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NEWS

2

# TeleService of a S7-1200 station via mobile network

CP 1242-7 V2, CP 1243-7 LTE, TCSB V3.1

https://support.industry.siemens.com/cs/ww/en/view/56720905

Siemens Industry Online Support



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# 1 Task

#### Introduction

The infrastructure of a plant contains a SIMATIC S7-1200 sub-station. The substation communicates wirelessly with a central station via the internet. Additionally, a service operator monitors the sub-station and communicates with it via remote access.

The communication is realized via the TeleControl Server Basic V3.1 (TCSB V3.1) software installed in the central station.

## Overview of the automation task

The following figure provides an overview of the automation task. Figure 1-1



\*Possible Access Methods:

- Access via UMTS (e.g. USB stick)
- Access via DSL (e.g. router with integrated DSL modem)

## Requirements

This application example is intended to meet the following requirements:

- Via remote access, the service operator monitors the status of the connected remote stations.
- Via remote access, the service operator downloads updated program data and modifies any parameters.

The remote access is done via the internet and independent from the internet service provider.

## 2 Solution

## 2.1 Overview

## **Schematic layout**

The figure below shows a schematic overview of the most important components of the solution.

Figure 2-1



#### Setup

With TCSB V3.1, the central and the remote station can communicate with each other via the mobile network. The central station is connected with the internet via a DSL router.

The remote maintenance (TeleService) requires an uninterrupted data transfer between the remote station and the engineering station via the GPRS network. The connection between the engineering station and the GPRS network is established by TCSB V3.1.

The engineering station is connected to the internet with the following alternative technologies:

- UMTS (e. g. USB-Stick)
- Router (e. g with integrated DSL-modem)

**Note** The connection between the engineering station and the GPRS network can also be established via a TeleService gateway.

The TeleService gateway only serves the "TeleService" function via the mobile network. With the TeleService gateway, no connections to remote stations can be monitored and no process data can be transferred (see  $\frac{5}{5}$ ).

The "TS Gateway" software is included in the scope of delivery of the CP 1242-7 GPRS V2.

#### **Remote Station**

"Remote Station" refers to a spatially removed remote station with a SIMATIC S7-1200 CPU and a CP 12427 GPRS V2.

Central station

"Central station" refers to a central control unit (PC, IPC or comparable device) with internet connection, onto which the TCSB V3.1 software is installed.

## Engineering Station

Engineering Station (ES) refers to a programming device, notebook or a comparable device with software component STEP 7 V15.1 and an existing internet connection.

**Note** In this application example, central station and engineering station have been integrated into one device.

#### **Advantages**

The solution offers you the following advantages:

- TCSB V3.1 enables economic data communication between remote stations and the central station.
- World-wide access to the remote station is possible via the internet.
- The application example can also be used for the CP 1243-7 LTE.
- The core application areas are industrial applications where the objective is to send data in a cost-effective way on a wireless basis, for example in water treatment plants, for water purification or in pumping stations.

#### Topics not covered by this application

This application example does not contain a description of:

- SIMATIC NET TeleControl Server Basic (see also <u>\3</u>)
- LAD / FBD / STL / SCL programming languages

Basic knowledge of these topics is assumed.

## 2.2 Hardware and software components

## 2.2.1 Validity

This application example is valid for the following software versions:

- CP 1242-7 V2 with FW. V3.1 or higher
- CP 1243-7 LTE
- STEP 7 V15.1
- S7-1200 CPU with FW. V4.1 or higher
- TCSB V3.1

## 2.2.2 Components used

This application example was created with the following components:

## Hardware components of station 1

Table 2-1

Component	Qty	Article number	Note
S7-1200 PM1207	1	6EP1332-1SH71	Power supply
SIMATIC S7-1200 CPU 1217C DC/DC/DC	1	6ES7217-1AG40-0XB0	Any S7-1200 CPU as of V4.1 can be used.
COMMUNICATION PROCESSOR CP 1242-7 V2	1	6GK7242-7KX31-0XE0	Alternatively, a CP 1243-7 LTE can also be used: • CP 1243-7 LTE EU (6GK7243-7KX30-0XE0) • CP 1243-7 LTE US (6GK7243-7SX30-0XE0)
Antenna ANT794- 4MR	1	6NH9860-1AA00	GSM quad-band and UMTS and LTE (Europe).
SIMATIC memory card	1	6ES7954-8LF01-0AA0	Memory card for the S7-1200 CPU (optional).

#### Accessories

#### Table 2-2

Component	Qty	Article number	Note
SIM card	1	Available from your mobile communications provider	Activated for data communication.
DSL router and modem	2	Specialist retailers	SCALANCE M816
Fixed IP address for DSL (broadband) connection or DynDNS	2	Available from your provider.	-

## Software components

Tabl	е	2-3
iabi	e	2-3

Component	Qty	Article number	Note
STEP 7 Professional V15.1	1	6ES7822-1AA05-0YA5	STEP 7 Basic can also be used.
Software TCSB V3.1	1	6NH9910-0AA31-0AA0	A maximum of eight connectable stations. The product is available in further stages of development and licenses, (see document $\underline{3}$ ).

## Example files and projects

The following table contains all files and projects used in this example.

Table 2-4

Component	Note
56720905_S7_1200_TeleService_PROJ_V12.zip	<ul><li>This zip file includes:</li><li>The STEP 7 V15.1 project</li><li>TCSB project</li></ul>
56720905_S7_1200_TeleService_DOC_V12_en.pdf	This document.

## 3 Function principle

This application example shows the following core elements:

- Configuration of a S7-1200 station with CP 1242-7 V2 for communication with the central station via mobile communications network and the internet.
- Configuration of a S7-1200 station with CP 1242-7 V2 for remote maintenance (TeleService) of the remote station that is operated by a service operator.
- How the remote station can be maintained by a service operator.

# 3.1 Connection buildup between remote station and central station via TCSB V3.1

The following diagram shows the complete system with all parameters required for communication between the remote station and the central station. In this application example, the connection is established via TCSB V3.1.



 PIN number of the SIM card that is installed into the CP 1242-7 V2. The CP 1242-7 V2 logs in automatically at the GSM network of the provider, given that the PIN number of the installed SIM card has been recognized as valid.

- Note The SIM card's PIN number must be enabled.
  - 2. APN

The CP 1242-7 V2 logs in at the GPRS access point of the mobile service provider using the APN address, APN user name and APN user password. An IP address from the address area of the provider is assigned to the CP 1242-7 V2. It is now accessible via internet and can send IP-based requests to other participants on the internet.

Note

The APN user name and the APN user password are provider-dependent

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## 3. Fixed IP address

The CP 1242-7 V2 sends a connection request to the central station. The static IP address of the internet connection for accessing the central station is required.

