Diagnostics Tools for SIMATIC IPCs

SIMATIC IPC DiagBase and SIMATIC IPC DiagMonitor
SIMATIC WinCC V13 SP1 (Runtime Advanced/Runtime Professional)
SIMATIC WinCC V7

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1 Task

Introduction
Different diagnostic and signaling software tools are available for SIMATIC IPCs. These tools are used to quickly detect and avoid potential system failures. IPCs support the following monitoring functions:
- temperature, e.g. processor, mainboard, chip set
- fan, battery
- condition and functionality of hard disks (also RAID) and CompactFlash cards
- watchdog – program flow
- hours meter

Overview of the automation task
The application describes which software and settings are necessary to implement the following automation tasks.
- Outputting diagnostic data locally on the respective IPC.
- Outputting the diagnostic data of all networked SIMATIC IPCs via one IPC.
- Outputting the diagnostic data using WinCC Runtime Advanced, WinCC Runtime Professional, a Comfort Panel, or WinCC V7.3 SE.
- Outputting the diagnostic data via a text message on a cell phone.
2 Solution

2.1 Overview

What does the application example do?
The application example presents solutions that show you how to output the diagnostic data of an IPC and which software is required to do so.

Topics not covered by this application
- This application does not include a description of the diagnostic software used. For details, please refer to the software manuals.
- This application does not include a description of the following HMI software:
  - WinCC Runtime Advanced
  - WinCC Runtime Professional
  - WinCC (TIA Portal)
  - WinCC V7.3 SE
- This application does not include a description of the HMI operator panels used.
2.2 Available software

Various software solutions are available for monitoring and diagnosing SIMATIC Industrial PCs. The following chapters provide an overview of these solutions. The information on the software solutions and functions shown in this document can also be found on the Online Support pages: https://support.industry.siemens.com.

Open the Online Support pages and enter the software name in the search box. The Online Support pages always provide you with the most current information on software versions, as well as the hardware and operating system requirements.

Example view

The figure below shows a TP700 Comfort Panel that is used to display the diagnostic data of the networked IPC. The following chapters describe details on the software used.

Figure 2-1
2.2 Available software

2.2.1 SIMATIC IPC DiagBase

The SIMATIC IPC DiagBase software is included in the standard scope of delivery of the SIMATIC IPC. However, you can also install the software later. The software is available to you as a free download. (See link below)

Diagnostics functions

DiagBase enables the following diagnostics functions:

- monitoring of IPC components
  - hard drive
  - RAID
  - CF/CFast card
  - SSD
  - fans
  - temperature
  - CMOS battery voltage
  - system state
- reporting of critical states
- call of individual applications in the event of an alarm
- local communication of information
- logging of all events

For more information on the functionality of the SIMATIC IPC DiagBase software, please refer to the appropriate online help.

Supported devices and operating systems

At the following link, you will find information on the available versions, supporting devices and operating systems.

SIMATIC IPC DiagBase; download \3\ https://support.industry.siemens.com/cs/ww/en/view/29316343
2 Solution

2.2 Available software

2.2.2 PCDiagBridge

NOTICE

The PCDiagBridge software will not be further developed; among other things, it cannot run on the Windows 7 64 bit operating system. Use “SIMATIC IPC DiagMonitor” instead.

The “PCDiagBridge” diagnostics software is a software tool that reads diagnostic information out of

- SIMATIC IPC
- SITOP UPS
- WinAC RTX and WinAC RTX F

Diagnostics functions

PCDiagBridge enables the following diagnostics functions:

- SIMATIC IPC hardware
  - fans
  - CPU temperature
  - CMOS voltage
  - mass storage
- SITOP UPS
  - operating state
  - error message
  - shutdown
- operator control and monitoring of
  - WinAC RTX (Run/Stop, error indication, operating state)
  - WinAC RTX F (Run/Stop, error display, operating state)

Supported devices and operating systems

At the following link, you will find information on the available versions, supporting devices and operating systems.

PCDiagBridge; download \\nhttps://support.industry.siemens.com/cs/ww/en/view/42674746
2.2 Available software

2.2.3 SIMATIC IPC DiagMonitor

The use of the “SIMATIC IPC DiagMonitor” diagnostic and signaling software allows early detection of potential faults in SIMATIC IPCs. SIMATIC IPC DiagMonitor is paid software that can be purchased as a single license.

Diagnostics functions

SIMATIC IPC DiagMonitor enables the following diagnostics functions:

- monitors critical PC states for SIMATIC IPCs (hard disk, RAID, CF/CFast card, SSD, fan, temperature, CMOS battery voltage, system state).
- signals detected errors and also freely selectable service intervals.
- communicates this information locally or remotely via SNMP, OPC, LAN, email and SMS text messages (telephone).
- acts through adjustable Windows restart in the event of a watchdog interrupt and executes batch programs and executable files.
- logs all events in the Windows EventLog and optionally the measured temperature/fan data in a measured data file.
- supports monitoring of networked SIMATIC Industrial PCs.

Supported devices and operating systems

At the following link, you will find information on the available versions, supporting devices and operating systems.

SIMATIC IPC DiagMonitor V4.5; product note \5\nhttps://support.industry.siemens.com/cs/ww/en/view/109477200
2.3 Selection aid

Introduction

This chapter provides you with an aid for selection and decision-making. Depending on where you want to output the diagnostic information of the IPC, it shows the following three solutions.

- Output of diagnostic data on the local IPC
- Output of diagnostic data via the network
- Output via a text message

Figure 2-2

Evaluate diagnostic data

...continue in Chapter 2.3.1
...continue in Chapter 2.3.2
...continue in Chapter 2.3.3
### 2.3.1 Output of diagnostic data on an IPC

The figure shows different options for outputting diagnostic data on an IPC.

#### Figure 2-3

<table>
<thead>
<tr>
<th>Diagnostic data</th>
<th>Output via...</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPC general overview</td>
<td>Management Explorer (Windows program)</td>
<td>See chapter 3.1</td>
</tr>
<tr>
<td></td>
<td>Internet Explorer (web browser)</td>
<td>See chapter 3.2</td>
</tr>
<tr>
<td></td>
<td>WinCC Runtime Advanced</td>
<td>See chapter 3.3</td>
</tr>
<tr>
<td></td>
<td>WinCC Runtime Professional</td>
<td>See chapter 3.4</td>
</tr>
<tr>
<td></td>
<td>WinCC V7</td>
<td>See chapter 3.5</td>
</tr>
</tbody>
</table>
2.3 Selection aid

2.3.2 Output of diagnostic data via the network

The figure shows how you can output the diagnostic data of IPCs integrated in the network via an IPC.

Figure 2-4

<table>
<thead>
<tr>
<th>Diagnostic data</th>
<th>Output via...</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPC general overview</td>
<td>Management Explorer (Windows program)</td>
<td>See chapter 4.1</td>
</tr>
<tr>
<td></td>
<td>Internet Explorer (web browser)</td>
<td>See chapter 4.2</td>
</tr>
<tr>
<td></td>
<td>WinCC Runtime Advanced</td>
<td>See chapter 4.3</td>
</tr>
<tr>
<td></td>
<td>WinCC Runtime Professional</td>
<td>See chapter 4.4</td>
</tr>
<tr>
<td></td>
<td>WinCC V7</td>
<td>See chapter 4.5</td>
</tr>
<tr>
<td></td>
<td>Comfort Panel</td>
<td>See chapter 4.6</td>
</tr>
</tbody>
</table>
2.3 Selection aid

2.3.3 Output via a text message

The figure shows how you can output the diagnostic data of the IPC via email or SMS as a text message and which software the IPC requires for this.

Figure 2-5

<table>
<thead>
<tr>
<th>Diagnostic data</th>
<th>Output via...</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPC general overview</td>
<td>eMail MS-Outlook</td>
<td>See chapter 5.1</td>
</tr>
<tr>
<td>See chapter 5</td>
<td>Text message (SMS) cell phone</td>
<td>See chapter 5.2</td>
</tr>
</tbody>
</table>
2.4 Hardware and software components

Validity

This application is valid for
- WinCC V13 SP1
- WinCC V7.3 SE

The application has been created with the following components:

Hardware components used

<table>
<thead>
<tr>
<th>Component</th>
<th>Qty</th>
<th>Article number</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPC677D</td>
<td>1</td>
<td>6AV7260-......-......</td>
<td>Depending on the configuration</td>
</tr>
<tr>
<td>IPC277E</td>
<td>1</td>
<td>6AV7882-0...-0...-0</td>
<td>Depending on the configuration</td>
</tr>
<tr>
<td>TP700 Comfort</td>
<td>1</td>
<td>6AV2124-0GC01-0AX0</td>
<td></td>
</tr>
</tbody>
</table>

Software components used

<table>
<thead>
<tr>
<th>Component</th>
<th>Qty</th>
<th>Article number</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>DiagBase</td>
<td>1</td>
<td>--</td>
<td>See chapter 2.2.1</td>
</tr>
<tr>
<td>DiagMonitor</td>
<td>1</td>
<td>6ES7648-6CA04-5YX0</td>
<td>See chapter 2.2.3</td>
</tr>
<tr>
<td>WinCC Advanced V13 SP1</td>
<td>1</td>
<td>6AV2102-0AA03-0AA5</td>
<td>Engineering SW</td>
</tr>
<tr>
<td>WinCC Runtime Advanced V13 SP1</td>
<td>1</td>
<td>6AV2104-0DA03-0AA0</td>
<td>Runtime SW</td>
</tr>
<tr>
<td>WinCC Professional V13 SP1</td>
<td>1</td>
<td>6AV2103-0XA03-0AA5</td>
<td>Engineering SW</td>
</tr>
<tr>
<td>WinCC Runtime Professional V13 SP1</td>
<td>1</td>
<td>6AV2105-0DA03-0AA0</td>
<td>Runtime SW</td>
</tr>
<tr>
<td>WinCC V7.3 SE</td>
<td>1</td>
<td>6AV63.1-......-7-3-...</td>
<td></td>
</tr>
</tbody>
</table>

Example files and projects

The following list includes all files and projects that are used in this example.

