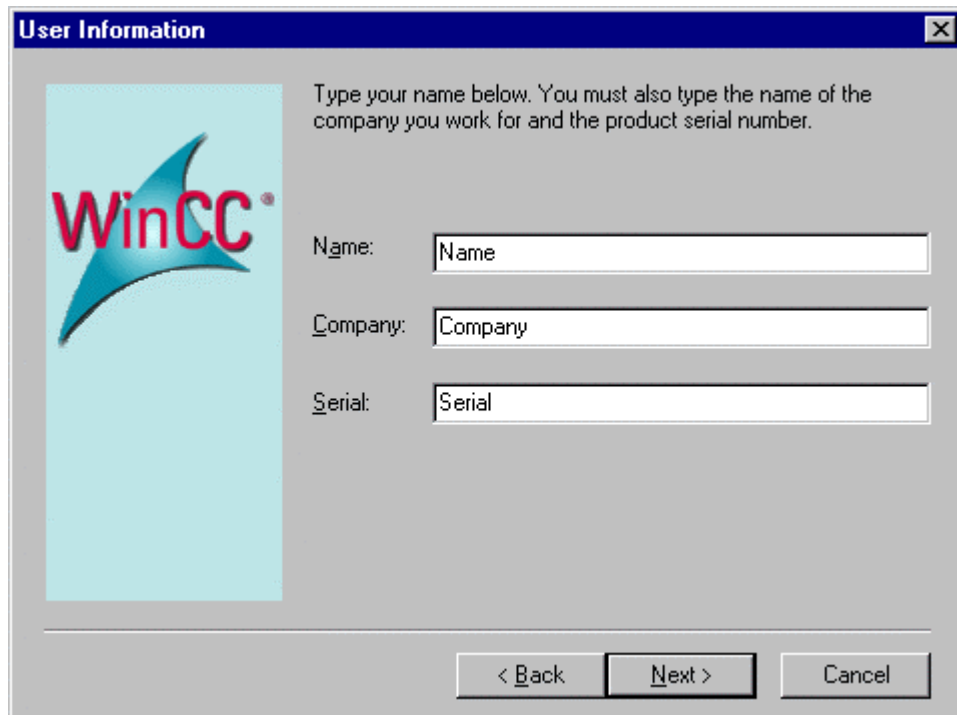
To view additional information about the WinCC Web Navigator, click on the "Welcome", "Read first", "Display CD-ROM Contents", "Install Software" and "Language Selection" entries.

 To install the WinCC Web Navigator Server, click on the "Install Software" entry. You will be guided step-by-step through the installation.


Installation: User Registration


 Read and accept the license conditions by clicking on the "Yes" button.

 In the "User Information" dialog window, enter the required data.



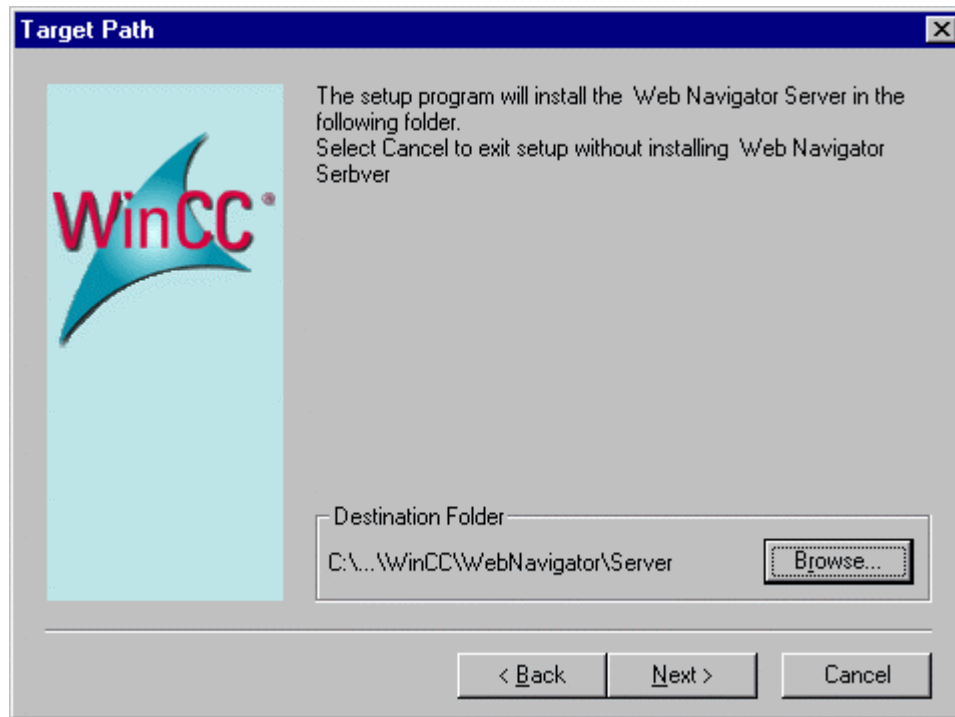
The "User Information" dialog box is shown. It has a title bar with the text "User Information" and a close button. On the left side, there is a light blue rectangular area containing the WinCC logo. To the right of this area, the text reads: "Type your name below. You must also type the name of the company you work for and the product serial number." Below this text are three input fields: "Name:" followed by a text box containing the placeholder "Name", "Company:" followed by a text box containing the placeholder "Company", and "Serial:" followed by a text box containing the placeholder "Serial". At the bottom right of the dialog box, there are three buttons: "< Back", "Next >", and "Cancel".

 Click on the "Next" button.

 Confirm your inputs in the "Registration Confirmation" dialog by clicking on the "Yes" button.

Installation: Folder Selection

Select the target folder, in which the WinCC Web Navigator Server is to be installed. The default folder is "C:\Siemens\WinCC\WebNavigator\Server".

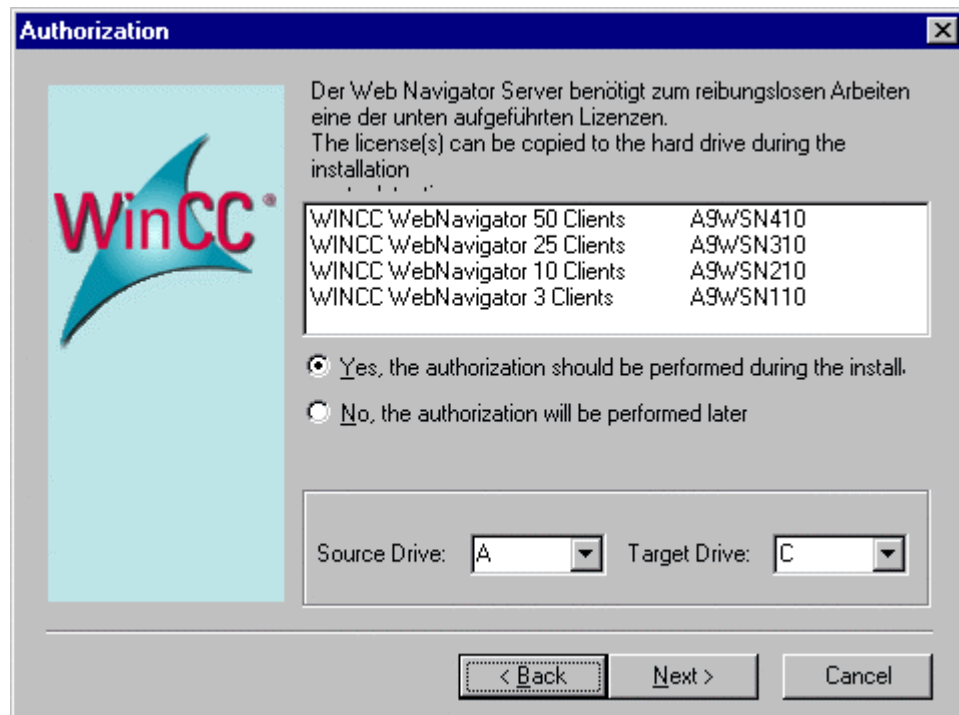


Click on the "Next" button.

Confirm your inputs in the next dialog box by clicking on the "Next" button.

Installation: Authorization

The "Authorization" dialog box will display a list of the required authorizations based on the components selected. Select the "Yes, the authorization should be performed during the installation" radio-button and insert the authorization floppy disk into drive "A:".