4. Port

As soon as the connection request has been received by the router of the local IT network of the central station, it will be forwarded to the central station with the relevant port number.

5. Project number, station number and TeleControl password

TCSB V3.1 checks the connections request of the CP 1242-7 V2, using the data (project number and station number) stored in the configuration.

To authenticate the remote station, an additional password is requested.

If the connection request is evaluated successfully the TCSB V3.1 updates the internal routing table entry related to this remote station and the corresponding current IP address of the CP 1242-7 V2. A connection for the transmission of TCP/IP packages is established between the CP 1242-7 V2 of the remote station and the central station.

6. IP address of TCSB V3.1

# 3.2 Teleservice connection between remote station and engineering station

As engineering station and remote station always communicate via the central station, the central and the remote station need to be connected via the TCSB V3.1 in this application example. The TeleService connection for loading project or program data or querying diagnostic data is directly integrated in the main connection.

The graphic below shows the complete system with all parameters required for a teleservice communication between remote station and engineering station in addition to the parameters from Figure 3-1.





1. IP address of TCSB V3.1

The engineering station sends a connection request to the central station. For this, the IP address of the TCSB V3.1 is needed, via which the TeleService connection between engineering station and remote station is run.

2. Port

As soon as the connection request has been received by the router of the local IT network of the central station, it will be forwarded to the central station with the relevant port number.

3. Server password

The TCSB V3.1 checks the connection request of the engineering station. This password is used to authenticate the engineering station in the TCSB.

If this remote station is entered in the TCSB V3.1 and online, the teleservice request from the engineering station to the remote station is forwarded on the basis of the existing TCP/IP connection.

4. TeleService user name and password

For protection against an unauthorized access to the CP 1242-7 V2, the TeleService user name and password are requested during the start-up of the TeleService session.

If the teleservice connection request is validated, diagnostic and program data can then be transferred between the remote station and the engineering station. The process value communication is not affected by this.

**Note** The project included in this application example has already been configured for you. Chapter 4 explains the implemented work steps again.

The configuration is done with the following configuration tools:

- STEP 7 V15.1:
  - Configuration of a remote station (S7-1200 CPU with CP 1242-7 GPRS V2) for data communication with the central station via mobile communications network and the Internet
  - Configuration of a remote station (S7-1200 CPU with CP 1242-7 GPRS V2) for remote maintenance (TeleService) by a service operator
- TCSB V3.1:
  - create and configure a project
  - create and configure connections
  - configure general parameters

## 4.1 Configuring the remote station

The table below shows how to configure a S7-1200 station with the CP 1242-7 GPRS V2 for data communication with the central station via mobile communications network and the Internet and for remote maintenance (TeleService).

Table 4-1

No.	Action
1.	Create a STEP 7 V15.1 project.
2.	Add the S7-1200 CPU (as of V4.1) for the SIMATIC station 1.
3.	Add the CP 1242-7 GPRS V2 to the station.
	Communications modules
	🕶 🛅 Industrial Remote Communication
	▶ 🛅 CP 1243-1
	CP 1243-1 DNP3
	CP 1243-1 IEC
	✓ ☐ CP 1242-7 GPRS
	6GK7 242-7KX30-0XE0
	GGK7 242-7KX31-0XE0
	CP 1243-7 LTE
	CP 1243-8 IRC

No.	Action
4.	Activate the following control boxes under "Properties of the CP 1242-7 GPRS V2 > General > Communication types": • "Enable telecontrol communication" • "Enable online functions". General IO tags System constants Texts • General Project information Catalog information Identification & Maintenance Communication types • Mobile wireless communicat • Ethermet interface [X1]
5.	Under "Properties of the CP 1242-7 GPRS V2 > Mobile wireless communications settings", make the required mobile communication settings marked in the following figure. Mobile wireless communication settings
	APN settings
6.	Enable the security functions. Under "Properties of the CP 1242-7 GPRS V2 > Security > Security properties", create a user profile for the security functions.

No.		Action	
7.	<ul> <li>Under "Properties of the CP 1242-7 GPRS V2 &gt; Partner stations &gt; Connection to partner", configure the CP parameters required to configure the TCSB V3.1:</li> <li>Partner IP address (static IP address / provider-dependent)</li> <li>Partner port</li> </ul>		
	Connection to partner		
	IP address: TCP connection monitoring time: TCP keepalive monitoring time: Connection mode: Connection establishment:	"WAN-IP-ADDRESS" Connection monitoring 180 s 10 s Permanent Connection establishment by CP	
	Partner port:	55097	
	<ul> <li>Properties &gt; Security &gt; CP identif</li> <li>Project number</li> <li>Station number</li> <li>Telecontrol password (here "</li> </ul>	fication" Feleservice").	
	CP identification		
	Project number: 1		
	Station number	1	
	Access ID	200165	
	Telecontrol password	•••••	
	Repeat password	•••••	
	The parameters assigned here mu	ist be identical to the parameters in TCSB.	

No.		Action		
8.	<ul> <li>Adopt the global security settings that are required or the TeleService access.</li> <li>Under "Global security settings &gt; Users and roles", create a new user-defined role.</li> <li>Under "Global security settings &gt; Users and roles", create a user that is allowed to execute the TeleService functions for CP.</li> <li>Under "Global security settings &gt; User management &gt; Roles &gt; Rights of the role" activate the right "Use TeleService".</li> </ul>			
	Project tree			
	Devices	1 Users Wuser groups 1 Roles		
	56720905_57-1200_TeleService_COD     Add new device     Devices & networks     Cr12427_V2_Teleservice [CPU     Device configuration     Qonline & diagnostics     Erogram blocks     Technology objects	User name Password Authentication Maximum sessi administrator Password 30 Min Siemens OS Password 30 Min Add new users Assigned user groups Assigned roles Assigned rights Assigned roles Assigned role Assigned role		
		Assigned to     Name     Description     Maximum setsin.     Co       iv     Engineering administrator     System-defined role "Engineering s. 30     Min     Engi       iv     Engineering standard     System-defined role "Regineering s. 30     Min     Engi       iv     NETAdministrator     System-defined role "NETStandard"     30     Min       iv     NETStandard     System-defined role "NETStandard"     30     Min       iv     NETStandard     System-defined role "NETStandard"     30     Min       iv     NETRemote Access     System-defined role "NETBenoses"     30     Min       iv     NETAdministrator Radius     System-defined role "NETAdminist 30     Min       iv     NETAdministrator Radius     System-defined role "NETAdminist 30     Min       iv     NETAdministrator Radius     System-defined role "NETRadius"     30     Min       iv     NETAdministrator Radius     System-defined role "NETRadius"     30     Min       iv     teleservice     User-defined role     30     Min		
	User name: "SiemensOS Password: "Teleservice" Role: "teleservice"	Engineering administrator Properties Linfo Diagnostics		
9.	Load the project data to	the station via your PROFINET interface.		