<table>
<thead>
<tr>
<th>Component</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>109478242_Diagnostic_IPC_WinCC_Adv_V13_Code.zip</td>
<td>This zip file contains the WinCC Advanced project.</td>
</tr>
<tr>
<td>109478242_Diagnostic_IPC_WinCC_Prof_V13_Code.zip</td>
<td>This zip file contains the WinCC Professional project.</td>
</tr>
<tr>
<td>109478242_Diagnostic_IPC_WinCC_V7.3SE_Code.zip</td>
<td>This zip file contains the WinCC V7.3 SE project.</td>
</tr>
<tr>
<td>109478242_Diagnostic_IPC_WinCC_en.pdf</td>
<td>This document.</td>
</tr>
</tbody>
</table>
3 Configuration - Output of Diagnostic Data on the IPC

Overview

There are different options for outputting diagnostic data on the IPC. The figure below provides an overview of these options.

Figure 3-1
Overview of the required diagnostic software

Table 3-1

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Output of diagnostic data via “Management Explorer”.</td>
<td>DiagBase</td>
</tr>
<tr>
<td></td>
<td></td>
<td>By default, DiagBase is installed on the SIMATIC IPCs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DiagMonitor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Paid software. Outputs the same data as when using DiagBase.</td>
</tr>
<tr>
<td>2.</td>
<td>Output of diagnostic data via a web browser (for example, Internet Explorer).</td>
<td>DiagBase</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The web browser only displays the current status of the IPC.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DiagMonitor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Allows you to output the same data as when using “Management Explorer”.</td>
</tr>
<tr>
<td>3.</td>
<td>Output of diagnostics data via WinCC Runtime Advanced.</td>
<td>DiagBase</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Runtime only displays the current status of the IPC.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DiagMonitor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Allows you to output the same data as when using “Management Explorer”.</td>
</tr>
<tr>
<td>4.</td>
<td>Output of diagnostics data via WinCC Runtime Professional.</td>
<td>DiagBase</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Runtime only displays the current status of the IPC.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DiagMonitor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Allows you to output the same data as when using “Management Explorer”.</td>
</tr>
<tr>
<td>5.</td>
<td>Output of diagnostics data via WinCC V7.3 SE.</td>
<td>DiagBase</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Runtime only displays the current status of the IPC.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DiagMonitor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Allows you to output the same data as when using “Management Explorer”.</td>
</tr>
</tbody>
</table>
3.1 Diagnostics with “Management Explorer”

The installation of the “DiagBase” or “DiagMonitor” software makes the “Management Explorer” available.

**Note**

By default, SIMATIC IPCs are delivered with the preinstalled SIMATIC DiagBase software. When using the SIMATIC IPC DiagMonitor software, you have to uninstall the SIMATIC IPC DiagBase software first.

### DiagBase, Management Explorer

#### Table 3-2

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1.  | Opening “Management Explorer”  
- On the IPC’s taskbar, click the “Windows Start button” (1).  
- Select the appropriate icon to open “Management Explorer” (2). |
| 2.  | “DiagBase Management Explorer” view  
The tree structure allows you to open the different items of diagnostic information. |
3 Configuration - Output of Diagnostic Data on the IPC

3.1 Diagnostics with “Management Explorer”

DiagMonitor, Management Explorer

Table 3-3

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Opening “Management Explorer”</td>
</tr>
<tr>
<td></td>
<td>Management Explorer is opened in the same way as described previously for “DiagBase” (Table 3-2).</td>
</tr>
<tr>
<td></td>
<td>• On the IPC’s taskbar, click the “Windows Start button”.</td>
</tr>
<tr>
<td></td>
<td>• Select the appropriate icon to open “Management Explorer”.</td>
</tr>
<tr>
<td>2.</td>
<td>Adding a station</td>
</tr>
<tr>
<td></td>
<td>• Select the “Station &gt; Add...” menu command. Alternatively, use the appropriate icon (1).</td>
</tr>
<tr>
<td></td>
<td>• Enable the “Local station” option (2) in the dialog box and confirm your selection with OK.</td>
</tr>
<tr>
<td></td>
<td>• If you cannot add the station, please observe the notes in chapter 6.2.</td>
</tr>
</tbody>
</table>

3. “DiagMonitor Management Explorer” view
3.2 Diagnostics with a web browser

MS Internet Explorer is installed by default on the IPC. This web browser allows you to access the integrated web server of “DiagBase” or “DiagMonitor” and open the diagnostic information.

Note
The web pages of “DiagBase” and “DiagMonitor” differ in the amount of diagnostic information.

Prerequisite
In order to access the integrated web server of DiagBase or DiagMonitor, the “Webserver” option in Management Explorer has to be enabled.

Enabling the web server

Table 3-4

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Enabling the web server</td>
</tr>
</tbody>
</table>

- Call the “Management Explorer”.
- Open the “Tools” menu (1).
- To enable the web server, left-click the field next to “Webserver” (2).
- Now you can close “Management Explorer”.

![Management Explorer](image)
3 Configuration - Output of Diagnostic Data on the IPC

3.2 Diagnostics with a web browser

Access to diagnostic data in “DiagBase”

Table 3-5

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Calling the web server</td>
</tr>
<tr>
<td></td>
<td>• Open “Internet Explorer”.</td>
</tr>
<tr>
<td></td>
<td>• In the command line, enter the following address:</td>
</tr>
<tr>
<td></td>
<td>- <a href="http://localhost:5009">http://localhost:5009</a> or</td>
</tr>
<tr>
<td></td>
<td>- <a href="https://localhost:5449">https://localhost:5449</a></td>
</tr>
</tbody>
</table>

**Note**
If you want to access the web user interface via “https”, it is possible that a Microsoft system message - “There is a problem with this website’s security certificate” - is displayed. In this case, select the “Continue to this website” option. The start page is then displayed.

• On the start page, select the “SIMATIC PC Web business card” link.
• The web interface displays the status and general information on the IPC.
3 Configuration - Output of Diagnostic Data on the IPC

3.2 Diagnostics with a web browser

Access to diagnostic data in “DiagMonitor”

Depending on the user name with which you log in to the DiagMonitor web server, pages with different degrees of information open up. Information on the user names can be found in the following table, in line “Login information”.

Table 3-6

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>Calling the web server</strong></td>
</tr>
<tr>
<td></td>
<td>• Open “Internet Explorer”.</td>
</tr>
<tr>
<td></td>
<td>• In the command line, enter the following address:</td>
</tr>
<tr>
<td></td>
<td>- <a href="http://localhost:5009">http://localhost:5009</a> or</td>
</tr>
<tr>
<td></td>
<td>- <a href="http://localhost:5449">http://localhost:5449</a></td>
</tr>
<tr>
<td></td>
<td>The start page of the web interface opens.</td>
</tr>
</tbody>
</table>

2. **Opening the diagnostics pages**

On the start page, select the “SIMATIC PC DiagMonitor Webserver” option. A page with a login dialog opens (1). Depending on the name with which you log in, different options are available (see next table section).
### 3 Configuration - Output of Diagnostic Data on the IPC

**3.2 Diagnostics with a web browser**

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3.</strong></td>
<td><strong>Login information</strong></td>
</tr>
</tbody>
</table>

The following users are stored in the web server by default.

- **Name:** Operator  
  **Password:** Operator  
  Displays information on temperatures, drives and operating hours.

- **Name:** Supervisor  
  **Password:** Supervisor  
  Displays information on temperatures, drives and operating hours. On the "Operating hours" page, the user can adjust the parameters for the "watchdog".

- **Name:** Administrator  
  **Password:** Administrator  
  Opens pages where administrative tasks regarding
  - stations
  - user administration
  - access to the file system
  - configuration of the web server
  can be performed.

| **4.** | **Example view (temperature overview)** |

"Operator" was entered in the Login dialog.
Customizing the web server “Configuration” file

The default settings stored, such as, for example, the “port number” for the web server can be customized in the “Configuration” file.

Table 3-7

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Customizing the password and port number of the web server</td>
</tr>
</tbody>
</table>

Opening the “Configuration” file

- On the IPC’s taskbar, click the “Windows Start button”.
- Select the “All Programs > Siemens Automation > DiagBase > WebServer” folder.
- Open the “Configuration” file. In the file search for “port”, for example.

Note:
For more information on this topic, please refer to the Management Explorer online help.
3.3 Diagnostics with WinCC Runtime Advanced

3.3.1 Access to diagnostic data via HTML browser

Using DiagBase or DiagMonitor in conjunction with WinCC Runtime Advanced, you can display the diagnostic information of the IPC. It is displayed with an HTML browser via a configured plant screen. This requires that the following software products are installed on the IPC.

- DiagBase or DiagMonitor
- WinCC Runtime Advanced

**Note**

The volume of the diagnostic data depends on the installed diagnostics software (see chapter 3).

### Access to diagnostic data via HTML browser

Table 3-8

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Configuring screen with HTML browser</td>
</tr>
</tbody>
</table>

**Note**

The ready-to-use template is stored in the PC Runtime project supplied in the “Topic_001.1” screen.