Click on the "Next" button.

The following dialog box will display the selected settings. If you want to make changes to the settings, click on the "Back" button, otherwise click on "Next".

The WinCC Web Navigator Server will then start with the transfer of the files. At the conclusion of the installation, you have the option to open the "README.TXT" file.

To complete the installation, click on "Yes, restart computer now" in the final dialog box.

1.2 Deinstallation

The WinCC Web Navigator Server and the WinCC Web Navigator Client can be deinstalled as usual from Windows. Access the Windows "Control Panel" and double-click on the "Add/Remove Programs" icon.

- Under Windows NT 4.0, highlight the "WinCC Web Navigator Server/Client" entry in the "Install/Uninstall" tab and then click on the "Add/Remove" button. Follow the displayed instructions.
- Under Windows 2000, double-click on the "Add/Remove Programs" icon. Follow the displayed instructions.

This will remove the WinCC Web Navigator Server/Client from your system.

Note

If you deinstall the WinCC Web Navigator Server, the corresponding authorization should also be deinstalled using the "AuthorsW.exe" application. The authorization can then be reused at a later time. Additional information about authorizations can be found in the WinCC software protection documentation.

Chapter 2

2 The first Web Project

This chapter is based on the "Qckstart" project that was outlined in the "Getting Started" manual of the WinCC basic system.

For this example project, the WinCC Web Navigator Server, WinCC and WinCC Web Navigator Client are installed on the same computer. When making changes to the WinCC project, you will work with the server components (WinCC and WinCC Web Navigator Server). The client component (WinCC Web Navigator Client) access the project via the Internet Explorer.

The following steps will be described:

- Configuration of the Web Navigator Server
- Conversion of Process Pictures so that they can run on the WinCC Web Navigator Client
- Web Site Administration
- Installation of the WinCC Web Navigator Client
- Internet Explorer Settings
- Creation of a new Process Picture

2.1 Configuration of the WinCC Web Navigator Server

2.1.1 Step 1: Starting the "Qckstart" Project



Click on this icon and then select the "Execute the program from this location" entry to copy the project to the hard drive of your computer.

Follow the displayed instructions.



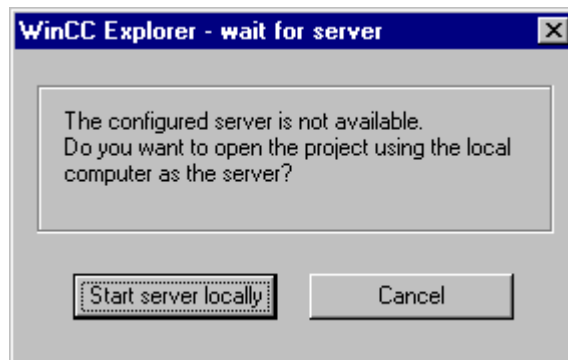
Activate WinCC via "SIMATIC" → "WinCC" → "Windows Control Center".



Open the "Qckstart" project.



Click on the "Start server locally" button in the following dialog.



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 on the "Computer" entry and then select the "Properties" menu command from the displayed pop-up menu.



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



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

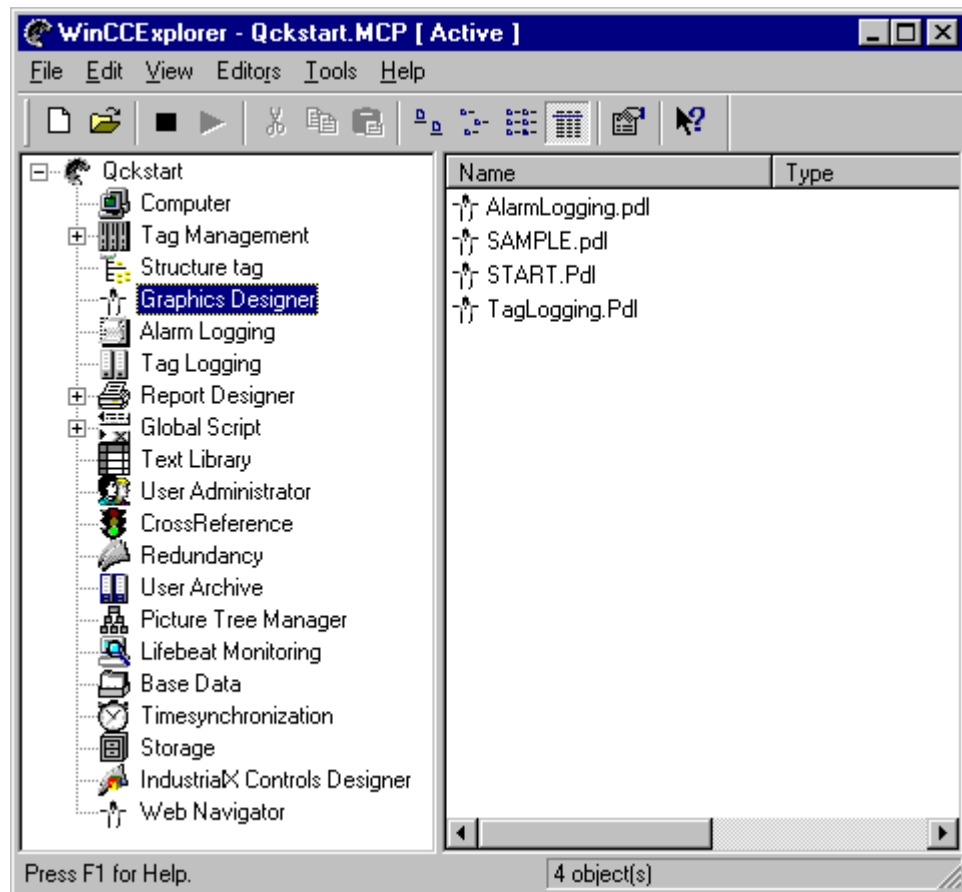


Click on the "OK" button.


The changes will become effective after a restart of the project.

Close the "Qckstart" project via the "File/Exit" menu commands on the menu bar of the WinCC Explorer.


Open the "Qckstart" project again.




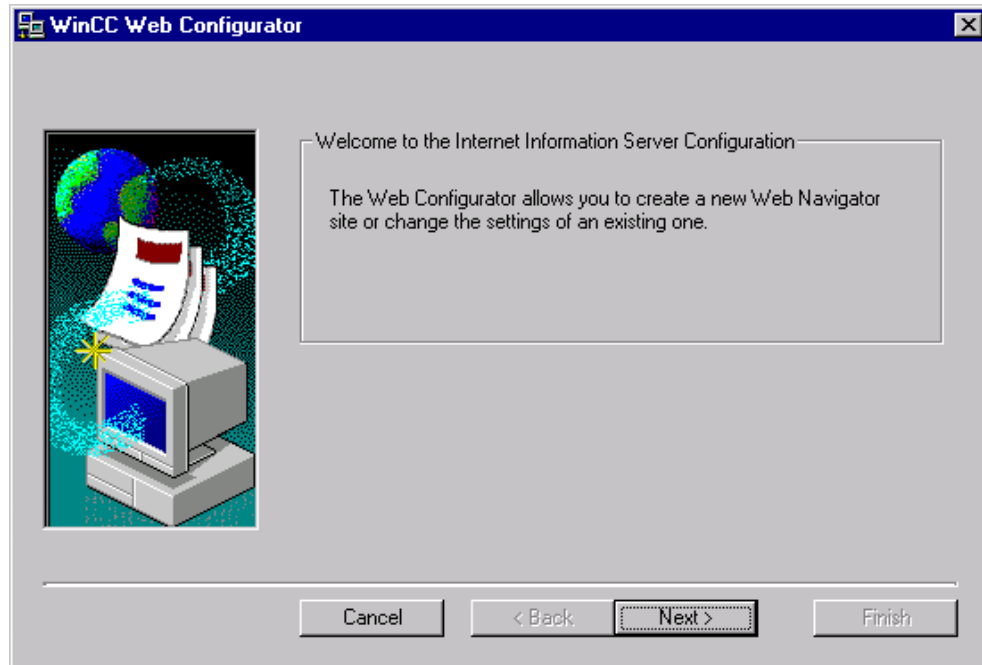
To start the runtime module, click on the "File/Activate" menu commands on the menu bar of the WinCC Explorer. A check-mark next to "Activate" indicates that runtime is active.