## 4.2 Configuring the TCSB V3.1

Table 4-2

No.		Action		
1.	Under "Windows TCS Basic > Co interface of TCS	s Start menu > All Programs > Siemens Automation > SIMATIC > nfig and Monitoring Tool", start the configuration and monitoring B (CMT).		
2.	After the program	n has started, the login dialog of the CMT appears.		
	СМТ	Logon		
	Enter user name a	nd user password		
	User name:	administrator		
	Password:	••••••		
	TCSB server:	127.0.0.1		
		Logon		
	<ul> <li>Enter a con</li> </ul>	figured user name or keep the default user name.		
	<ul> <li>Enter the respective password.</li> <li>Enter the IP address or the TeleControl server name resolved by DNS:         <ul> <li>Computer name or</li> <li>IP address (default IP address: 127.0.0.1)</li> </ul> </li> </ul>			
	Default logon da	ta:		
	User name: adm	inistrator		
	Password: 0000			
3.	Create a new pr	oject:		
	<ul> <li>In the navig</li> </ul>	ation pane, select the entry "Projects".		
	<ul> <li>In the communication</li> </ul>	hands bar, click on the "Add" button.		
1		appears in the navigation parte and in the object area.		
4.	Select the projectab.	ct in the navigation pane or object area and click on the "Settings"		

No.	Action
5.	Fill in the parameters "Project name", "Project number" and "Server password" of the project. Click on "Create".
	Create a project
	General         Project name:         Project number:         2         SMS gateway provider:         T-Mobile         Server password:         Repeat password:         Comment:
	Note: The server password is required for the TeleService access. In this example, the server password is "Teleservice".
6.	"Save & activate" the configuration to activate the configuration data for connection establishment. Project Discard Save & activate System variables Activated parameters
7.	Create a new connection for station 1 by following the steps below:
	In the navigation pane, select a project for which you want to create a new connection
	<ul> <li>In the command bar, select the required connection type from the "Connection type" drop-down list.</li> </ul>
	<ul> <li>In the object pane, select the "Add" button from the command bar. Select the CP 1242-7 V2.</li> </ul>
	Connection       Edit       Add       Delete       Impo         Configure connection Station       S7-1200       CP1243-1       CP1243-1       CP1243-7         Communication monitoring       CP1243-7       CP1242-7 V2       Name:       CP1242-7         Monitoring of the transferred       CP1242-7       CP1242-7       Name:       Name:
	sr-300     mumber:       MD720-3 / MD7zo     trol password:       sr-200     MD720(Secure)       MD720(Secure)     nt:
	The new connection appears in the object area.
8.	Save the changes and activate the project.  Project Discard Save & activate  S System variables Activated parameters

No.	Action
9.	Select the connection and in the object pane, select the "Connections" tab. In the parameter area, various parameter groups are displayed for this connection.
10.	In the "General" parameter group, enter the parameters for the remote station: <ul> <li>Station name</li> <li>Station number</li> </ul> <li>Telecontrol password: Teleservice <ul> <li>Configure connection Station 1/</li> </ul> </li> <li>General <ul> <li>Station name: <a href="station1">Station 1</a> </li> <li>Configure connection Station 1/</li> </ul> </li>
	<b>Note:</b> The parameters assigned here must be identical with the parameters in the STEP 7 project.
11.	Under "TCSB system > "TCM" tab > General > Address TCM 1", configure the IP address and the port of the Telecontrol server. TCSB system TCM Database General Address TCM 1: 172.16.62.100 Address TCM 2: Address TCM 2 (IPv6): Listener ports MSC listener port: 26862 IPT listener port: 26861 Data port: 26861 TCSB port: 26864
12.	Save the changes and activate the project.  Project Discard Save & activate   s System variables Activated parameters

# 5 Installation and Commissioning

## 5.1 Installing the hardware

The necessary hardware components are listed in Chapter 2.2.

**Note** The installation guidelines of all components have to be observed.

NOTICE	Before you switch on the power supply, complete and check the
	installation!

## 5.1.1 Hardware setup of the remote station

The figure below shows the hardware setup of the remote station with the central station and the engineering station.



Industrial Ethernet

No.	Action
1.	Insert your SIM card into the CP 1242-7 GPRS V2.
2.	Connect the individual modules to a suitable module rack.
3.	Connect the CPU with the CP 1242-7 GPRS V2.
4.	Connect the antenna to the CP 1242-7 GPRS V2.
5.	Connect the engineering PG to the PROFINET interface of the S7-CPU. <b>Note:</b> This connection is only required while the project data are loaded. Remote
	maintenance occurs via the Internet.
6.	Connect the CPU 1217C and the CP 1242-7 GPRS V2 to a 24 V DC power source.
7.	Connect the DC power source to the power grid (230 V AC).

## 5.1.2 Hardware setup of central station

Figure 5-2 below shows the hardware setup of the central station. Figure 5-2



Industrial Ethernet

### Table 5-2

No.	Action
1.	Connect your PC on which TeleControl Server Basic runs to the router via Ethernet.
2.	If the DSL (broadband) modem is not integrated in the router, connect the router to the DSL modem.

## 5.1.3 Hardware setup of the engineering station

The figure below shows the hardware setup of the engineering station. Figure 5-3



#### Industrial Ethernet

No.	Action
1.	Establish an internet connection at your engineering station.
	Possible access methods:
	Access via UMTS (e. g. USB-Stick)
	Access via DSL (e. g router with integrated DSL-modem).

**Note** The engineering station and the central station are realized with a single device in this application example.

## 5.2 Installing the software

## **Engineering PC/PG**

Table 5-4

No.	Action	Remark
1.	Install STEP 7 V15.1.	Follow the instructions of the installation program.

## PC/PG as central station

No.	Action	Remark
1.	Install TeleControl Server Basic V3.1	Follow the instructions of the installation program.

## 5.3 Installing the example project

Unzip the "\*zip" file "56720905\_S7\_1200\_TeleService\_PROJ\_V12". This folder contains the following files:

- The archived STEP 7 project "56720905\_S7-1200\_TeleService\_CODE\_V12.zip".
- The TCSB configuration file "56720905\_S7-1200\_TeleService.bak".

## 5.4 Commissioning

## 5.4.1 Setting the IP addresses

The following table shows the configured IP addresses.

Table 5-6

Module	IP address	Subnet mask
Station 1: CPU 1217C DC/DC/DC	192.168.0.1	255.255.255.0
Programming unit	192.168.0.100	255.255.255.0
PC/PG central station (TCSB)/ Engineering Station	172.16.61.100	255.255.0.0
LAN IP address of router	172.16.0.1	255.255.0.0

## 5.4.2 Assigning the IP address to the engineering station

Change the network settings of your engineering station as shown in the following table.