- Create an IPC configuration (WinCC Runtime Advanced configuration)
- Insert the “HTML browser” control into a screen.
- In the property list of the control in “General”, enter the following address in the "URL" field: [http://localhost:5009](http://localhost:5009)

By calling this page, the “SIMATIC PC MiniWeb Server” automatically opens up.
3.3 Diagnostics with WinCC Runtime Advanced

3.3.2 Read access to diagnostic data with WinCC via OPC and DiagMonitor

Using DiagMonitor in conjunction with HMI Runtime, you can
- use an HTML browser or
- via OPC
to access the diagnostic data.
Access to the variables via HTML browser is performed in the same way as previously described. (See Access to diagnostics data via HTML browser.)

In this example, data exchange between the IPC and WinCC Runtime Advanced is performed via OPC.

To this end, the OPC variables to be displayed later in WinCC Runtime are declared in Management Explorer.
WinCC Runtime Advanced is installed directly on the IPC.

Note

The “OPC” option must have been enabled during the installation of HMI Runtime. If necessary, install the option later.
The following folder should exist on the IPC:
“Start > Siemens Automation > SIMATIC > OPC-XML-Gateway”

Management Explorer – defining the OPC variables

Table 3-9

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Selecting the IPC station</td>
</tr>
<tr>
<td></td>
<td>• Open DiagMonitor’s Management Explorer.</td>
</tr>
<tr>
<td></td>
<td>• Select the “Station &gt; Add” menu command.</td>
</tr>
<tr>
<td></td>
<td>• In the dialog box, select the local IPC station.</td>
</tr>
</tbody>
</table>

2. Opening the OPC Server Configuration

- Select the “Tools > OPC server...” menu item.

![Management Explorer screenshot](image-url)
### Selecting the server and group list

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>Selecting the server and group list</td>
</tr>
</tbody>
</table>

#### Description
- (1) Use this button to select the stationary (local) IPC station. In this case, this is station “HH22”.
- (2) Use this button to select the OPC server. The server name must match the server name of your HMI Runtime configuration in “Connections”. See [Creating the OPC connection](#).
- (3) Enter a group name (can be selected as desired).
- (4) This button applies the values from (1) to (3) to the “Server and group list” (5).
- (6) The “Save” button allows you to save a created configuration. The “Load” button allows you to open a saved configuration.
- (7) This button is used for specifying the prefixed name for the “OPC variables”. The next section provides more information on this subject.
- (8) If you have assigned “variables” in an existing OPC server list, this button allows you to display the variables.

![OPC Server Configuration](image)
### 3.3 Diagnostics with WinCC Runtime Advanced

#### Template – editing the names of the “OPC variables”

To monitor the processor temperature, for example, multiple OPC variables are available (current value, max. value, etc.). The names of these individual OPC variables are predefined by the system and can be output via HMI Runtime.

To distinguish the OPC variables for monitoring multiple stations, the OPC variables can be prefixed with a defined name.

You can use existing “name templates” or create custom names.

To do this, use the “OPC Server Configuration” menu to open the following dialog.

(Main command “Tools > OPC server… > Templates”).

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.</td>
<td>Template – editing the names of the “OPC variables”</td>
</tr>
</tbody>
</table>

To monitor the processor temperature, for example, multiple OPC variables are available (current value, max. value, etc.). The names of these individual OPC variables are predefined by the system and can be output via HMI Runtime.

To distinguish the OPC variables for monitoring multiple stations, the OPC variables can be prefixed with a defined name.

You can use existing “name templates” or create custom names.

To do this, use the “OPC Server Configuration” menu to open the following dialog.

(Main command “Tools > OPC server… > Templates”).

- To edit an existing template, use the drop-down list (1) to select the template and change the name in the field (2). Use the “Apply” button (4) to confirm the changes.
- To create a new template, overwrite an existing name and select the “Apply” button (4).
- In this field, specify the prefixed name for the OPC variable.
  You can choose any name and combine it, for example, with the “wildcards”.
  The meaning of the “wildcards” is explained in the “Template substitutions” field below (3).
- Description of the “wildcards” (“Template substitutions”).
- This button applies the changes in the template.
- From the drop-down list, select the server (corresponds to the server name from the

---

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3 Configuration - Output of Diagnostic Data on the IPC

3.3 Diagnostics with WinCC Runtime Advanced

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>“OPC Server Configuration” menu.</td>
</tr>
<tr>
<td></td>
<td>- (6) Specify via the drop-down list which template the system is to use. The “OPC.SimaticHMI.PTPro” template was used in this example.</td>
</tr>
<tr>
<td></td>
<td>- Confirm the entries with “OK”.</td>
</tr>
<tr>
<td></td>
<td>Close the “OPC Server Configuration” menu.</td>
</tr>
</tbody>
</table>

5. **Selecting OPC variables**

- Reading out a group
  - If you want to read out all the variables of a group, right-click to select, for example, the “Temperatures” group in the folder tree.
  - In the dialog, select the “OPC...” function. The window “Adding OPC variables” opens up.

- Reading out a section
  - If you only want to read out a section of a group, right-click only the specific area.
  - In the dialog, select the “OPC...” function. The window “Adding OPC variables” opens up.

The next steps are described in the following section.
3 Configuration - Output of Diagnostic Data on the IPC

3.3 Diagnostics with WinCC Runtime Advanced

6. Adding OPC variables

In the example, the “Temperatures” group was selected beforehand in the project tree.

- (1) This area lists the “Server and group list” configured in section 2 (OPC Server Configuration).
- (2) In this area, you can select or unselect the “Processor, Mainboard and RAM” temperature elements.
- (3) For each temperature element, you can select or unselect the default system OPC variables.
  In the example, all variables were selected.
- (4) This button assigns the selected OPC variables to the “Server and group list”.
- (5) “Added OPC variables” view. The prefixed name is composed as previously defined in the template.
  See section 3 “Template – editing the names of the ‘OPC variables’”.
- (6) This button allows you to check whether variables have already been assigned to the selected “Server and group list” (1).
  An additional window opens that allows you to delete OPC variables you no longer need.
  Furthermore, this overview is an aid for variable declaration in the WinCC Engineering editor. See Declaring variables.

This completes the Management Explorer settings for displaying OPC variables. If necessary, you can add more variables (e.g., the fan values, etc.). To do this, repeat sections 4 and 5.
HMI Runtime – OPC Configuration

Prerequisite
- An existing WinCC Runtime Advanced configuration.
- HMI Runtime runs directly on the local IPC.

Table 3-10

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Enabling OPC service</td>
</tr>
<tr>
<td></td>
<td>Open the Runtime settings of WinCC RT Advanced and tick the services in the OPC DCOM Server</td>
</tr>
</tbody>
</table>

2. Declaring variables
- Open the tag editor.
- Open the Management Explorer and look at the names of the OPC variables defined there. See Adding OPC variables.
- Enter the names of the OPC variables in the tag editor. A controller does not have to be selected, since the OPC server is locally installed (internal variables).

Notes
In the example project, all OPC variables were applied, for example, from temperature monitoring. Therefore, all the status information is available to you and you can use it as a template. You can replace the station name with your station name using the “Find and Replace” function.
3.3 Diagnostics with WinCC Runtime Advanced

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>Creating a diagnostic screen</td>
</tr>
</tbody>
</table>

Insert the appropriate elements into the screen and assign the OPC variables to the elements. In this case, the temperature is output via the bar display.

![Diagnostic Screen](image)

- Processor
- Air intake
- Mainboard 1
- Power supply

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3.4 Diagnostics with WinCC Runtime Professional

3.4.1 Access to diagnostic data via HTML browser

Using DiagBase or DiagMonitor in conjunction with WinCC Runtime Professional, you can display the diagnostic information of the IPC. It is displayed with an HTML browser via a configured plant screen.

This requires that the following software products are installed on the IPC.

- DiagBase or DiagMonitor
- WinCC Runtime Professional

**Note**

The volume of the diagnostic data depends on the installed diagnostics software (see chapter 3).

### Access to diagnostic data via HTML browser

**Table 3-11**

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Configuring screen with HTML browser</td>
</tr>
</tbody>
</table>

**Note**

The ready-to-use template is stored in the “109478242_CODE_WinCC_Prof_V13.zip” project provided in the “Screen_1_1” screen.

- Create an IPC configuration (WinCC Runtime Professional configuration)
- Insert the “HTML browser” control into a screen.
- In the property list of the control in “General”, enter the following address in the “URL” field: http://localhost:5009

By calling this page, the “SIMATIC PC MiniWeb Server” automatically opens up.
3.4 Diagnostics with WinCC Runtime Professional

3.4.2 Read access to diagnostic data with WinCC via OPC and DiagMonitor

Using DiagMonitor and in conjunction with HMI Runtime, you can

- use an HTML browser or
- via OPC

to access the diagnostic data.

Access to the variables via HTML browser is performed in the same way as previously described. (See Access to diagnostics data via HTML browser.)

In this example, the data exchange between the IPC and WinCC Runtime Professional is performed via OPC.

To this end, the OPC variables to be displayed later in WinCC Runtime are declared in Management Explorer.

WinCC Runtime Professional is installed directly on the IPC.

Note

The “OPC” option must have been enabled while installing HMI Runtime. If necessary, install the option later.

The following folder should exist on the IPC:
“Start > Siemens Automation > SIMATIC > OPC-XML-Gateway”

If the OPC Server “OPCServer.WinCC_SCADA.1” is used, no other OPC server must be used on this IPC.