As an alternative, you can also use the "Activate"  button on the toolbar of the WinCC Explorer.

2.1.2 Step 2: WinCC Web Configurator

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

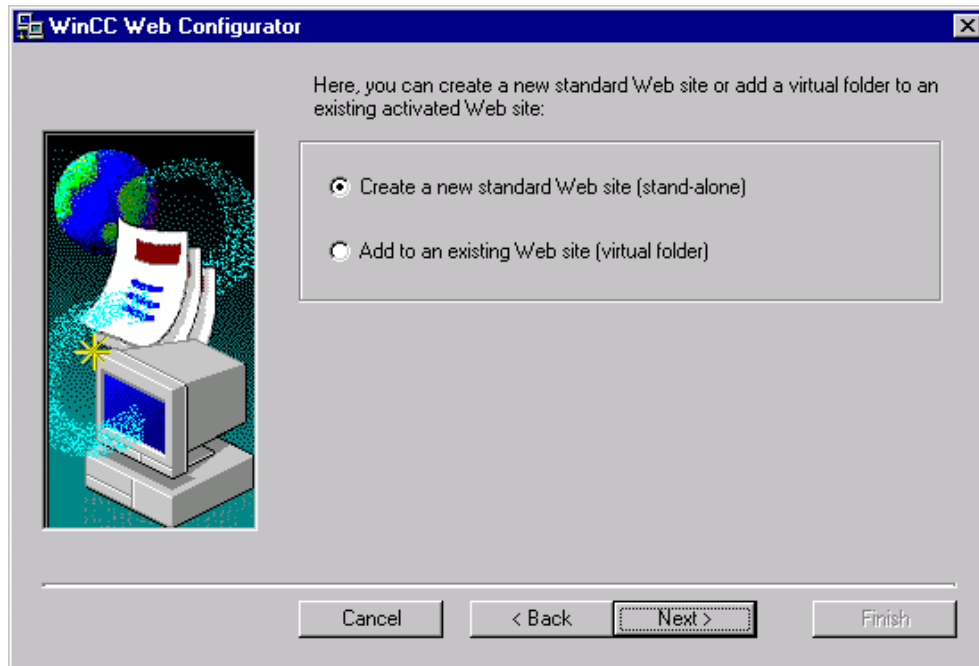
 In the pop-up menu displayed, click on the "Web Configurator" menu command.



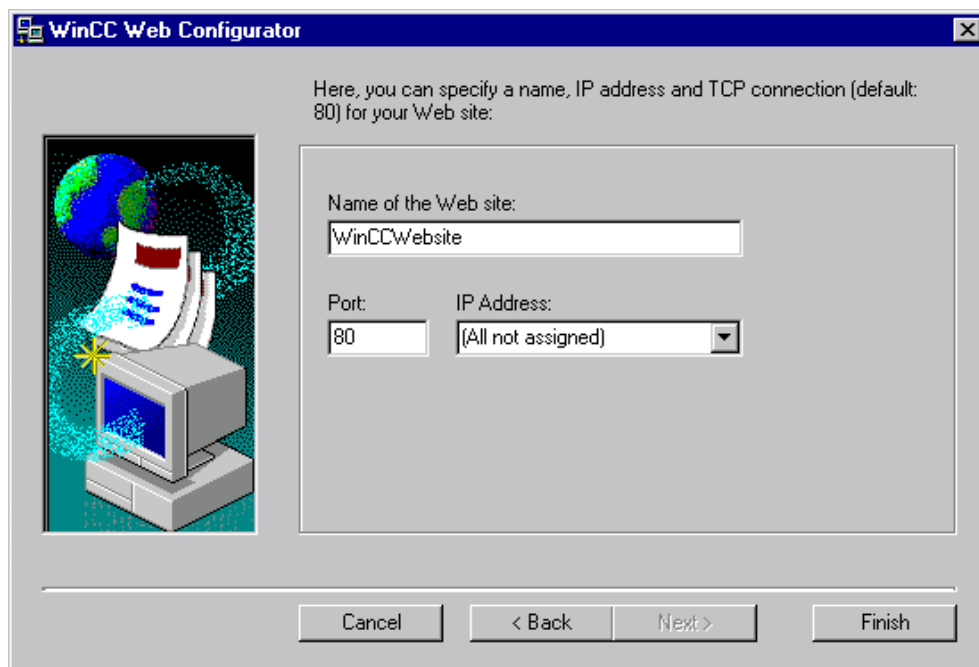
 Click on the "Next" button.

2.1.3 Step 3: Defining the Standard Web Site

When starting the WinCC Web Configurator for the first time, a dialog window will open that gives you two choices.



Select "Create a new standard Web site (stand-alone)" and click on the "Next" button.





As the name of the Web site, enter "WinCCWebSite". Select an IP address from the selection field.




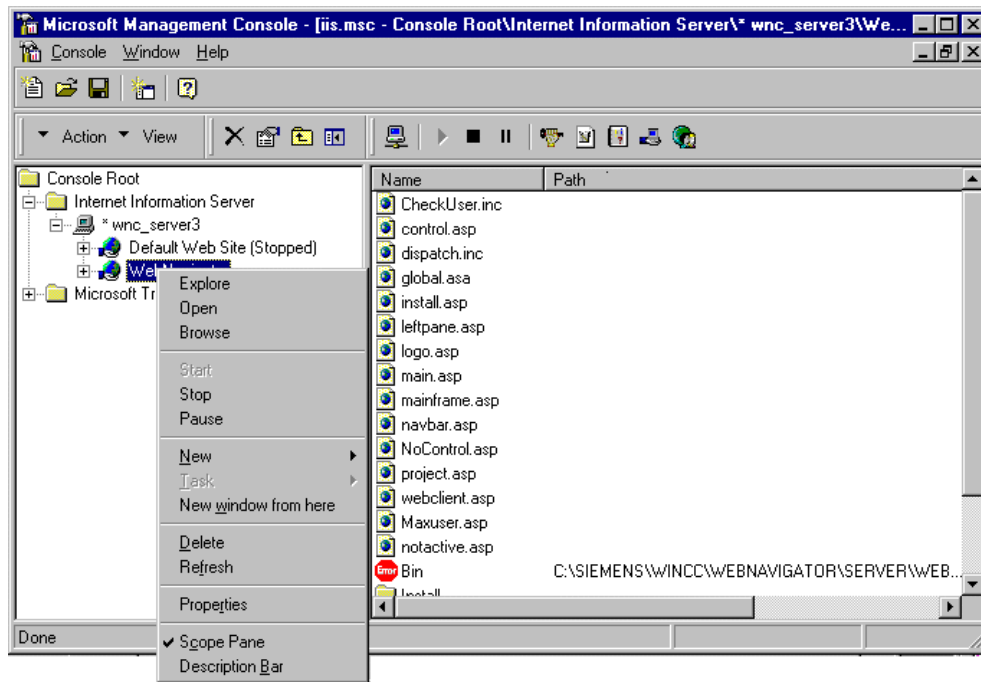
Click on the "Finish" button to complete the configuration of the server.


2.1.4 Step 4: Checking the activated Web Site (Web)

 Activate the Internet Information Server.

- Under Windows NT 4.0, select "Programs" → "Windows NT 4.0 Option Pack" → "Microsoft Internet Information Server" → "Internet Service Management Console".
- Under Windows 2000, select "Programs" → "Management" → "Internet Service Manager".

 In the navigation window, select the computer and open the folder displayed below it. The corresponding Web site will be displayed. Check the entry of the Web site. If "Stopped" is displayed next to the desired Web site, e.g. the "WinCCWebSite", the Web site needs to be started. To do so, right-click on the Web site and select "Start" from the displayed pop-up menu.





 Close the dialog box.

The Web site is now activated.

2.2 Conversion of Process Pictures

2.2.1 Step 5: Starting the Web View Publisher

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


 In the pop-up menu displayed, click on the "Web View Publisher" menu command.



 Click on the "Next" button.