Table 5	5-7
---------	-----

No.	Action
1.	Open the "Internet Protocol (TCP/IP) Properties" via "Start > Settings > Network Connection > Local Connections".
2.	In the open window, select the Internet Protocol (TCP/IP) and open Properties.
3.	Fill in the boxes as shown in the figure.         Close the dialog box with "OK".         Image: Close the dialog box with "OK".
4.	If your PG has an IWLAN interface, disable it.

## 5.4.3 Configuring the DSL router

For the configuration, no specific router will be discussed as the screen forms will differ from router to router.

**Note** To configure the router, you have to assign an IP address to your PG/PC that is in the router's internal network.

No.	Ac	tion
1.	Open the configuration user interface of the router.	This can be additional software, "Telnet" or a web page.
2.	Enter the connection data for your Internet connection.	Login, password, etc. you received from your provider.
3.	Enter your DNS server.	You will receive the address together with your access data.
4.	Specify a LAN IP address for the router.	In this example: "172.16.0.1"
5.	Forward the partner port.	TCP port 55097 to port 55097 of 172.16.61.100.

# 5.4.4 Inserting a backup copy of the "56720905\_S7 1200\_TeleService.bak" database into TCSB V3.1

			Actio	on			
Stop the ex y means o	tisting datal	base ows 1	by stopping the s ask Manager in	service the "Se	"TSC E ervices'	Basic Da ' tab (as	atab s adr
Windows Task N	lanager				-		×
ile Ontione Vi	uu Hala						
ne options via	ew Heip						
Applications Proce	sses Services per	formance	Networking Users				
Name	( )	<b>₽</b> )−	Description	Status	Group		
Adaba ADMaami			Adaba Asrabat Hadata Carries	Duran	NI/A		
AdobeARMservi	Le	-1592	Adobe Acrobat Opdate Service	Kunn	N/A		
ALC			Application Experience	Stop	netsves N/A		
ALG		1616	Automation Lisense Manager	Duran	N/A		
		1010	nutoination License Manager	Runn	N/A		
APPHONES		1649	Application Host Holper Convict	. Kufifi	apphont		
AppTDSvc		1040	Application Identity	Stop	appriosit LocalServic		
AppiDSVC		109	Application Identity	Stop	LocalSerVIC.		
Appinto		-100	Application Information	Stop	netsvcs		
approgram			Application Management ASD NET State Service	Stop	NI/A		
AudioEndpoint®	ildor	609	Martine i State Service Windows Audio Endocint Buildor	Bupp	LocalEvete		
AudioEnupointol	uluei	404	Windows Audio Enapoint bailaer	Runn	LocalServic		
AvInetSV		101	ActiveV Installer (AvInstSV)	Stop			
			Actives installer (Astristav)	otop	$\gamma \sim \gamma$		
BDESVC			Bitl ocker Drive Encryption Ser	Ston			
BDESVC		1488	BitLocker Drive Encryption Ser Base Filtering Engine	. Stop Runn	( 🍋 )	)	-
BDESVC BFE		1488	BitLocker Drive Encryption Ser Base Filtering Engine	. Stop Runn	2		•
Alliside BDESVC BFE	Help	1488	BitLocker Drive Encryption Ser Base Filtering Engine	. Stop Runn	2		· · ·
ALIBUSY BDESVC BFE File Action View G Services (Local)	Help Help Conservices (Local)	1488 II IÞ	BitLocker Drive Encryption Ser Base Filtering Engine	. Stop Runn	2	 Services.	• • • • • • • • • • • • • • • • • • •
Services      Services      File Action View      Services (Local)	Help	1488	BitLocker Drive Encryption Ser Base Filtering Engine	. Stop Runn	2 2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		• • •
Services Services Services Services(Local)	Help	1488 IIII ervice	BitLocker Drive Encryption Ser Base Filtering Engine	. Stop Runn Description Provides St	n Status	Startup Type Manual	× Log ^
Q Services File Action View ( Services (Local)	Help C Services (Local) TCS Basic DatabaseSee Stop the service Restart the service	1488	BitLocker Drive Encryption Ser Base Filtering Engine	. Stop Runn Description Provides Sc r Enables int Provider 5	n Status	Startup Type Manual Disabled	Log ^ Loc Net
Services File Action View () Services (Local)	Help Help Services (Local) TCS Basic DatabaseSe Stop the service Restart the service	1488	BitLocker Drive Encryption Ser Base Filtering Engine	Description Provides St Executes int Provides St	n Status 0 te 5 5 5	Startup Type Manual Disabled Automatic Disabled	Log ^ Loc Net Net
ALEISAV BDESVC BFE G Services File Action View C Services (Local)	Help Services (Local) TCS Basic DatabaseSe Stop the service Restart the service Description:	1488	BitLocker Drive Encryption Ser Base Filtering Engine Name SPP Notification Service SQL Active Directory Helpe SQL Server (TCSB) SQL Server (TCSB) SQL Server (TCSB)	Description Provides St Executes jo Provides St	n Status 0 10.	Startup Type Manual Disabled Automatic	Log ^ Loc Net Net Loc
Services Services File Action View	Help Services (Local) TCS Bacic DatabaseSe Stop the service Restart the service Description: Database Service Interf DetBase Service Interf DetBase Service Interf	1488	BitLocker Drive Encryption Ser Base Filtering Engine Name SpP Notification Service SQL Active Directory Helpe SQL Server T(CSB) SQL Server FICSB SQL Server Sty Writer	Description Provides St me. Enables in the Provides St Provides St Provides St	Status     Status     Status     Status     Status     Statted     Statted     Statted     Statted	Startup Type Manual Disabled Automatic Disabled Automatic	Log A Loc Net Net Loc Loc
Q Services File Action View ( Services (Local)	Help C Services (Local) TCS Basic DatabaseSee Stop the service Restart the service Description: Database Service Interf TeleControl Server Bas	1488	BitLocker Drive Encryption Ser Base Filtering Engine Name SPP Notification Service SQL Active Directory Helpe SQL Server (TCSB) SQL Server Agent (TCSB) SQL Server Agent (TCSB) SQL Server Agent (TCSB) SQL Server VSD Writer SSDP Discovery	Description Provides States Provides Provides Provides States Provides States Provides States	Status     Status     Commentation     Status     Status     Statted     Statted     Statted     Statted	Startup Type Manual Disabled Automatic Manual	Log A Loc Net Net Loc Loc Loc Loc
Autors V BDESVC BFE File Action View	Help Services (Local) TCS Basic DatabaseSe Stop the service Restart the service Description: Database Service Interf TeleControl Server Bas	1488	BitLocker Drive Encryption Ser Base Filtering Engine SPP Notification Service SQL Active Directory Helpe SQL Server T(CSB) SQL Server Browser SQL Server Browser SQL Server Strowser SQL	Description Provides St Provides St Provid	a Status 0 5 5 4 5	Startup Type Manual Disabled Automatic Automatic Manual Manual	Log * Loc Net Net Net Loc Loc Loc Loc
Aufosov BDESVC BFE Q Services File Action View ← ← ↓ [Tr] ⊆ C Q Services (Local)	Help Simp I I I I I I I I I I I I I I I I I I I	1488	BitLocker Drive Encryption Ser Base Filtering Engine Name SPN Notification Service SQL Active Directory Helpe SQL Server (TCSB) SQL Server (TCSB) SQL Server (TCSB) SQL Server (TCSB) SQL Server Stower SQL Server VSS Writer SSDP Discovery SQL Server VSS Writer System Event Notification System Event Notification	Description Provides St Provides St Provid	a Status On. ite. iso Started h Started h Started a Started w Started a Started	Startup Type Manual Disabled Automatic Disabled Automatic Manual Manual Manual Manual	Log A Loc Net Net Net Loc Loc Loc Loc Loc