Management Explorer – defining the OPC variables

Table 3-12

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Selecting the IPC station</td>
</tr>
<tr>
<td></td>
<td>• Open DiagMonitor’s Management Explorer.</td>
</tr>
<tr>
<td></td>
<td>• Select the “Station &gt; Add” menu command.</td>
</tr>
<tr>
<td></td>
<td>• In the dialog box, select the local IPC station.</td>
</tr>
</tbody>
</table>
3 Configuration - Output of Diagnostic Data on the IPC

3.4 Diagnostics with WinCC Runtime Professional

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Opening the OPC Server Configuration</td>
</tr>
<tr>
<td></td>
<td>- Select the “Tools &gt; OPC server...” menu item.</td>
</tr>
</tbody>
</table>

![OPC Server Configuration](image)

3. Selecting the server and group list

![Selecting server and group list](image)

Description

- (1) Use this button to select the stationary (local) IPC station. In this case, this is station "HH22".
- (2) Use this button to select the OPC server.
- (3) Enter a group name (can be selected as desired).
- (4) Accept the values with the “Add” button.
- (6) The “Save” button allows you to save a created configuration. The “Load” button allows you to open a saved configuration.
- (7) This button is used for specifying the prefixed name for the “OPC variables”. The next section provides more information on this subject.
- (8) If you have assigned “variables” in an existing OPC server list, this button allows you to display the variables.
3 Configuration - Output of Diagnostic Data on the IPC

3.4 Diagnostics with WinCC Runtime Professional

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.</td>
<td>Template – editing the names of the “OPC variables”</td>
</tr>
</tbody>
</table>

To monitor the processor temperature, for example, multiple OPC variables are available (current value, max. value, etc.). The names of these individual OPC variables are predefined by the system and can be output via HMI Runtime.

In order to distinguish the OPC variables for monitoring multiple stations, the OPC variables can be given a defined prefix (for example, the station name). You can use existing “name templates” or create custom names.

To do this, use the “OPC Server Configuration” menu to open the following dialog. (Menu command “Tools > OPC server… > Templates”).

**Variable name template configuration**

- **1** The drop-down list allows you to open stored “templates” in order to check or edit the settings.
  - To edit an existing template, use the drop-down list (1) to select the template and change the name in the field (2). Use the “Apply” button (2) to confirm the changes.
  - To create a new template, overwrite an existing name and then click the “Apply” button (4).
- **2** In this field, specify the prefixed name for the OPC variable. You can choose any name and combine it, for example, with the “wildcards”.
- **3** Description of the “wildcards” (“Template substitutions”).
- **4** This button applies the changes in the template.

Description

- (1) The drop-down list allows you to open stored “templates” in order to check or edit the settings.
  - To edit an existing template, use the drop-down list (1) to select the template and change the name in the field (2). Use the “Apply” button (2) to confirm the changes.
  - To create a new template, overwrite an existing name and then click the “Apply” button (4).
- (2) In this field, specify the prefixed name for the OPC variable. You can choose any name and combine it, for example, with the “wildcards”.
- (3) Description of the “wildcards” (“Template substitutions”).
- (4) This button applies the changes in the template.
### 3 Configuration - Output of Diagnostic Data on the IPC

#### 3.4 Diagnostics with WinCC Runtime Professional

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
</table>
|     | • (5) From the drop-down list, select the server (corresponds to the server name from the “OPC Server Configuration” menu).  
|     | • (6) Specify via the drop-down list which template the system is to use.  
|     | The “OPC.SimaticHMI.PTPro” template was used in this example.  
|     | • Confirm the entries with “OK”.  
|     | Close the “OPC Server Configuration” menu. |

5. **Selecting OPC variables**

- Reading out a group  
  - If you want to read out all the variables of a group, right-click to select, for example, the “Temperatures” group in the folder tree.  
  - In the dialog, select the “OPC...” function. The window “Adding OPC variables” opens up.  

- Reading out a section  
  - If you only want to read out a section of a group, right-click only the specific area.  
  - In the dialog, select the “OPC...” function. A window opens up Adding OPC variables

The next steps are described in the following section.
3 Configuration - Output of Diagnostic Data on the IPC

3.4 Diagnostics with WinCC Runtime Professional

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.</td>
<td>Adding OPC variables</td>
</tr>
</tbody>
</table>

In the example, the "Temperatures" group was selected beforehand in the project tree.

- (1) This area lists the "Server and group list" configured in section 2 (OPC Server Configuration).
- (2) In this area, you can select or unselect the "Processor, Mainboard and RAM" temperature elements.
- (3) For each temperature element, you can select or unselect the default system OPC variables.
  In the example, all variables were selected.
- (4) This button assigns the selected OPC variables to the "Server and group list".
- (5) "Added OPC variables" view. The prefixed name is composed as previously defined in the template.
  See section 4 "Template – editing the names of the "OPC variables"".
- (6) This button allows you to check whether variables have already been assigned to the selected "Server and group list" (1).
  An additional window opens that allows you to delete OPC variables you no longer need.
  Furthermore, this overview is an aid for variable declaration in the WinCC Engineering editor. See Declaring variables.

This completes the Management Explorer settings for displaying OPC variables. If necessary, you can add more variables (e.g., the fan values, etc.). To do this, repeat sections 4 and 5.
HMI Runtime – OPC Configuration

Prerequisite
- An existing WinCC Runtime Professional configuration.
- HMI Runtime runs directly on the local IPC.

Table 3-13

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Declaring variables</td>
</tr>
</tbody>
</table>

- Open the tag editor.
- Open the Management Explorer and look at the names of the OPC variables defined there. See Adding OPC variables, bullet point 6.
- Enter the names of the OPC variables in the tag editor. A controller does not have to be selected, since the OPC server is locally installed (internal variables).

Notes
- In the example project, all OPC variables were applied, for example, from temperature monitoring. Therefore, all the status information is available to you and you can use it as a template. You can replace the station name with your station name using the “Find and Replace” function.
## 3.4 Diagnostics with WinCC Runtime Professional

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td><strong>Creating a diagnostic screen</strong></td>
</tr>
</tbody>
</table>

Insert the appropriate elements into the screen and assign the OPC variables to the elements.

![Siemens Industry Online Support](image)

**Processor**
- Max. operating temperature: 50
- Min. operating temperature: 8

**Air intake**
- Max. operating temperature: 34
- Min. operating temperature: 22

**Mainboard 1**
- Max. operating temperature: 37
- Min. operating temperature: 32

**Power supply**
- Max. operating temperature: 35
- Min. operating temperature: 33
3.5 Diagnostics with WinCC V7

3.5.1 Access to diagnostic data via HTML browser

Using DiagBase in conjunction with SIMATIC WinCC Runtime, you can display the diagnostic information of the IPC. It is displayed with an HTML browser via a configured plant screen.

This requires
- DiagBase or DiagMonitor to be installed on the IPC.
- SIMATIC WinCC Runtime to be installed.

Note: The volume of the diagnostic data depends on the installed diagnostics software (see chapter 3).

Access to diagnostic data via HTML browser

Table 3-14

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Configuring screen with HTML browser</td>
</tr>
<tr>
<td></td>
<td>• Create an IPC configuration (SIMATIC WinCC V7 configuration)</td>
</tr>
<tr>
<td></td>
<td>• Insert the “WinCC WebBrowser” control into a screen.</td>
</tr>
<tr>
<td></td>
<td>• In the Property list of the control at “Control Properties”, enter the following address in the “MyPage” field: <a href="http://localhost:5009">http://localhost:5009</a></td>
</tr>
<tr>
<td></td>
<td>By calling this page, the “SIMATIC PC MiniWeb Server” automatically opens up.</td>
</tr>
</tbody>
</table>
3.5.2 Read access to diagnostic data with WinCC V7 via OPC and DiagMonitor

Using DiagMonitor and in conjunction with HMI Runtime, you can
- use an HTML browser or
- via OPC
to access the diagnostic data.
Access to the variables via HTML browser is performed in the same way as before.
See Access to diagnostics data via HTML browser.
In this example, data exchange between the IPC and SIMATIC WinCC V7 is performed via OPC.

To this end, the OPC variables to be displayed later in SIMATIC WinCC V7 are declared in Management Explorer.
SIMATIC WinCC V7 is installed directly on the IPC.

Note
The “OPC” option must have been enabled during the installation of HMI Runtime. If necessary, install the option later.
The following folder should exist on the IPC:
“Start > Siemens Automation > SIMATIC > OPC-XML-Gateway”

Management Explorer – defining the OPC variables

Table 3-15

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Selecting the IPC station</td>
</tr>
<tr>
<td></td>
<td>• Open DiagMonitor’s Management Explorer.</td>
</tr>
<tr>
<td></td>
<td>• Select the “Station &gt; Add” menu command.</td>
</tr>
<tr>
<td></td>
<td>• In the dialog box, select the local IPC station.</td>
</tr>
<tr>
<td>2.</td>
<td>Opening the OPC Server Configuration</td>
</tr>
<tr>
<td></td>
<td>• Select the “Tools &gt; OPC server...” menu item.</td>
</tr>
</tbody>
</table>
### 3.5 Diagnostics with WinCC V7

#### 3. Selecting the server and group list

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>Selecting the server and group list</td>
</tr>
</tbody>
</table>

![OPC Server Configuration](image)

**Description**

- (1) Use this button to select the stationary (local) IPC station. In this case, this is station “SIEMENS IPC”.
- (2) Use this button to select the OPC server. The server name must match the server name you have used in the HMI Runtime configuration in “Connections”. See [Creating the OPC connection](#).
- (3) Enter a group name (can be selected as desired).
- (4) This button applies the values from (1) to (3) to the “Server and group list” (5).
- (6) The “Save” button allows you to save a created configuration. The “Load” button allows you to open a saved configuration.
- (7) This button is used for specifying the prefixed name for the “OPC variables”. The next section provides more information on this subject.
- (8) If you have assigned “variables” in an existing OPC server list, this button allows you to display the variables.
### 3.5 Diagnostics with WinCC V7

#### Template – editing the names of the “OPC variables”

To monitor the processor temperature, for example, multiple OPC variables are available (current value, max. value, etc.). The names of these individual OPC variables are predefined by the system and can be output via HMI Runtime.