2.2.2 Step 6: Publishing Pictures

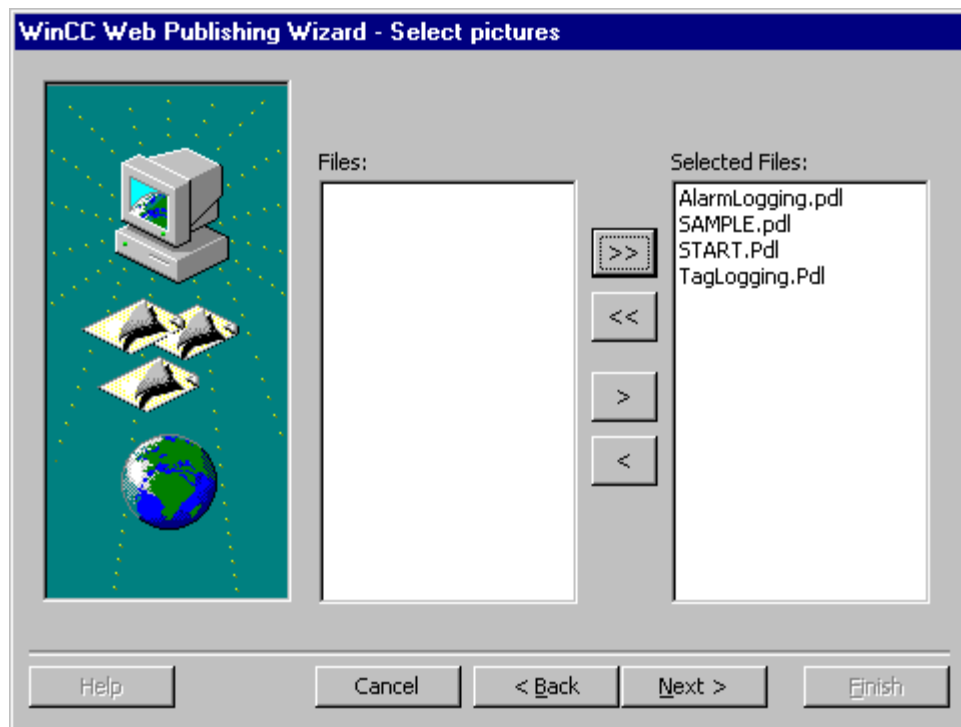


 The picture folder in the WinCC project and the folder for the Web access are generally set correctly.

Picture Folder in the WinCC Project: ...ProjectPath\ProjectName\GraCs

Folder for the Web Access: ...ProjectPath\ProjectName\WebNavigator

 Click on the "Next" button.

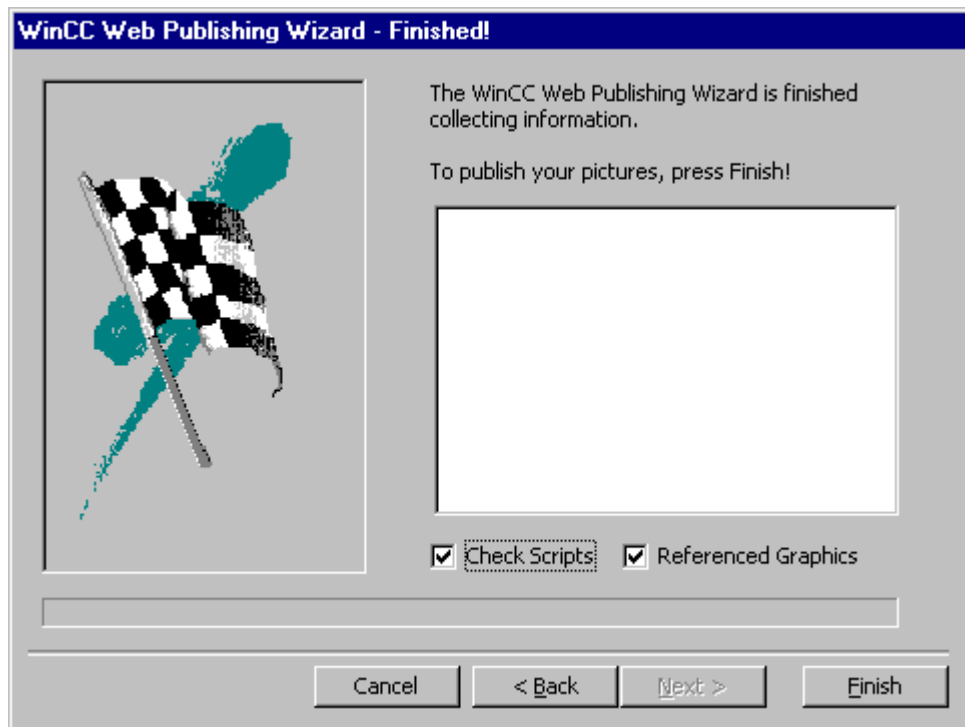


- Click on the ">>" button to select all files.
- Click on the "Next" button to go to the next dialog box.

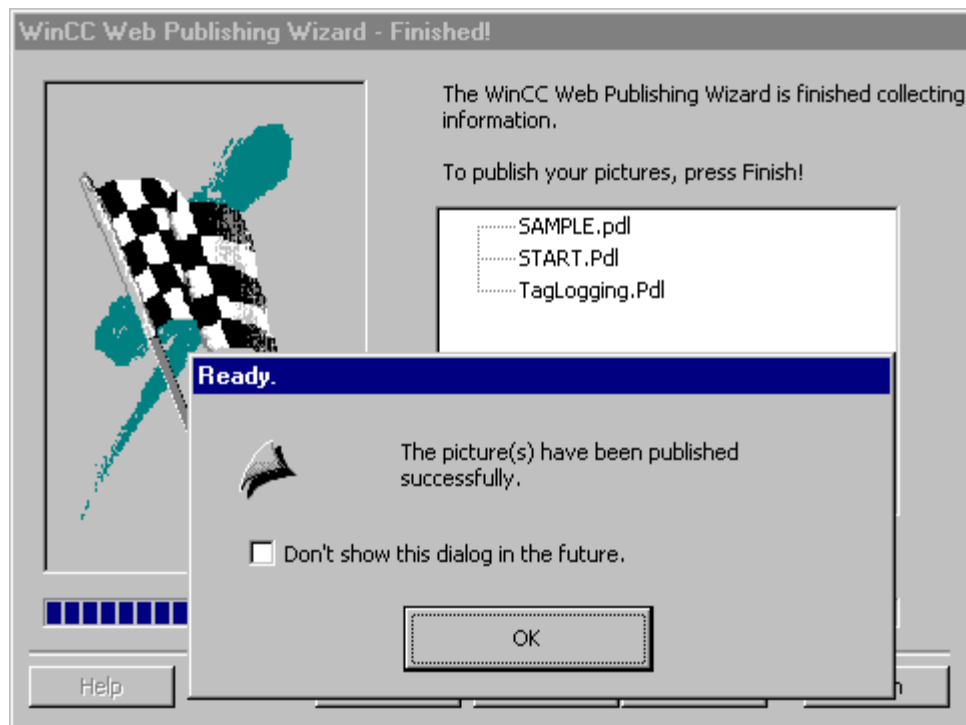


- Use the ">" button to select the project functions to be published.

- Click on the "Next" button to go to the next dialog box.





- Set the check-boxes. "Check Scripts" activates the conversion of scripts so that they can run on the client. If "Referenced Graphics" is activated, graphics (e.g. bitmaps) referenced in the pictures (*.PDL) will be transferred as well.
- Click on the "Finish" button to publish the pictures on the Web site.

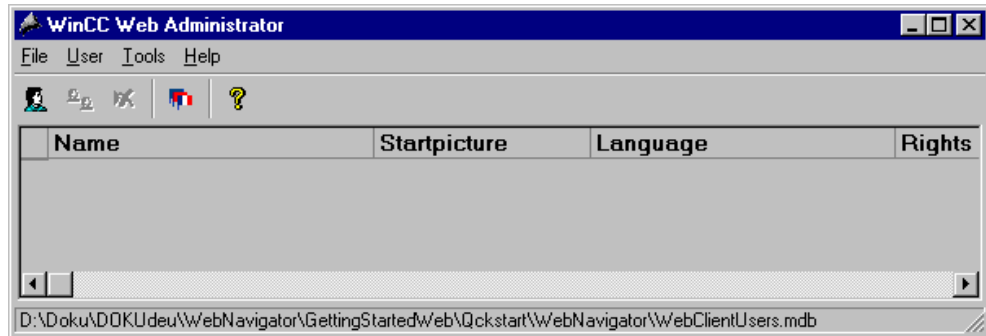


After the completion of the conversion, a dialog box will be displayed. Acknowledge this dialog box to exit the operation.