Services File Action View	Help Services (Local) TCS Basic DatabaseSe Stop the service Restart the service Description: Database Service Interf TeleControl Server Bas	1488	BitLocker Drive Encryption Ser Base Filtering Engine Name G. SPP Notification Service G. SQL Active Directory Helpe G. SQL Server T(CSB) G. SQL Server T(CSB) G. SQL Server Start SQL Server VSS Writer G. SQL Server VSS Writer G. SDP Discovery G. Superfetch G. Sparter Event Notification S G. Tablet PC Input Service G. Tablet PC Input Service	Description Provides Str Provides St Provides St Provides St Provides St Provides St Provides St Provides St Provides St Discovers r Maintains s Enables Tal Enables Tal	a Status Dun Status Dun Started Dun Started Dun Started Dun Started Dun Started Dun Started Dun Started Dun Started Dun Started	Startup Type Manual Disabled Automatic Automatic Automatic Manual Automatic Manual	Log A Log A Log C Net Net Loc Loc Loc Loc Loc Loc
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SubisSY BDESVC BFE File Action View C Services (Local)	Help Construction of the service (Local) TCS Basic DatabaseSee Stop the service Restart the service Description: Database Service Interf TeleControl Server Bas	1488	BitLocker Drive Encryption Ser Base Filtering Engine Server Comparison Service Server (CSB) SQL Server (CSB) SQL Server Browser SQL Server Brows	Stop     Runn      Description     Provides St     Executes jo     Provides St	A Status Come Co	Startup Type Manual Disabled Automatic Disabled Automatic Manual Automatic Automatic Automatic Automatic Automatic	Loc A Net Loc Loc Loc Loc Loc Loc Loc Loc
Services File Action View C Services (Local)	Help Services (Local) TCS Basic DatabaseSe Stop the service Restart the service Description: Database Service Interf TeleControl Server Bas	1488 III ID ervice face for iic.	BitLocker Drive Encryption Ser Base Filtering Engine Ser SPN Notification Service SQL Active Directory Helpe SQL Server (TCSB) SQL Server (TCSB) SQL Server (TCSB) SQL Server (TCSB) SQL Server Stower SQL Server Stower SQL Server VSS Writer SQL Server Stower SQL Server Stower S	Description Provides St Provides St Provide St Pro	a Status On. Eta: Started A. Started A. Started A. Started B. Started B. Started A. Started A. Started Started Started Started Started Started	Startup Type Manual Disabled Automatic Manual Automatic Manual Automatic Automatic Automatic Automatic Automatic Automatic	Log ^ Loc Loc Loc Loc Loc Loc Loc Loc Loc Loc Loc
Services File Action View C Services (Local)	Help Services (Local) TCS Basic DatabaseSe Stop the service Restart the service Description: Database Service Interf TeleControl Server Bas	1488	BitLocker Drive Encryption Ser Base Filtering Engine	Description Provides Str Provides St Provides St Provi	2 Status 2 Status 2 Status 2 Status 2 Stated 3 Stat	Startup Type Manual Disabled Automatic Disabled Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic	Log ^ Net Loc Loc Loc Loc Loc Loc Loc Loc Loc
ALIBASY BDESVC BFE    Services   File Action View	Help C Services (Local) TCS Basic Databases Stop the service Restart the service Description: Database Service Interf TeleControl Server Bas	1488	BitLocker Drive Encryption Ser Base Filtering Engine	Description Provides St Provides St Provid	A Status A Status A Status A Status A Stated A Stat	Startup Type Manual Disabled Automatic Disabled Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic	Log A Net Net Loc Loc Loc Loc Loc Loc Loc Loc Loc Loc
Services File Action View Pile Services (Local)	Help Services (Local) TCS Basic DatabaseSe Stop the service Restart the service Description: Database Service Interf TeleControl Server Bas	1488	BitLocker Drive Encryption Ser Base Filtering Engine	Description Provides St Provides St Provid	A Status Come Co	Startup Type Manual Disabled Automatic Disabled Automatic Manual Automatic Automatic Automatic Automatic Automatic Automatic Automatic Manual Automatic Manual Manual	Log × Log × Net Net Net Loc Loc Loc Loc Loc Loc Loc Loc
Services     Services     File Action View     C Services     Services     Services	Help Services (Local) TCS Basic DatabaseSe Stop the service Restart the service Description: Database Service Interf TeleControl Server Bas	1488	BitLocker Drive Encryption Ser Base Filtering Engine Name SPN Notification Service SQL Active Directory Helpe SQL Server (TCSB) SQL Server (TCSB) SQL Server (TCSB) SQL Server (TCSB) SQL Server (TCSB) SQL Server (TCSB) SQL Server State SQL Server State SQL Server VSS Writer SQL Server State SQL Server State	Description Provides St Provides St Provides St Provides St Provides St Provides St Provides St Provides st Enables au Provides st Provides St Provide St	a Status Do., Statted M., Statted St	Startup Type Manual Disabled Automatic Disabled Automatic Manual Automatic	Log A Loc Net Net Loc Loc Loc Loc Loc Loc Loc Loc Loc Loc Loc Loc Loc Loc Loc Loc
Services BFE File Action View (Comparison of the services) (Comparison of	Help Services (Local) TCS Basic DatabaseSe Stop the service Bestart the service Description: Database Service Interf TeleControl Server Bas	1488	BitLocker Drive Encryption Ser Base Filtering Engine	Description Provides Str Provides St Provides St Provi	A Status D. Status D. Status D. Status D. Stated D. Stated	Startup Type Manual Disabled Automatic Disabled Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic	Loc ^ Loc
Autoria Disave BDESVC BFE	Help Services (Local) TCS Basic DatabaseSee Stop the service Restart the service Description: Database Service Interf TeleControl Server Bas	1488	BitLocker Drive Encryption Ser Base Filtering Engine	Description Provides St Provides St Provid	A Status A Status A Status A Status A Stated A Stat	Startup Type Manual Disabled Automatic	Los A Los A Los Net Loc Loc Loc Loc Loc Loc Loc Loc Loc Loc Loc
Services BFE Services File Action View Comparison Services (Local)	Help Sorvices (Local) TCS Basic DatabaseSe Stop the service Restart the service Description: Database Service Interf TeleControl Server Bas	1488	BitLocker Drive Encryption Ser Base Filtering Engine SPN totification Service SQL Active Directory Helpe SQL Server (TCSB) SQL Server Stower SQL Server St	Description Provides St Provides St Provid	A Status Come Status Come Stated Stated Stat	Startup Type Manual Disabled Automatic Disabled Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic Automatic Manual Automatic Manual Automatic	Log ^ Loc Loc Loc Loc Loc Loc Loc Loc Loc Loc