To distinguish the OPC variables for monitoring multiple stations, the OPC variables can be prefixed with a defined name.

You can use existing “name templates” or create custom names.

To do this, use the “OPC Server Configuration” menu to open the following dialog. (Menu command “Tools > OPC server… > Templates”).

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.</td>
<td><strong>Template – editing the names of the “OPC variables”</strong></td>
</tr>
</tbody>
</table>

To edit an existing template, use the drop-down list (1) to select the template and change the name in the field (2). Use the “Apply” button (2) to confirm the changes.

To create a new template, overwrite an existing name and select the “Apply” button (4).

In this field, specify the prefixed name for the OPC variable. You can choose any name and combine it, for example, with the "wildcards". The meaning of the "wildcards" is explained in the “Template substitutions” field below (3).

Description

- (1) The drop-down list allows you to open stored “templates” in order to check or edit the settings.
  - To edit an existing template, use the drop-down list (1) to select the template and change the name in the field (2). Use the “Apply” button (2) to confirm the changes.
  - To create a new template, overwrite an existing name and select the “Apply” button (4).
- (2) In this field, specify the prefixed name for the OPC variable.
- (3) Description of the "wildcards" (“Template substitutions”).
- (4) This button applies the changes in the template.
- (5) From the drop-down list, select the server (corresponds to the server name from the

![Variable name template configuration dialog](image)
3 Configuration - Output of Diagnostic Data on the IPC

3.5 Diagnostics with WinCC V7

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&quot;OPC Server Configuration&quot; menu. In this example, the &quot;OPCServer.WinCC.1&quot; block was selected.</td>
</tr>
<tr>
<td></td>
<td>(6) Specify via the drop-down list which template the system is to use.</td>
</tr>
<tr>
<td></td>
<td>Confirm the entries with &quot;OK&quot;.</td>
</tr>
<tr>
<td></td>
<td>Close the &quot;OPC Server Configuration&quot; menu.</td>
</tr>
</tbody>
</table>

5. **Selecting OPC variables**

- Reading out a group
  - If you want to read out all the variables of a group, right-click to select, for example, the "Temperatures" group in the folder tree.
  - In the dialog, select the "OPC..." function. A window opens up.

Adding OPC variables

- Reading out a section
  - If you only want to read out a section of a group, right-click only the specific area.
  - In the dialog, select the "OPC..." function. A window opens up.

Adding OPC variables

The next steps are described in the following section.
3.5 Diagnostics with WinCC V7

6. **Adding OPC variables**

In the example, the “Temperatures” group was selected beforehand in the project tree.

- (1) This area lists the “Server and group list” configured in section 2 (OPC Server Configuration).
- (2) In this area, you can select or unselect the “Processor, Mainboard and RAM” temperature elements.
- (3) For each temperature element, you can select or unselect the default system OPC variables.
  
In the example, all variables were selected.

- (4) This button assigns the selected OPC variables to the “Server and group list”.

- (5) “Added OPC variables” view. The prefixed name is composed as previously defined in the template. See section 3 “Template – editing the names of the ‘OPC variables’”.

- (6) This button allows you to check whether variables have already been assigned to the selected “Server and group list” (1).
  
An additional window opens that allows you to delete OPC variables you no longer need. Furthermore, this overview is an aid for variable declaration in the WinCC Engineering editor. See [Declaring variables](#).

This completes the Management Explorer settings for displaying OPC variables. If necessary, you can add more variables (e.g., the fan values, etc.). To do this, repeat sections 4 and 5.
HMI Runtime – OPC Configuration

Prerequisite
- An existing SIMATIC WinCC Runtime configuration.
- HMI Runtime runs directly on the local IPC.

Table 3-16

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Creating the OPC connection</td>
</tr>
</tbody>
</table>

- Start SIMATIC WinCC Configuration Studio and open the Tag Management by double clicking it.
- Right-click on the Tag Management icon and select the new driver “OPC” (OPC.chn) via the “Add new driver” drop-down list.
- Right-click on “OPC Groups (OPCHN Unit #1)” and select the menu command “New connection” in the context section and rename the connection as “IPC”, for example.
- Right-click on the new connection “IPC” and select “Connection parameter” from the context menu.
- Proceed as follows in the “Connection parameter” window in the “OPC connection” tab.
- Select the “OPC DA” option from the “Server type” drop-down list(1). In the “OPC server” menu box, select OPC server “OPCServer.WinCC.1” (2). The OPC server used must match the OPC server selected in the “Management Explorer”. See Selecting the server and group list.
- Enter the word “<LOCAL>” (3) in the menu box “Run the server on another computer:”, if starting the server on the local computer.
- Check the connection by clicking on “Test Server” (4).

Note
Access and configuration of the OPC server are only possible if the WinCC project of the OPC server is located in Runtime.
This message appears if the OPC server is not accessible: “The desired OPC server could not be accessed. ... Class not registered”.

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### 3 Configuration - Output of Diagnostic Data on the IPC

### 3.5 Diagnostics with WinCC V7

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
</table>
| 2.  | **Creating OPC variables in the tag management**  
- Create a new group, for example, "WinCC.IPC" in the newly set up connection, in this case, "IPC" within the "OPC" channel and create the OPC variables for system diagnostics in the "Variables" tab.  
- Open the Management Explorer and look at the names of the OPC variables defined there. See [Adding OPC variables](#).  
- Enter the names of the OPC variables, the connection, the group, and then the OPC address into the tag editor. The following screen shows the OPC variables created in the "OPC.CHN" channel.  
**Note**  
- When defining the tag name in the WinCC Tag Management, the dot "." must not be used as a separator. Instead, use the underscore "_" as a separator (for example, OPC variable: "Disk[0].Devicename" => in the Tag Management: "Disk[0]_Devicename") |
| 3.  | **Creating structure tags for the OPC variables**  
For a successful transfer of tag values from DiagMonitor, you need to map an according structure in the Tag Management of WinCC for the OPC variables.  
The following procedure is recommended:  
- Create a new structure type (e.g. Temperatures... (1).  
- Create a new structure tag (e.g. Temperature[0], Temperature[1], Temperature[2], Temperature[3]) (2).  
- Connect the structure tags to the created OPC connection "e.g. IPC" and the respective group "e.g. WinCC.IPC" (3).  
- Enter the OPC element with the same name in Address (4).  
- Create the respective structure type elements (SessionCurrent, LowerMax, UpperMin) (5). |
| 4.  | **Creating a diagnostic screen**  
Insert the appropriate elements into the screen and assign the OPC variables to the elements. |
4 Configuration - Outputting Diagnostic Data via the Network

Overview

The following section shows options for accessing the diagnostic data of IPCs in the network from an IPC (called “IPC control center” in this case) or a Comfort Panel.

Figure 4-1

Output of diagnostic data via
• Management Explorer
• Web browser
• WinCC Runtime Advanced
• WinCC Runtime Professional
• Comfort Panel
### Overview of the required diagnostic software

Table 4-1

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Software</th>
</tr>
</thead>
</table>
| 1.  | Output of diagnostic data in the "IPC control center" via the "Management Explorer". | DiagBase
|     |                                                                             | Network access is not supported. |
|     |                                                                             | DiagMonitor                     |
|     |                                                                             | DiagMonitor is required on each IPC. |
|     |                                                                             | Network access is supported.    |
| 2.  | Output of diagnostic data on the "IPC control center" via a web browser (for example, Internet Explorer). | DiagBase
|     |                                                                             | Network access is not supported. |
|     |                                                                             | DiagMonitor                     |
|     |                                                                             | DiagMonitor is required on each IPC. |
|     |                                                                             | Network access is supported.    |
| 3.  | Output of the diagnostic data in the "IPC control center" via WinCC Runtime Advanced. | DiagBase
|     |                                                                             | Function is not supported.      |
|     |                                                                             | DiagMonitor                     |
|     |                                                                             | DiagMonitor is required on each IPC. |
|     |                                                                             | Access is performed via OPC (variables). |
| 4.  | Output of diagnostic data on the "IPC control center" via WinCC Runtime Professional. | DiagBase
|     |                                                                             | Function is not supported.      |
|     |                                                                             | DiagMonitor                     |
|     |                                                                             | DiagMonitor is required on each IPC. |
|     |                                                                             | Access is performed via OPC (variables). |
| 5.  | Output of diagnostics data via a Comfort Panel. (Status output is performed via the HTML browser). | DiagBase
|     |                                                                             | Function is not supported.      |
|     |                                                                             | DiagMonitor                     |
|     |                                                                             | DiagMonitor is required on each IPC. |

### Prerequisite

The following requirements must be met:

- All nodes are networked and connected to each other.
- The network-capable “DiagMonitor” software is installed on each IPC whose diagnostic data you want to read out. Regarding the installation, please follow the information in chapter 6.
4 Configuration - Outputting Diagnostic Data via the Network

4.1 Diagnostics with “Management Explorer”

4.1 Diagnostics with “Management Explorer”

DiagMonitor’s “Management Explorer” allows you to display the diagnostic information of multiple IPC stations on one IPC. It is not necessary that Management Explorer is open on the individual IPC stations.