2.2.3 Step 7: WinCC Web Administrator


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

 In the pop-up menu displayed, click on the "Web Administrator" menu command.





 Click on the  button to create a new user.

 Under "Edit User", enter the necessary data.



 Confirm the inputs by clicking on the "OK" button.

Defining the Start Picture

 In the line of the desired user, double-click on the "Start Picture" field.

 In the following dialog box, select the corresponding start picture and click on the "OK" button.



Defining the Language

-  In the line of the desired user, double-click on the "Language" field.
-  Select the corresponding language, e.g. English (United States).

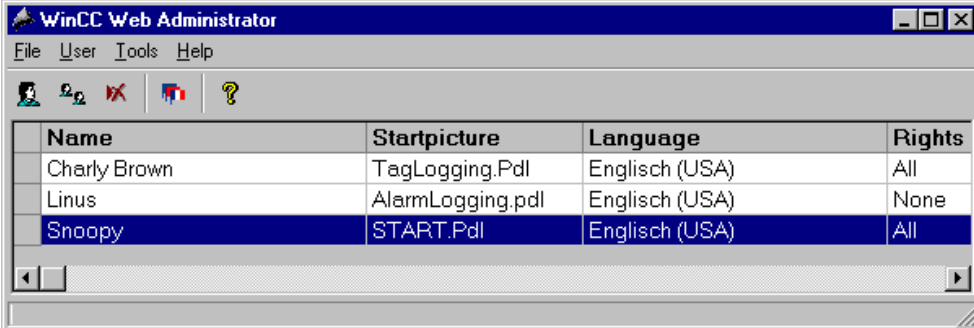
Note

Only languages installed via "Options/Languages" will be available for selection.

Defining Rights

-  In the line of the desired user, double-click on the "Rights" field.
-  Select the corresponding rights.

Repeat these steps and assign a different start picture for each user.




The screenshot shows the 'WinCC Web Administrator' window. It has a menu bar with 'File', 'User', 'Tools', and 'Help'. Below the menu is a toolbar with icons for user management, a language flag, and a help icon. The main area contains a table with four columns: 'Name', 'Startpicture', 'Language', and 'Rights'. The table lists three users: 'Charly Brown', 'Linus', and 'Snoopy'. The 'Snoopy' row is selected, highlighted in blue. Below the table is a horizontal scrollbar.

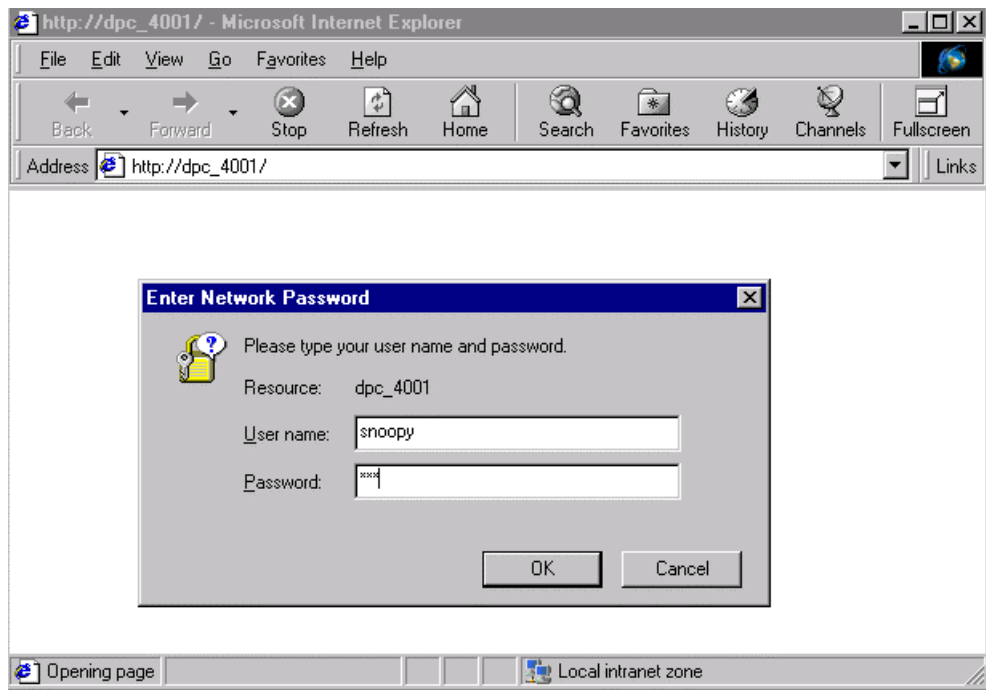
Name	Startpicture	Language	Rights
Charly Brown	TagLogging.Pdl	Englisch (USA)	All
Linus	AlarmLogging.pdl	Englisch (USA)	None
Snoopy	START.Pdl	Englisch (USA)	All


2.3 Client Access to the Web Project

2.3.1 Step 8: Installation of the WinCC Web Navigator Client

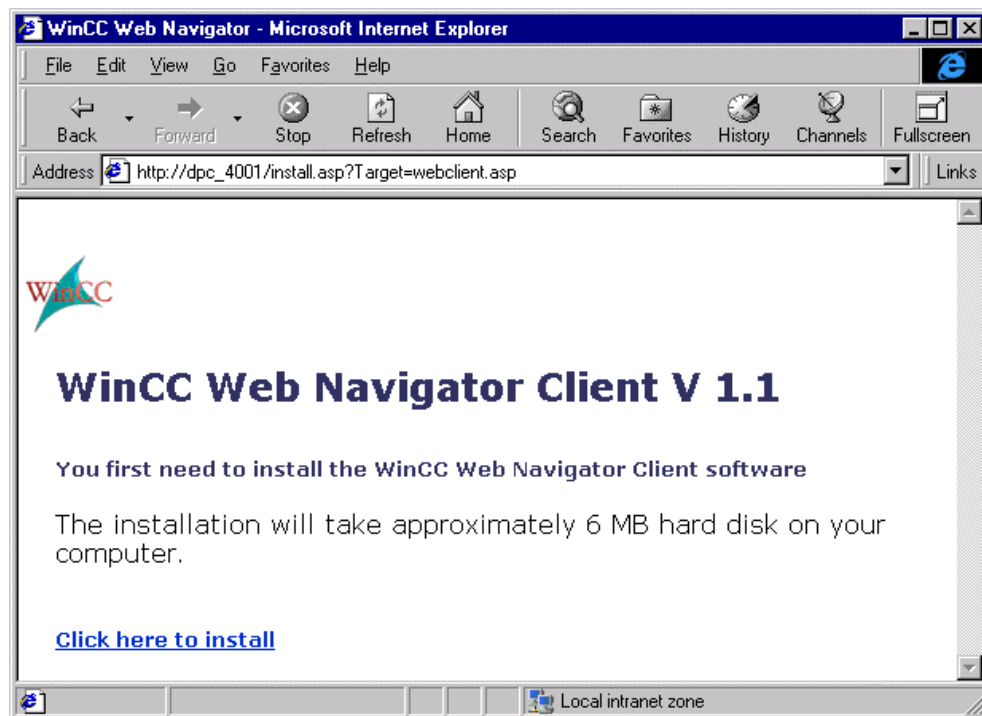
 In the address field of the Internet Explorer, enter the address of the Web Navigator Server, e.g. `http://Name_of_Server`, and then hit the "Enter" key.

 You will be asked to input your user name and password, e.g. Snoopy.