No.	Action
2.	As administrator, start the SQL Server Management Studio under "Start > All Programs > Microsoft SQL Server 2008 R2 > SQL Server Management Studio"
	Open         Windows Update         Run as administrator         Troubleshoot compatibility         Open file location         Open file location         Pin to Taskbar         Developmen         Maintenance         Microsoft SQL Sec         Open file         Properties         Delete         Import and E         Properties         SQL Server Installation Center         SQL Server Installation Center         Back         Sect programs and files
	<ul> <li>I he "Connect to server" dialog opens with the following settings:</li> <li>Server type: Database Engine</li> <li>Server name: <pc name="">\TCSB</pc></li> </ul>
	Authentication: Windows Authentication
3.	Keep all settings and click on "Connect".
	Microsoft* SQL Server*2008 R2
	Server type: Database Engine
	Server name: USER-PC\TCSB
	Authentication: Windows Authentication
	User name:
	Password: Remember password Connect Cancel Help Options >>
	SQL Server Management Studio opens with the database's object navigation.

No.	Action							
4.	Select the "Databases" item.							
5.	Select the context menu (right mouse button) "Restore Database".							

No.	Action									
6.	<ul> <li>In the "Destination for restore" field, select the database ("To database") "TCSB".</li> </ul>									
	<ul> <li>In the "Source for restore" field, activate the option ("From device") and open the "Specify Backup" dialog via the "" button.</li> </ul>									
	• Select the "56720905_S7-1200_TeleService.bak" backup copy by first opening the file browser using the "Add" button.									
	Restore Database - TCSB									
	Select a page Script v The Help									
	Destination for restore									
	Select or type the name of a new or existing database for your restore operation.									
	To database: To a point in time: Most recent to									
	Source for restore									
	Specify the source and location of backup sets to restore.									
	© From database:									
	From device:									
	Sel 2 sets to restore: R( ) Component Specify Backup									
	Specify the backup media and its location for your restore operation.									
	Backup media: File 👻									
	Backup location:									
	Remove									
	OK Cancel Help									
7	In the "Postero Database", TCSP" dialog, select the selected "bestwin set" in the									
1.	"Restore" column and click on "OK".									
8.	Click "OK" to close Management Studio.									
9.	Restart the computer.									

## 5.4.5 Configuring the IP address and ports of TCSB V3.1

No.	Action
1.	Start the configuration and monitoring interface of TCSB (CMT) under "Windows Start menu > All Programs > Siemens Automation > SIMATIC > TCS Basic > Config and Monitoring Tool":
2.	After the program has started, the login dialog of the CMT appears.
	CMT Logon
	Enter user name and user password
	User name: administrator
	Passwort TCSB serve 127.0.0.1 Logon
	User name: "administrator"
	Password: "administrator"
	• Enter the IP address or the TeleControl server name resolved by DNS:
	– Computer name
	– IP address (default IP address: 127.0.0.1)
3.	Configure the IP address and the ports of the TeleControl server:
	"TCSB system > "TCM" tab > General > Address TCM 1".
	TCSB system
	TCM Database
	General
	Address TCM 1: 172.16.61.100
	Address TCM 2:
	Address TCM 1 (IPv6) USER-PC 🔹
	Address TCM 2 (IPv6):
	Listener ports
	MSC listener port: 26862
	IPT listener port: 55097
	Control port: 26861
	Data port: 26860
	ICSB port: 26864
4.	Save the changes and activate the project.
	Project 🏷 Discard 🔄 Save & activate 💌
	s System variables Activated parameters
5.	Restart the computer.

## 5.4.6 Loading the remote station

## Prerequisites

- There is an existing connection between your engineering station and the CPU (e. g. via the PROFINET interface).
- The CPU must be in an operation mode that allows loading.
- Prior to loading the user program, a general reset of the CPU should be performed to ensure that none of the "old" blocks still exist on the CPU.

Table 5	-11
---------	-----

No.	Action							
1.	Unzip the project "39863979_S7-1200_TeleService_CODE_V12.zip".							
2.	Open the STEP 7 V15.1 project "CP1242-7_V2_Teleservice.ap15_1" and log of with the following credentials: User name: "administrator" Password: "administrator"							
	Log on This project is protected, log on with valid	l credentials						
	User type: Project user	•						
	User name: administrator							
	Password: *********	**						
	Change password	OK Cancel						
3.	Under "Properties of the CP 1242-7 GPRS V2 > Mobile wireless communications settings", adjust the mobile communication settings of the CP 1242-7 GPRS V2: • PIN • APN settings • Teleservice settings	Mobile wireless communication settings         Mobile wireless settings         CP phone number:         449123456789         P phone number:         449123456789         P phone number:         P phone number: <tr< td=""></tr<>						

No.	Action
4.	Under "Properties of the CP 1242-7 GPRS V2 > Partner stations > Connection to partner", adjust the partner IP address (fixed IP address of your DSL router) required for the connection to the TeleControl server in the central station.
5	Select the station "CP1242 7 Teleson <i>lice</i> " and download the project into the remote
	Station.         ************************************
6.	After having loaded the configuration, a connection to the TCSB V3.1 is established.
	CMT - Configuration and Monitoring Tool       File     View     Options     Help       System navigation     CP1242-7_Teleservice(1)       Image: Projects     Connection     Connection       Connection     Status V     Station name     Station number       Station 1     101     RUN     Activated

# 6 Operating the Application Example

The following chapters show how to wirelessly monitor and control the remote station. An existing connection of the remote station to the central station is required for this (TCSB V3.1).