Table 4-2

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1.  | **Adding an IPC station**  
|     | • Start the Management Explorer on the IPC from which you wish to access the other IPC stations. Chapter 3.1 describes how to open the Management Explorer.  
|     | • Select the “Station > Add…” menu command.  
|     | • A dialog opens (1). Enter the name or IP address of the IPC station whose diagnostic data you want to display. Alternatively, use the “Find…” button and browse to the IPC station (2). Confirm your selection with “OK”. |
| 2.  | **Newly created station – view** |

To add more IPC stations, repeat steps 1 and 2.
4.2 Diagnostics with a web browser

As a general, a web browser (MS Internet Explorer) is installed by default on each IPC. The web browser allows you to access the integrated “DiagMonitor” web server and to open the diagnostic information.

Depending on the user name with which you log in to the DiagMonitor web server, pages with different contents open.

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Calling the web server</td>
</tr>
<tr>
<td></td>
<td>- Open “Internet Explorer”.</td>
</tr>
<tr>
<td></td>
<td>- In the command line, enter the following address:</td>
</tr>
<tr>
<td></td>
<td>- <a href="http://IP">http://IP</a> address of IPC:5009 or</td>
</tr>
<tr>
<td></td>
<td>- <a href="http://IP">http://IP</a> address of IPC:5449</td>
</tr>
</tbody>
</table>

**Note**

If you want to access the web user interface via “https”, it is possible that a Microsoft system message - “There is a problem with this website’s security certificate” - is displayed. In this case, select the “Continue to this website” option.

The start page is then displayed.

The start page of the web interface opens.

**Note**

It may happen that you cannot establish a connection to the “target IPC” via Internet Explorer. In this case, disable the “Web server” option for the “target IPC” in Management Explorer and re-enable “Web server”.

For information on enabling the “web server”, please refer to chapter 3.2.
### 4.2 Diagnostics with a web browser

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td><strong>Opening the diagnostics pages</strong>&lt;br&gt;&lt;ul&gt;&lt;li&gt;On the start page, select the “SIMATIC PC DiagMonitor Webserver” option. A page with a login dialog opens. Depending on the name with which you log in, different options are available.&lt;/li&gt;&lt;/ul&gt;More information can be found in the following chapter <a href="#">Calling the diagnostic pages</a>.</td>
</tr>
<tr>
<td>3.</td>
<td><strong>Customizing the web server “Configuration” file</strong>&lt;br&gt;&lt;br&gt;More information on this, can be found in the following chapter <a href="#">Customizing the web server “Configuration file”</a>.</td>
</tr>
</tbody>
</table>
4.3 Diagnostics with WinCC Runtime Advanced

Using DiagMonitor in conjunction with WinCC Runtime Advanced, you can
- access the diagnostic data of the IPC using an HTML browser.
- use OPC to access the diagnostic data of the IPC.

Note: The web server has to be enabled, see chapter 3.2

4.3.1 Access via the network using the HTML browser

Table 4-4

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Remote access</td>
</tr>
</tbody>
</table>

Note
In the supplied PC Runtime project, the ready-to-use template is stored in the “Topic_001.2” screen.

- Create an IPC configuration (WinCC Runtime Advanced configuration)
- Insert the “HTML browser” control into a screen.
- In the property list of the control in “General”, enter the IP address of the IPC of which you wish to output the diagnostic data, into the “URL” field.
  In this case: [http://172.16.34.212:5009](http://172.16.34.212:5009)
  By calling this page, the “SIEMATIC PC MiniWeb Server” automatically opens up.

Note
The screen optionally includes an additional IO field that allows you to manually enter more IP addresses.
In the Property list of the control, “General”, the appropriate tag has been assigned to the “URL tag” field (1).
4.3.2 Access via the network using OPC

Introduction

Chapter 3.3, “Access to diagnostic data via OPC”, describes how to output the diagnostic data of one IPC via OPC, using WinCC Runtime Advanced.

This chapter describes how to output the diagnostics data of all IPCs in the associated network via one WinCC Runtime Advanced. WinCC Runtime Advanced runs separately on an IPC.

Note

The “OPC” option must have been enabled during the installation of HMI Runtime. If necessary, install the option later.

The following folder should exist on the IPC:
“Start > Siemens Automation > SIMATIC > OPC-XML-Gateway”

The following settings are made on the IPC on which WinCC Runtime Advanced is running.

Management Explorer – defining the OPC variables

Table 4-5

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Selecting the IPC station</td>
</tr>
<tr>
<td></td>
<td>• Open DiagMonitor’s Management Explorer.</td>
</tr>
<tr>
<td></td>
<td>• Select the “Station &gt; Add” menu command.</td>
</tr>
<tr>
<td></td>
<td>• In the dialog box, select the IPC station whose diagnostic data you want to evaluate.</td>
</tr>
</tbody>
</table>

Note:
In chapter 3.3, the “local IPC station” was selected at this point.

2. Opening the OPC Server Configuration

• Select the “Tools > OPC server...” menu item.
4 Configuration - Outputting Diagnostic Data via the Network

4.3 Diagnostics with WinCC Runtime Advanced

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>Selecting the server and group list</td>
</tr>
</tbody>
</table>

The settings are similar to the ones described previously in chapter 3.2. They differ in the assignment/selection of the server.

![OPC Server Configuration](image)

**Description**

- (1) Use this button to select the local computer name/station. In this case, this is the local IPC station, "HH-PC".  
  => Via the network, Management Explorer is connected to the IPC station whose diagnostic data you want to read out. This diagnostic data is read out via the local OPC server of the "HH-PC" IPC station.  
  **Background:**  
  The WinCC Advanced Runtime installation optionally installs the “OPC server”. The diagnostic data is stored on this OPC server.  
- (2) Use this button to select the OPC server.  
- (3) Enter a group name (can be selected as desired).  
- (4) This button applies the values from (1) to (3) to the “Server and group list” (5).  
- (6) These buttons save and reopen the created configuration.  
- (7) This button is used for specifying the prefixed name for the "OPC variables". The next section provides more information on this subject.  
- (8) If you have assigned “variables” in an existing OPC server list, this button allows you to display the variables.  

Repeat steps (1) to (4) if you want to output the diagnostic data of other stations.

4. The next steps correspond to the instructions described in chapter 3.3, Table 3-9 section 4 (link).
4.4 Diagnostics with WinCC Runtime Professional

Using DiagMonitor in conjunction with WinCC Runtime Professional, you can
- access the diagnostic data of the IPC using an HTML browser.
- use OPC to access the diagnostic data of the IPC.

4.4.1 Access via the network using the HTML browser

Table 4-6

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Remote access</td>
</tr>
</tbody>
</table>

**Note**
The ready-to-use template is stored in the enclosed PC Runtime project in “Screen_1_2”.

- Create an IPC configuration (WinCC Runtime Professional configuration)
- Insert the “HTML browser” control into a screen.
- In the property list of the control in “General”, enter the IP address of the IPC of which you wish to output the diagnostic data, into the “URL” field.
  
  In this case: **http://172.16.34.212:5009**
  
  By calling this page, the “SIMATIC PC MiniWeb Server” automatically opens up.

**Note**
The screen optionally includes an additional IO field that allows you to manually enter more IP addresses.

In the Property list of the control, “General”, the appropriate tag has been assigned to the “URL tag” field (1).
4 Configuration - Outputting Diagnostic Data via the Network

4.4 Diagnostics with WinCC Runtime Professional

4.4.2 Access via the network using OPC

Introduction

Chapter 3.3, “Access to diagnostic data via OPC”, describes how to output the diagnostic data of one IPC via OPC using WinCC Runtime Professional.

This chapter describes how to output the diagnostic data of all IPCs in the associated network via a WinCC Runtime Professional. WinCC Runtime runs separately on an IPC.

Note

The “OPC” option must have been enabled during the installation of HMI Runtime. If necessary, install the option later.

The following folder should exist on the IPC:
“Start > Siemens Automation > SIMATIC > OPC-XML-Gateway”

If the OPC Server “OPCServer.WinCC_SCADA.1” is used, no other OPC server must be used for the IPC.

The following settings are made on the IPC on which WinCC Runtime Professional is running.

Management Explorer – defining the OPC variables

Table 4-7

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Selecting the IPC station</td>
</tr>
<tr>
<td></td>
<td>• Open DiagMonitor’s Management Explorer.</td>
</tr>
<tr>
<td></td>
<td>• Select the “Station &gt; Add” menu command.</td>
</tr>
<tr>
<td></td>
<td>• In the dialog box, select the IPC station whose diagnostic data you want to evaluate.</td>
</tr>
<tr>
<td></td>
<td>Note:</td>
</tr>
<tr>
<td></td>
<td>In chapter 3.3, the “local IPC station” was selected at this point.</td>
</tr>
<tr>
<td>2.</td>
<td>Opening the OPC Server Configuration</td>
</tr>
<tr>
<td></td>
<td>• Select the “Tools &gt; OPC server...” menu item.</td>
</tr>
</tbody>
</table>
3. Selecting the server and group list

The settings are similar to the ones described previously in chapter 3.2. They differ in the assignment/selection of the server.

- (1) Use this button to select the local computer name/station. In this case, this is the local IPC station, “IPC677D”.
  => Via the network, Management Explorer is connected to the IPC station whose diagnostic data you want to read out. This diagnostic data is read out via the local OPC server of the “IPC677D” IPC station.