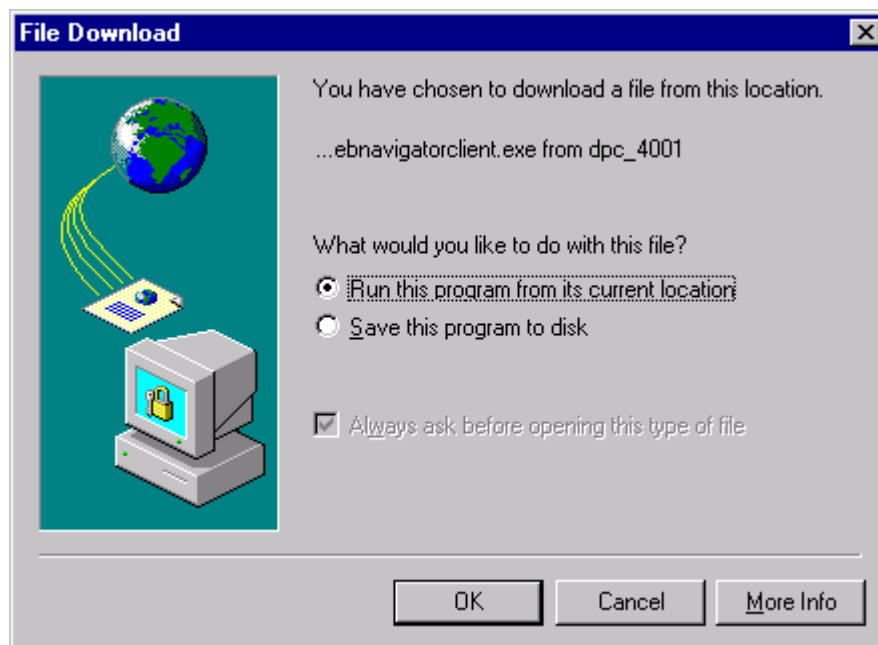


 Confirm your inputs by clicking on the "OK" button.

When accessing the WinCC Web Navigator Server for the first time, the following page will be displayed.

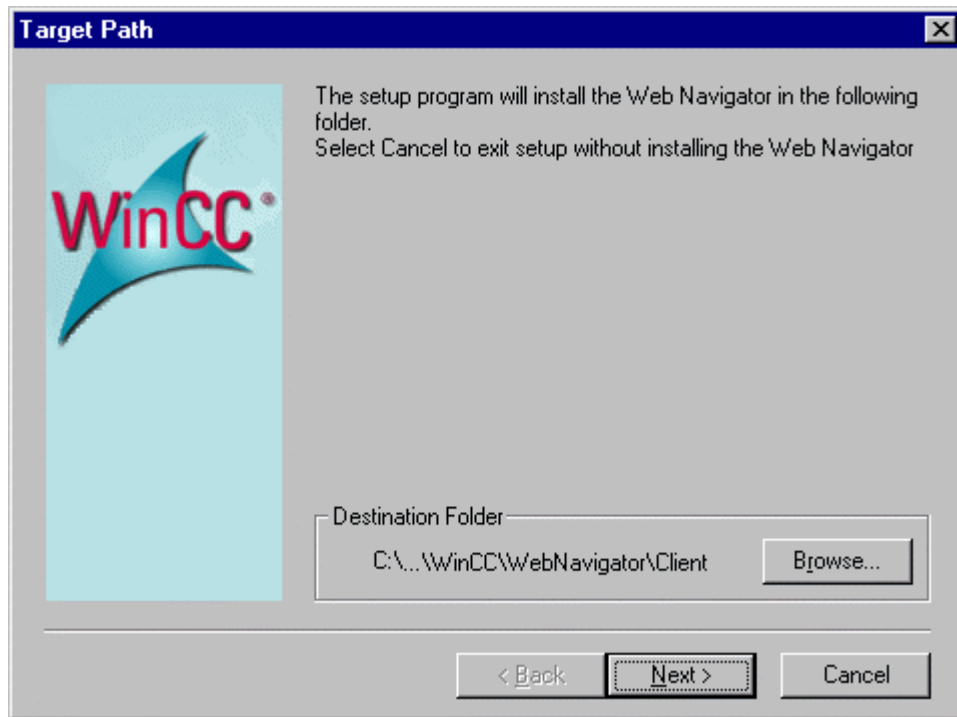



Click on the link "Click here to install" to copy the program to your client computer.




Activate the "Run this program from its current location" radio-button and confirm the selection by clicking on the "OK" button.

The downloaded file will be unzipped and the setup of the WinCC Web Navigator Client be started.





 In the following dialog box, select the target folder, in which the WinCC Web Navigator Client is to be installed. The default folder is "C:\Siemens\WinCC\WebNavigator\Client".

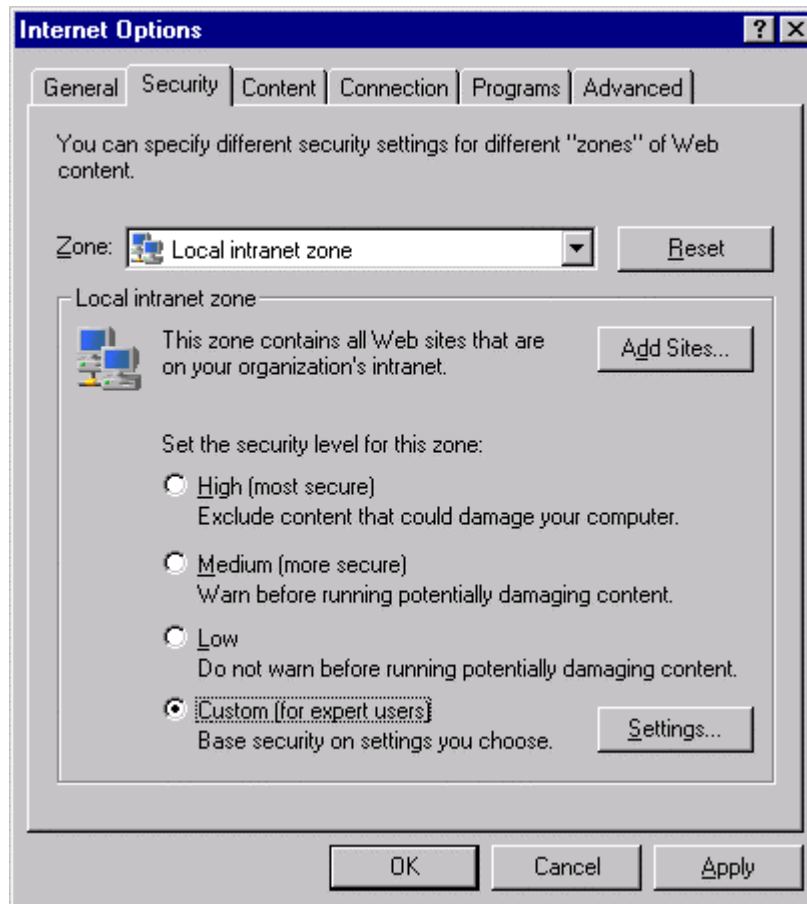
 Click on the "Next" button.


After the successful installation of the WinCC Web Navigator Client software, the client will connect to the runtime project.

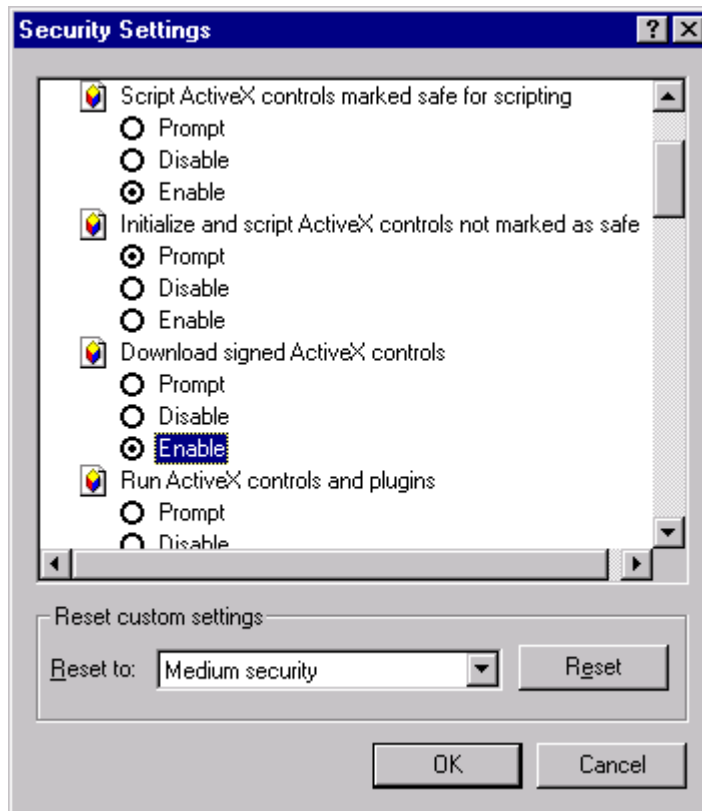
2.3.2 Step 9: Internet Explorer Settings

 In the Internet Explorer 4.0, click on "View" → "Internet Options" and in the Internet Explorer 5 on "Tools" → "Internet Options".