## 6.1 Polling diagnostic data from the station

Table 6-1

No.				Actio	on			
1.	Make sure that the engineering station is connected to the internet.							
	Note							
	Check the inter internet browse	rnet connection er by calling ι	on at your e up a randon	engin n inte	eering sta ernet page	tion with th	e help of the	)
2.	Select the station "CP1242-7_V2_Teleservice" and establish the online connection.							
	Project Edit View Insert Online Options Tools Window Help           Image: Project         Image: Projec							
	Project tree			_	- III -	G		
	Devices					_		
	B 0 0					2		
	Name							
	₩ CP1242-7_V	/2_Teleservice						
	ੱ 🎽 Add nev	v device						
		& networks	CPU 1217C DC/DC	וסמי				
	🕨 🛃 Global s	ecurity settings		, D C]	70			
	🕨 🔰 Commo	n data		(				
					<u> </u>			
3.	AS PG/PC Inte	rface type, se	elect " I eles	boar	e via mob	ile wireless	and as PG	i/PC
	Go online			bour	u .			×
		Configured access nod	es of "CP1242-7_V2_	Teleservi	ce"			
		Device	Device type	Slot	Туре	Address	Subnet	
		CP1242-7_V2_Telese CP 1242-7	CPU 1217C DC/D CP 1242-7 GPRS V2	1 X1 101 X1	PN/IE PN/IE	192.168.0.1 Not configured	PN/IE_1	
			CP 1242-7 GPRS V2	101	Mobile wireless	200165		
			Type of the PG/PC inte	rface:	- TeleService via	mobile wireless	-	
			PG/PC inte	rface:	Mobile wireless	TeleService board	( 🎽	
								/
4.	Establish the T	eleService co	onnection b	etwe	en engine	ering and r	emote static	on.
	Go online				<u> </u>			×
		Configured access nod	les of "CP1242-7_V2_	Teleservi	ce"			
		Device	Device type	Slot	Type PN/IE	Address	Subnet	
		CP 1242-7	CP 1242-7 GPRS V2	101 X1	PN/IE	Not configured	PN/IE_1	
			CP 1242-7 GPRS V2	101	Mobile wireless	200165		
			Type of the PG/PC inte	rface:	- TeleService via I	mobile wireless	1	
			PG/PC inte	rface:	Mobile wireless	TeleService board		
								/

## 6 Operating the Application Example

No.	Action
5.	Enter the following values and then click on "Connect": <ul> <li>IP address of the server (172.16.61.100)</li> <li>The server password (Teleservice)</li> <li>The port (55097)</li> <li>The TeleService user name (SiemensOS)</li> <li>The TeleService password (Teleservice).</li> </ul> Establish mobile wireless remote connection
	Telecontrol server / TeleService gateway for switching the connection: Component is on this PC Component is in network or Internet IP address or host name: 172.16.61.100 Port: 55097 Own server password: Authentication for TeleService access to station:
	TeleService user name: SiemensOS TeleService password:  Remote station:  Access ID: CP 1242-7: 200165
	Status: Not connected Connect Close
6.	The TeleService connection is established when the status changes to "Connected".
	Status: Connected Disconnect Close

		Actie	on				
Start searching	for accessible	participants b	oy cli	icking on "S	Start search"		
Extended download to	o device		_		_	_	×
_	Configured access no	des of "CP1242-7_V2_T	eleserv Slot	ice"	Addross	Subpat	
	CP1242-7_V2_Telese.	CPU 1217C DC/D	1 X1	PN/IE	192.168.0.1	Subher	
	CP 1242-7	CP 1242-7 GPRS V2 CP 1242-7 GPRS V2	101 X1 101	PN/IE Mobile wireless	Not configured 200165	PN/IE_1	
				_			
		Type of the PG/PC inter PG/PC inter	face: face:	TeleService via	mobile wireless	•	•
		nection to interface/sub	onet:	Direct at slot '101		-	۲
		1st gate	way:				) 🕐
	Compatible devices in	n target subnet:			Show all compatib	le devices	
	Device 	Device type 	Type PN/IE	Addi	ess ess address	Target devic	e
F							
Flash LED							
	-					<u>S</u> tart :	search
Online status informatio	n:				(		
Display only error m	essages						
					- I and		
					Load	<u></u> a	ncel
Romoto mointo	nance of the e	tation is now !		ible			
Remote mainte		at the station					
Open the devic	e configuration			-1242-7_V	2_Teleservic	je.	
Project tree				•			
Devices							
				<b>1</b>			
Name							
<ul> <li>CP1242-7_V</li> </ul>	2_Teleservice						
Add new	device						
Devices	& networks			-			
CP1242-7	/_V2_Teleservice [	CPU 1217C DC/	•				
Onlin	e & diagnostics						
	Start searching  Start	Start searching for accessible          Extended download to device         Configured access no         Device         CP1242-7_V2_Telese.         CP1242-7         Compatible devices in         Device         Place         Place         Compatible devices in         Device         Place         Compatible devices in         Device         Place         Place         Contine status information:         Display only error messages         Remote maintenance of the status         Open the device configuration         Project tree         Devices         Name         CP1242-7_V2_Teleservice         Add new device         Devices & networks         CP1242-7_V2_Teleservice         Add new device         Devices & networks         CP1242-7_V2_Teleservice         Online & diagnostics	Activ Start searching for accessible participants to Extended download to device Configured access nodes of "CP12427_U2_T Device Device type CP12427_U2_TeleseCPU 1217C DCD CP 12427_CP12427_CPRS V2 CP 12427_CP12427_CPRS V2 CP 12427_CPT2427_CPRS V2 Type of the PG/PC inter Connection to interfaceds ud Ist gate Compatible devices in target subnet: Device Device type Fash LED Online status information: Display only error messages Remote maintenance of the station is now p Open the device configuration of the station Project tree Devices Add new device Devices & networks CP124227_V2_Teleservice [CPU 1217C DC/ Device configuration Q Online & diagnostics Online & diagnostics	Action Start searching for accessible participants by cl Extended download to device Configured access nodes of "CP12427_V2_Teleserv Device UPevice CP11217C DCD Type of the PCIPC interface: PCIPC interface: PCIPC interface: Compatible devices in target subnet: Device Device type Type Compatible devices in target subnet: Device Device type Type Flash LED Online status information: Display only error messages Remote maintenance of the station is now poss Open the device configuration of the station "CI Project tree Devices Add new device Devices & networks CP12427_V2_Teleservice CP1247_V2_Teleservice CP1247_V2_Teleservice CP1247_V2_Teleservice CP1247_V2_Teleservice CP1247_V2_Teleservice CP1247_V2_V2_Teleservice CP1247_V2_V2_V2_V2_V2_V2_V2_V2_V2_V2_V2_V2_V2_	Action Start searching for accessible participants by clicking on "S  standed download to device Configured access nodes of 'CP1242-7_V2_Telesenice' Device Device type Slot Type CP1242-7 GP1242-7 GP5 V2 101 Mobile wireless Type of the PGIPC interface: Type of the PGIPC interface: Type of the PGIPC interface: Connection to interface/subnet: Connection to interface/subnet: Compatible devices in target subnet: Compatible devices intarget subnet: Compatible devices Co	Action         Start searching for accessible participants by clicking on "Start search"         Extended download to device         Configured access nodes of "CP12427, V2_Telesenice"         Device you Date Type Type Type Type Type Type Type Typ	Action Start searching for accessible participants by clicking on "Start search". Exempted download to davide Conjugated access modes of CP12427_V2_Teleservice* Conjugated access modes of CP12427_V2_Teleservice* CP12427_CP12427_GP5 V2 101 X1 PHILE VALUES 20165 Project interface: Tage of the RGPC interface of the RGPC inter