  **Background:**
  The WinCC Professional Runtime installation optionally installs the “OPC server”. The diagnostic data is stored on this OPC server.

- (2) Use this button to select the OPC server.
- (3) Enter a group name (can be selected as desired).
- (4) This button applies the values from (1) to (3) to the “Server and group list” (5).
- (6) These buttons save and reopen the created configuration.
- (7) This button is used for specifying the prefixed name for the “OPC variables”. The next section provides more information on this subject.
- (8) If you have assigned “variables” in an existing OPC server list, this button allows you to display the variables.

Repeat steps (1) to (4) if you want to output the diagnostic data of other stations.

4. The next steps correspond to the instructions described in chapter 3.3, Table 3-9 section 4 (link).
4.5 Diagnostics with WinCC V7

Using DiagMonitor and in conjunction with WinCC Runtime, you can
• use an HTML browser to access the diagnostic data of the IPC.
• use OPC to access the diagnostic data of the IPC.

4.5.1 Access via the network using the HTML browser

Table 4-8

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Remote access</td>
</tr>
</tbody>
</table>

Note
The ready-to-use template is stored in the supplied PC Runtime project in the “IPCDiagMonitor.pdl” screen.

• Create an IPC configuration (WinCC Runtime configuration)
• Insert the “WinCC WebBrowser” control into a screen.
• Enter the IP address of the IPC of which you wish to output the diagnostic data in the “MyPage” field in the Property list of the control in “Control Properties” (1).

In this case: http://172.16.34.212:5009

By calling this page, the “SIMATIC PC MiniWeb Server” automatically opens up.

4.5.2 Access via the network using OPC

Introduction
Chapter 3.3, “Access to diagnostic data via OPC”, describes how to output the diagnostic data of one IPC via OPC using WinCC Runtime.
This chapter describes how to output the diagnostic data of all IPCs in the associated network via a WinCC Runtime. WinCC Runtime runs separately on an IPC.

Note
The “OPC” option must have been enabled during the installation of HMI Runtime. If necessary, install the option later.
The following folder should exist on the IPC: “Start > Siemens Automation > SIMATIC > OPC-XML-Gateway”

The following settings are made on the IPC on which WinCC Runtime is running.

Management Explorer – defining the OPC variables

Table 4-9

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Selecting the IPC station</td>
</tr>
<tr>
<td></td>
<td>• Open DiagMonitor’s Management Explorer.</td>
</tr>
<tr>
<td></td>
<td>• Select the “Station &gt; Add” menu command.</td>
</tr>
<tr>
<td></td>
<td>• In the dialog box, select the IPC station whose diagnostic data you want to evaluate.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong></td>
</tr>
<tr>
<td></td>
<td>In chapter 3.3, the “local IPC station” was selected at this point.</td>
</tr>
</tbody>
</table>

2. Opening the OPC Server Configuration

• Select the “Tools > OPC server...” menu item.
### 4 Configuration - Outputting Diagnostic Data via the Network

#### 4.5 Diagnostics with WinCC V7

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>Selecting the server and group list</td>
</tr>
</tbody>
</table>

The settings are similar to the ones described in chapter 3.3.2. They differ in the assignment/selection of the server.

#### Description

- **(1)** Use this button to select the local computer name/station. In this case, this is the local IPC station, “SIEMENS IPC”.
  
  => Via the network, Management Explorer is connected to the IPC station whose diagnostic data you want to read out. This diagnostic data is read out via the local OPC server of the IPC station “SIEMENS IPC”.

  **Background:**
  
  The WinCC Runtime installation optionally installs the “OPC server”. The diagnostic data is stored on this OPC server.

- **(2)** Use this button to select the OPC server. The server name must match the server name you have used in the HMI Runtime configuration in “Connections”. See Creating the OPC connection.

- **(3)** Enter a group name (can be selected as desired).

- **(4)** This button applies the values from (1) to (3) to the “Server and group list” (5).

- **(6)** These buttons save and reopen the created configuration.

- **(7)** This button is used for specifying the prefixed name for the “OPC variables”. The next section provides more information on this subject.

- **(8)** If you have assigned “variables” in an existing OPC server list, this button allows you to display the variables.

Repeat steps (1) to (4) if you want to output the diagnostic data of other stations.

#### 4.

The next steps correspond to the instructions described in chapter 3.3, Table 3-9 section 4. See Template – editing the names of the “OPC variables”.

---

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4.6 Diagnostics with Comfort Panel

Comfort Panels have an integrated Internet Explorer. This web browser allows you to directly access the diagnostics pages of the IPC.

Alternatively, you can use the HTML browser control in a screen. The IPC’s status information can be displayed via the control.

Access to the IPC via HTML browser or HTML browser control

Requires that DiagMonitor be installed on the IPC whose diagnostic data you want to read out, as well as using a SIMATIC Comfort Panel.

### Table 4-10

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Using Internet Explorer</td>
</tr>
<tr>
<td></td>
<td>Note</td>
</tr>
<tr>
<td></td>
<td>In the WinCC Advanced project supplied, the ready-to-use template is stored in the “Topic_001.1” screen.</td>
</tr>
<tr>
<td></td>
<td>SIMATIC Comfort Panels have an Internet Explorer. A system function allows you to directly open Internet Explorer without exiting the Comfort Panel’s runtime.</td>
</tr>
</tbody>
</table>

#### Description

- (1) Assign the “StartProgram” system function to a button. Internet Explorer is opened using this system function.
- (2) Parameters for opening Internet Explorer
  
  Programs: \windows\iexplore.exe
  
  Program parameter: Here you can store a static IP address or, as in this example, a “String” type tag.
  
  This enables you to adjust the IP address via the panel.
- (3) Optional button.
  
  To facilitate entering the IP address, the IP address of the “ProgParameter” tag is transferred via the “SetTag” system function (4).
- (5) Optional I/O field
  
  To be able to manually specify the IP address, create an I/O field.
  
  Assign the “ProgParameter” tag to the I/O field (4).
### 4.6 Diagnostics with Comfort Panel

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td><strong>Using the HTML browser control</strong></td>
</tr>
</tbody>
</table>

**Note**

In the supplied HMI project, the ready-to-use template is stored in the “Topic_001.2” screen.

Alternatively to Internet Explorer, you can use the “HTML browser control”. Via this control, you can output the status of the IPC.

1. Insert the HTML browser control into a screen.
2. Enter the IP address of the IPC in the “URL” field.
3. Optional tag
   To be able to manually specify the IP address, a tag is stored in the “URL tag” field.
4. Optional I/O field
   To be able to manually specify the IP address, create an I/O field. Assign the “URL_Decentral” tag to the I/O field (4).
5 Configuration - Output of Diagnostic Data via Text Messages

To output IPC diagnostic data via text messages, you need the “SIMATIC IPC DiagMonitor” software.
The message can be sent by email or SMS.

Prerequisite
The following requirements must be met:
- All nodes are networked and connected to each other.
- The “DiagMonitor” software is installed on the IPC. Regarding the installation, please follow the information in chapter 6.

Overview

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Output of diagnostic data by email.</td>
<td>DiagBase</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The function is not supported.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DiagMonitor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>User-defined messages/texts can be created.</td>
</tr>
<tr>
<td>2.</td>
<td>Output of diagnostic data by SMS.</td>
<td>DiagBase</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The function is not supported.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DiagMonitor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>User-defined messages/texts can be created.</td>
</tr>
</tbody>
</table>
5.1 Email / SMTP server configuration

Table 5-2

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Opening and configuring the SMTP server</td>
</tr>
<tr>
<td></td>
<td>- Start Management Explorer on the “IPC”. Chapter 3.1 describes how to open the Management Explorer.</td>
</tr>
<tr>
<td></td>
<td>- Select the “Tools &gt; Email...” menu item.</td>
</tr>
<tr>
<td></td>
<td>- <strong>Recipient settings</strong></td>
</tr>
<tr>
<td></td>
<td>- A dialog box opens.</td>
</tr>
<tr>
<td></td>
<td>- (1) Enable the “Enable email notification” option.</td>
</tr>
<tr>
<td></td>
<td>- (2) Enter the recipient’s email address.</td>
</tr>
<tr>
<td></td>
<td>- Specify a text in the fields “Subject” and “Message text”. For more information, please refer to the online help.</td>
</tr>
<tr>
<td></td>
<td>- <strong>SMTP server settings</strong></td>
</tr>
<tr>
<td></td>
<td>- Open the “SMTP-Server” tab.</td>
</tr>
<tr>
<td></td>
<td>- (3) Enter the data of the “outgoing mail server”.</td>
</tr>
<tr>
<td></td>
<td>- (4) Enter your user data with which you are registered at the email service provider.</td>
</tr>
<tr>
<td></td>
<td>- (5) Enter the address of the “incoming mail server”.</td>
</tr>
<tr>
<td></td>
<td>- For information on the ports, please refer to your “email service provider”. For more information, please refer to the online help.</td>
</tr>
<tr>
<td></td>
<td>- Confirm your entries with “OK”.</td>
</tr>
</tbody>
</table>

![Diagram of SMTP server configuration](image)
5.2 SMS configuration

Table 5-3

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Opening and configuring the SMS server</td>
</tr>
</tbody>
</table>

**Prerequisite**
To be able to send an SMS text message via the station, a communication module is required that supports sending SMS text messages. Alternatively, you can connect a cell phone to the USB port. This may require drivers of the connected cell phone (for the drivers, see the cell phone manufacturer’s support pages).