 Click on the "Security" tab. Select the corresponding zone, e.g. "Local Intranet".



 Activate the "Custom (for expert users)" radio-button and click on the "Settings" button.

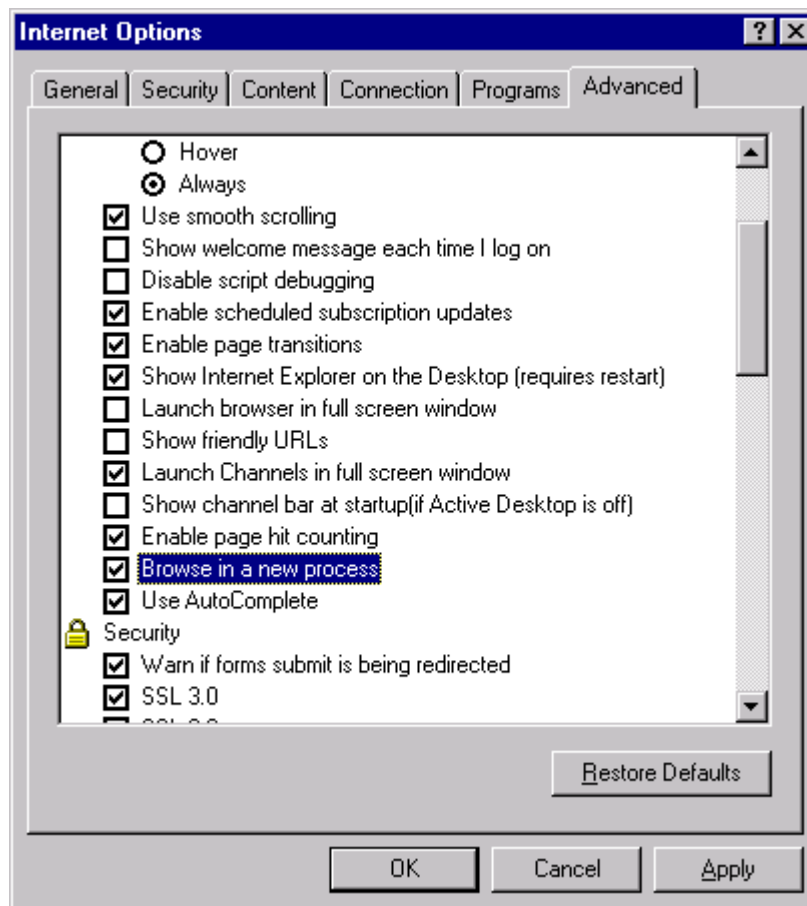



At "Script ActiveX Controls marked safe for scripting" and "Download signed ActiveX Controls", activate the "Enable" radio-button.

Click on the "OK" button.

In the "Internet Options" dialog box, click on the "Apply" button.

Click on the "Advanced" tab and activate the "Browse in a new process" (Internet Explorer 4.01 SP1) or "Open Browser window in a new process" (Internet Explorer 5) check-box.




 Click on the "OK" button.

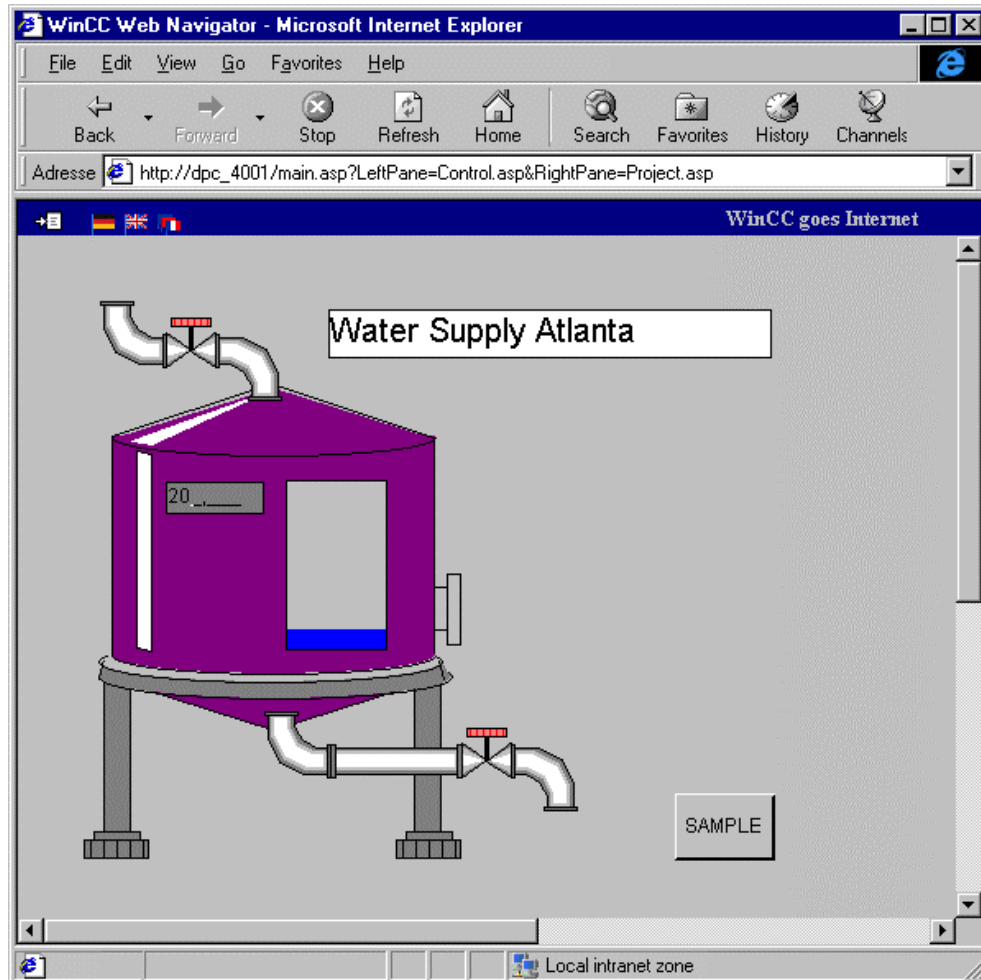
This completes all the necessary settings in the Internet Explorer.


2.3.3 Step 10: The Web Project

The start picture corresponding to the user identified will be displayed.

In the case of the user "Snoopy", the picture "Start.pdl" was defined as the start picture.

 Confirm the dialog box by clicking on the "OK" button.





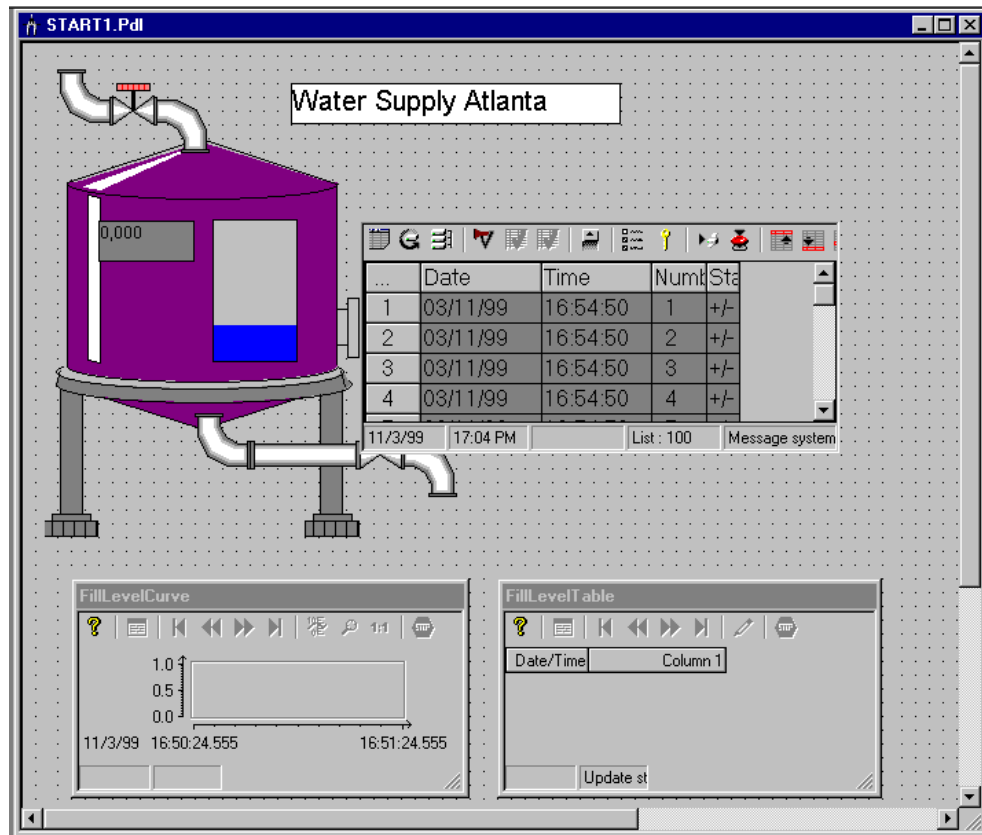
 If, for example, the value 50 is entered in the input field, the fill level of the tank in the "Qckstart" project will change accordingly.