No.	Action									
9.	Select the CP 1242-7 V2 and open the online diagnostics (right mouse-click).								ck).	
	103	102	101	1		2	3	4	5	6
	SIGNUS SAUTO IN-10									
			10 100 100-10	Change device						
		0~	1	( Cut		Ctrl+	×			
				Copy		Ctrl+	.c			
				Paste		Ctrl+	·V			
			- >	C Delete		D	el			
	Rename F2									
				Go to topology view						
	💑 Go to network view									
			Pack addresses Unpack addresses							
	Compile Download to device Go online Ctrl+K									
				Go offline		Ctrl+	м	_		
			Pan nei	Online & diagnostics		Ctrl+	D		<u></u>	
10.	Now se 1242-7.	lect the	e resp	pective topic in "Diag	nostics"	to ca	all up t	he inforr	nation	of the CP
	Diagnostics     General									
Diagnostic status Module										
	<ul> <li>Industria</li> </ul>	al Remote Cor	nm	Short designation:	CP 1242-7 GP	RS V2				
	<ul> <li>Functions</li> </ul>			Article number: Hardware:	6GK7 242-7K)	(31-0XE0				

# 6.2 Downloading project and program data from the STEP 7 project into the remote station

Table 6-2

No.	Action						
1.	Ensure that the engineering station is connected to the internet. <b>Note:</b> Check the internet connection at your engineering station with the help of the internet browser by calling up a random internet page.						
2.	Ensure that STEP 7 V15.1 on your engineering station is not in online mode.						
3.	Select the project content to be transferred to the remote station: Hardware and software (changes only) Hardware configuration Software (changes only) Cr1242-7_V2_Teleservice Add new device Devices & networks Cr1242-7_V2_Teleservice Add new device Devices & networks Copen in new editor Open block/PLC data type Copen in new editor Open block/PLC data type Copen Ctrl+2 Copy Ctrl+2 Copy Ctrl+2 Copy Ctrl+2 Copy Ctrl+2 Paste Ctrl+2 Delete Paste Ctrl+2 Copy Ctrl+2 Delete Paste Ctrl+2 Copy Ctrl+2 Copy Ctrl+2 Ctrl+2 Ctrl+2 Ctrl						
4.	As PG/PC interface type, select "TeleService via mobile wireless" and as PG/PC interface "Mobile wireless TeleService board". Establish the TeleService connection between engineering and remote station.						

No.	Action						
5.	Enter the following values and then click on "Connect":						
	• The IP address of the server (172.16.61.100)						
	The server password (Teleservice)						
	• The port (55097)						
	The TeleService user name (SiemensOS)						
	The TeleService password (Teleservice)						
	Establish mobile wireless remote connection X						
	Telecontrol server / TeleService gateway for switching the connection:						
	Component is on this PC						
	Component is in network or Internet						
	IP address or host name: 172.16.61.100						
	Port: 55097						
	Own server password:						
	Authentication for TeleService access to station:						
	TeleService user name: SiemensOS						
	TeleService password:						
	Remote station:						
	Access ID: CP 1242-7: 200165						
	Status: Not connected Close Connect						
6.	The TeleService connection is established when the status changes to "Connected".						
	Status: Connected Disconnect Close						

).			AC	tion			
7.	Start searchir	ng for accessib	le participants	s by cli	icking on "ያ	Start search	າ".
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			Type of the PG/PC in	terface:	L TeleService via	mobile wireless	-
			PG/PC in	terface:	Mobile wireles	s TeleService board	- •
			Connection to interface	subnet:	Direct at slot '10'		▼ (€)
			1st g	ateway:			<b>T</b>
						Show all compat	ible devices
		Compatible devic	es in target subnet:	Ture			Terret devices
				PN/IE	Acce	ess address	
	F						
	8.8						
	Flash LED						
							<u>Start search</u>
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#### Appendix 7

#### 7.1 Service and support

### **Industry Online Support**

Do you have any questions or need assistance?

Siemens Industry Online Support offers round the clock access to our entire service and support know-how and portfolio.

The Industry Online Support is the central address for information about our products, solutions and services.

Product information, manuals, downloads, FAQs, application examples and videos - all information is accessible with just a few mouse clicks: support.industry.siemens.com

### **Technical Support**

The Technical Support of Siemens Industry provides you fast and competent support regarding all technical queries with numerous tailor-made offers - ranging from basic support to individual support contracts. Please send queries to Technical Support via Web form: www.siemens.com/industry/supportrequest

## SITRAIN - Training for Industry

We support you with our globally available training courses for industry with practical experience, innovative learning methods and a concept that's tailored to the customer's specific needs.

For more information on our offered trainings and courses, as well as their locations and dates, refer to our web page: www.siemens.com/sitrain

### Service offer

Our range of services includes the following:

- Plant data services
- Spare parts services .
- Repair services
- On-site and maintenance services
- Retrofitting and modernization services •
- Service programs and contracts

You can find detailed information on our range of services in the service catalog web page:

support.industry.siemens.com/cs/sc

### **Industry Online Support app**

You will receive optimum support wherever you are with the "Siemens Industry Online Support" app. The app is available for Apple iOS, Android and Windows Phone:

support.industry.siemens.com/cs/ww/en/sc/2067

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# Links and Literature

Table 8-1

	Торіс
\1\	Siemens Industry Online Support http://support.industry.siemens.com
\2\	Download page of the entry https://support.industry.siemens.com/cs/ww/en/view/56720905
3	SIMATIC NET Industrial Remote Communication -TeleControl TeleControl Server Basic V3.1 https://support.industry.siemens.com/cs/ww/en/view/107536367
\4\	SIMATIC NET S7-1200 – TeleControl CP 1242-7 GPRS V2 – Manual https://support.industry.siemens.com/cs/ww/en/view/109476700
\5\	SIMATIC NET Industrial Remote Communication TeleService TS Gateway Manual https://support.industry.siemens.com/cs/ww/en/view/107535103

# 9 History

Table 9-1

Version	Date	Modifications
V1.0	10/2016	First version
V1.1	06/2018	Migration to TIA Portal V15 and TCSB V3.1
V1.2	08/2019	Migration to TIA Portal V15.1