- Start Management Explorer on the “IPC”. Chapter 3.1 describes how to open the Management Explorer.
- Select the “Tools > SMS...” menu item.
  - (1) A dialog opens.
  - Enable the “Alarm Notification via SMS (GSM)” option.
  - (2) Enter the recipient’s cell phone number.
  - (3) From the drop-down list, select the device via which you want to send the SMS text message.
  - Specify a text in the “Message” field. For more information, please refer to the online help.
- Testing the connection/function.
  - (4) When you have performed steps 2 and 3, use the “Test” button to test the function.
  - Confirm your entries with “OK”.

**Note**
The cell phone must support “GSM”.

![Image of SMS configuration setup](image)
6 Installation and Commissioning

6.1 Installing the software

SIMATIC IPC DiagBase / DiagMonitor

Depending on the application, install the following software on the IPS
- DiagBase
- DiagMonitor

Please note: only one of the two software versions can be installed on the IPC. Both versions cannot be used simultaneously on one IPC.

Enabling Windows features

The “SNMP” windows function has to be enabled for the installation of DiagMonitor.

Open the “Programs and Features” system function.
- “Start > Control Panel > Programs and Features”.
- “Turn Windows features on or off”.
- Enable the “Simple Network Management Protocol (SNMP)” option.

WinCC Runtime Advanced

When installing, make sure that the “OPC” option is also enabled.

6.2 System setting for DiagMonitor

To be able to display diagnostic information with SIMATIC IPC DiagMonitor, settings must be made in the “SNMP” service.

Procedure

- Select “Start > Control Panel > Administrative Tools > Services” to open the “services”.
- Navigate to the “SNMP Service”. Double-click to open the properties of the “SNMP” service.
- Open the “Security” tab. Select the “Accept SNMP packets from any host” option.
- Confirm your changes with “OK”.

For details, please refer to entry ID 78606661
Operating the Application

In order for you to be able to use the example projects provided in the entry, the configuration steps from chapter 3 or 4 are required.

7.1 WinCC Runtime Advanced and Comfort Panels

Overview and description of the user interface

Table 7-1

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Start screen</td>
</tr>
<tr>
<td></td>
<td>Starting Runtime opens the following screen.</td>
</tr>
<tr>
<td></td>
<td>The “Application example” button takes you to the overview page with the application examples.</td>
</tr>
</tbody>
</table>

2. Navigation page

This page takes you to the individual application examples.

| Topic 001.1: Local access |
| Topic 001.2: Remote access |
7 Operating the Application

7.1 WinCC Runtime Advanced and Comfort Panels

TP700 Comfort example

Two examples are stored for the TP700 Comfort example.
- Access to IPC data via Internet Explorer
- Access to IPC data via HTML browser control

Table 7-2

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>Topic 001.1 – access to IPC data via Internet Explorer</strong></td>
</tr>
<tr>
<td></td>
<td>The destination address of the IPC can be specified in the IO field. Alternatively, the “Default” button allows you to specify a default IP address of the IPC in the IO field. Selecting the “Call IE” button opens Internet Explorer. The address is applied from the IO field.</td>
</tr>
<tr>
<td>2.</td>
<td><strong>Topic 001.2 – access to IPC data via HTML browser control</strong></td>
</tr>
<tr>
<td></td>
<td>Opening the page automatically opens the IPC’s web browser. The destination address is set by default. Alternatively, the IO field can be used to specify a destination address.</td>
</tr>
</tbody>
</table>

WinCC Runtime Advanced example

Five examples are stored for WinCC Runtime Advanced.
- Local access to IPC diagnostic data via the Internet Explorer
- Remote access to IPC data via the Internet Explorer
- Output via OPC – temperature monitoring
- Output via OPC – fan speed monitoring
- Output via OPC – hard disk monitoring

Table 7-3

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>Topic 001.1 – local access to IPC data via Internet Explorer</strong></td>
</tr>
<tr>
<td></td>
<td>Opening the page automatically opens the IPC’s web browser. The destination address is set by default.</td>
</tr>
<tr>
<td>2.</td>
<td><strong>Topic 001.2 – remote access to IPC data via the Internet Explorer</strong></td>
</tr>
<tr>
<td></td>
<td>Opening the page automatically opens the IPC’s web browser. The destination address is set by default. Alternatively, the IO field can be used to specify a destination address.</td>
</tr>
<tr>
<td>3.</td>
<td><strong>Topic 002.1 – output via OPC – temperature monitoring</strong></td>
</tr>
<tr>
<td></td>
<td>The IPC’s temperature data is output on this page.</td>
</tr>
<tr>
<td>4.</td>
<td><strong>Topic 002.2 – output via OPC – fan speed monitoring</strong></td>
</tr>
<tr>
<td></td>
<td>The IPC’s fan speed is output on this page.</td>
</tr>
<tr>
<td>5.</td>
<td><strong>Topic 002.3 – output via OPC – hard disk monitoring</strong></td>
</tr>
<tr>
<td></td>
<td>The IPC’s hard disk information is output on this page.</td>
</tr>
</tbody>
</table>
7.2 WinCC Runtime Professional

Overview and description of the user interface

Table 7-4

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>Start screen</strong></td>
</tr>
<tr>
<td></td>
<td>Starting Runtime opens the following screen.</td>
</tr>
<tr>
<td></td>
<td>The “Application example” button takes you to the overview page with the application examples.</td>
</tr>
</tbody>
</table>

**Navigation page**

This page takes you to the individual application examples.
WinCC Runtime Professional example

Five examples are stored for WinCC Runtime Professional.

- Local access to IPC diagnostic data via the Internet Explorer
- Remote access to IPC data via Internet Explorer
- Output via OPC – temperature monitoring
- Output via OPC – fan speed monitoring
- Output via OPC – hard disk monitoring

Table 7-5

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>Local – local access to IPC data via the Internet Explorer</strong></td>
</tr>
<tr>
<td></td>
<td>Opening the page automatically opens the IPC’s web browser. The destination address is set by default.</td>
</tr>
<tr>
<td>2.</td>
<td><strong>Local – remote access to IPC data via the Internet Explorer</strong></td>
</tr>
<tr>
<td></td>
<td>Opening the page automatically opens the IPC’s web browser. The destination address is set by default. Alternatively, the IO field can be used to specify a destination address.</td>
</tr>
<tr>
<td>3.</td>
<td><strong>Temperature - output via OPC – temperature monitoring</strong></td>
</tr>
<tr>
<td></td>
<td>The IPC’s temperature data is output on this page.</td>
</tr>
<tr>
<td>4.</td>
<td><strong>Fan – output via OPC – fan speed monitoring</strong></td>
</tr>
<tr>
<td></td>
<td>The IPC’s fan speed is output on this page.</td>
</tr>
<tr>
<td>5.</td>
<td><strong>HDD – output via OPC – hard disk monitoring</strong></td>
</tr>
<tr>
<td></td>
<td>The IPC’s hard disk information is output on this page.</td>
</tr>
</tbody>
</table>
7.3 WinCC V7.3 SE

Overview and description of the user interface

Table 7-6

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>Start screen</strong></td>
</tr>
<tr>
<td></td>
<td>Starting Runtime opens the following screen. The &quot;Application example&quot; button takes you to the overview page with the application examples.</td>
</tr>
</tbody>
</table>

2. **Navigation page**

This page takes you to the individual application examples.
Operating the Application

7.3 WinCC V7.3 SE

WinCC Runtime example

Three examples are stored for WinCC Runtime.
- Local access to IPC diagnostic data via the Internet Explorer
- Remote access to IPC data via the Internet Explorer
- Output via OPC – temperature monitoring, fan speed monitoring, hard disk monitoring

Table 7-7

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>IPC Webserver (L) – local access to the data of the IPC via the Internet Explorer</strong></td>
</tr>
<tr>
<td></td>
<td>Opening the page automatically opens the IPC’s web browser. The destination address is set by default.</td>
</tr>
<tr>
<td>2.</td>
<td><strong>IPC Webserver (D) – remote access to IPC data via the Internet Explorer</strong></td>
</tr>
<tr>
<td></td>
<td>Opening the page automatically opens the IPC’s web browser. The destination address is set by default.</td>
</tr>
<tr>
<td>3.</td>
<td><strong>IPC DiagMonitor – output via OPC</strong></td>
</tr>
<tr>
<td></td>
<td>The temperature data, fan speeds, and hard disk data of the IPC are output on this page.</td>
</tr>
</tbody>
</table>
8 Links & Literature

Table 8-1

<table>
<thead>
<tr>
<th>Topic</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1| Siemens Industry Online Support</td>
<td><a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a></td>
</tr>
<tr>
<td>2| Download page of the entry</td>
<td><a href="https://support.industry.siemens.com/cs/ww/en/view/109478242">https://support.industry.siemens.com/cs/ww/en/view/109478242</a></td>
</tr>
<tr>
<td>3| Download</td>
<td>SIMATIC IPC DiagBase</td>
</tr>
<tr>
<td>4| Download</td>
<td>PCDiagBridge</td>
</tr>
<tr>
<td>5| Product note</td>
<td>SIMATIC IPC DiagMonitor</td>
</tr>
<tr>
<td>6| FAQ</td>
<td>Why can you not add any stations in SIMATIC IPC DiagMonitor?</td>
</tr>
<tr>
<td>7| Download</td>
<td>PCDiagBridge Download</td>
</tr>
</tbody>
</table>

9 History

Table 9-1

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Modifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1.0</td>
<td>09/2015</td>
<td>First version</td>
</tr>
<tr>
<td>V2.0</td>
<td>05/2016</td>
<td>WinCC Professional expansion</td>
</tr>
</tbody>
</table>