To view the "TagLogging.pdl" and "AlarmLogging.pdl" pictures, log onto the WinCC Web Navigator Server.









2.4 New Process Picture

2.4.1 Step 11: Creating a new Process Picture




-  On the right side of the WinCC Explorer window, right-click on "Start.pdl".
-  In the pop-up menu displayed, click on the "Open Picture" menu command.







Creating a Trend Window

-  From the object palette, select the "Controls" tab and from it the "WinCC Online Trend Control" entry.
-  In the "General" tab of the quick configuration dialog box, enter "Tank Level - Trend" as the title of the trend window.
-  Select the "Trends" tab.
-  Enter "Tank Level" as the name of the trend.
-  Click on the "Selection" button.
-  On the right side of the "Selection of Archives/Tags" dialog box, double-click on the "TankLevelArchive" archive.
-  On the left side of the "Selection of Archives/Tags" dialog box, click on the "TankLevelArchive" tag.
-  Confirm your inputs by clicking on the "OK" button.


Creating a Table Window


-  From the object palette, select the "Controls" tab and from it the "WinCC Online Table Control" entry.
-  Enter "Tank Level -Table" as the title of the table window.
- Repeat the steps carried out for the "Trends" tab in the "Columns" tab of the WinCC Online Table Control.
-  Confirm your inputs by clicking on the "OK" button.

Creating an Alarm Message Window

-  From the object palette, select the "Controls" tab and from it the "WinCC Alarm Control" entry.
 -  In the "Display" tab of the quick configuration dialog box, enter "Water Supply Atlanta" as the title of the message window.
 -  Activate the "Display" check-box.
 -  Confirm your inputs by clicking on the "OK" button.
- Save the picture under the name "Start1.pdf" and exit the Graphics Designer.

2.4.2 Step 12: Publishing a Process Picture

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

 In the pop-up menu displayed, click on the "Web View Publisher" menu command.

 In the "Select Pictures" dialog box, select the "Start1.pdl" file.

 Click on the "Finish" button to complete the operation.

Note


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


Open the "WinCC Web Administrator" and - for example - set the picture "Start1.pdl" as the new start picture for the user "Snoopy".

Via the "View" → "Refresh" menu commands on the menu bar of the WinCC Explorer, the project window can be refreshed.

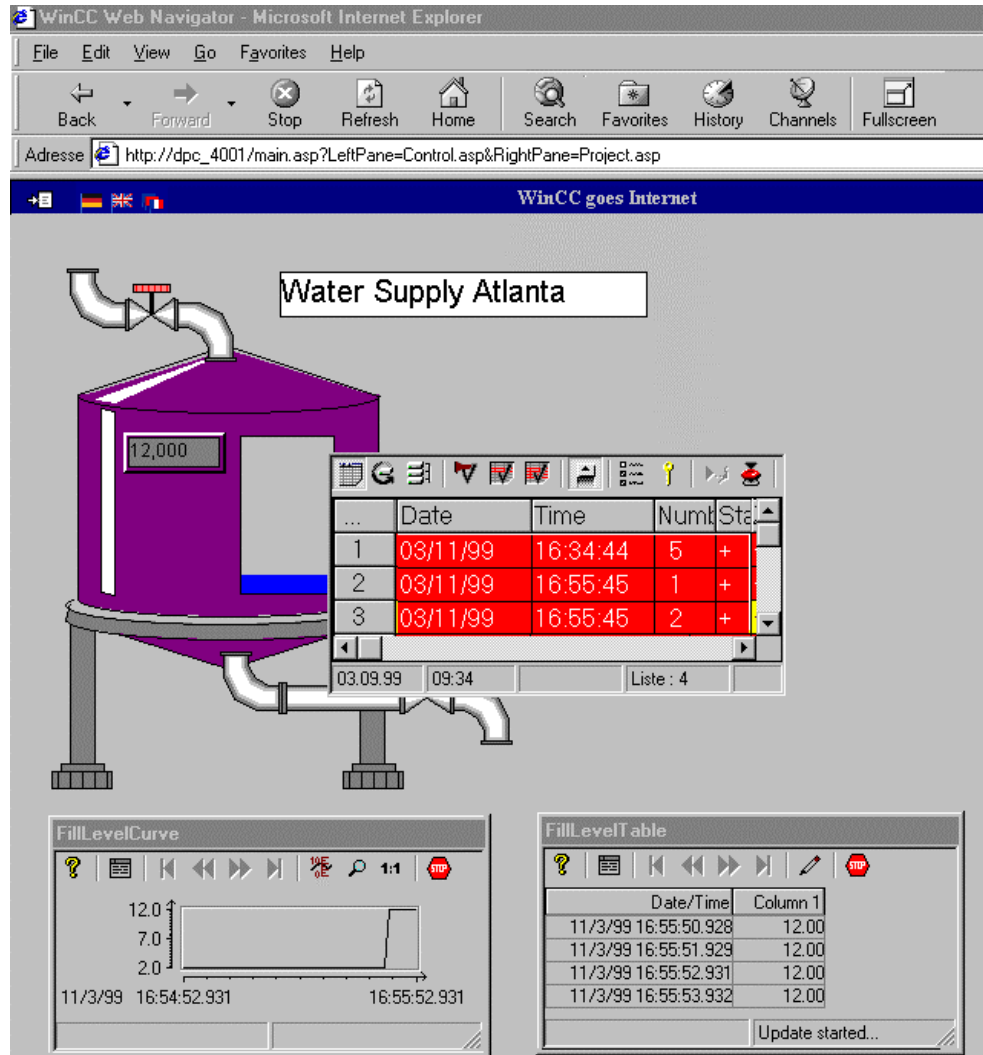
2.4.3 Step 13: Process Picture on the Web Client


Start the Internet Explorer.

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

 Confirm the inputs by clicking on the "OK" button.

If everything has been configured correctly, you should see the following picture:



 Enter a new value in the input field.

The displays of the WinCC Online Trend and Table Controls will change accordingly, as will the displays in the "Qckstart" project.

Note

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

2.5 Troubleshooting and Error Correction

No pictures are being displayed

In the Internet Explorer, check whether the following setting has been activated:

- Internet Explorer 4.0: Menu commands "View" → "Internet Options", tab: "Advanced" → "Browse in a new process"
- Internet Explorer 5.0: Menu commands "Tools" → "Internet Options", tab: "Advanced" → "Open Browser window in a new process" (provided that the option is available)

On the WinCC Web Navigator Server computer, check whether the "WinCCWebSite" has been activated:

- Activate the Internet Information Server via "Programs" → "Windows NT 4.0 Option Pack" → "Microsoft Internet Information Server" → "Internet Service Management Console". Check the entry at "WinCCWebSite". If "Stopped" is displayed, the Web site needs to be started. To do so, right-click on "WinCCWebSite" and select "Start" from the displayed pop-up menu.

Start picture is not being updated

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

- Start the Web View Publisher to make the new picture available to the Internet.
- Delete the temporary Internet files. Internet Explorer 4.0: under "View" → "Internet Options"; Internet Explorer 5.0: under "Tools" → "Internet Options".

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