

APPLICATION NOTE: AN-1289

AC500 CODESYS GATEWAY HOW TO INSTALL



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1 Introduction

1.1 Scope of the document

How to check if the gateway is installed properly. Sometimes it required to run some additional steps to install the gateway as a service. At least on Windows Server operating systems.

1.2 Compatibility

The application note explained in this document has been used with the below engineering system versions. They should also work with other versions, nevertheless some small adaptations may be necessary, for future versions.

• Automation Builder V2.x

2 CODESYS Gateway V3

If you get this screen and the Gateway stays red inside Automation Builder, then it could happen that no Gateway is installed, or the service is not registered.



2.1 Check Gateway service is running

Check first if you have "**CODESYS Gateway V3**" running as a service. For that navigate to: Start \rightarrow Control Panel \rightarrow Administrative Tools \rightarrow Services

If the service is not running, as you can see below on the picture, click on Status and select **Start**. In addition, the Startup Type must be Automatic.

Services							- 0
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Services (Local)	 Sevices (Local) 						
	Select on item to view its description.	Name	Description	Status	Startup Type	Log On As	
		C. Blastooth Autio Gateway Service	Service suggesting the autio gateway role of the Buetooth Handshee Profile.	Rangeing	Manual (Proper Start)	Local Service	
		C Bluetooth Support Service	The Buetooth service supports discovery and association of remote Bluetooth devices. Stopping or disabling this service may cause already installed Bluet.	Running	Manual (Intoper Start)	Local Service	
		Bluetooth User Support Service, 3ea/1538c	The Buetooth user service supports proper functionality of Buetooth features relevant to each user session.	Running	Manual (Tripper Start)	Local System	
		C. BrandhCadhe	This service caches network content from peers on the local submit,		Manual	Network So.	
		Capability Access Manager Service	Provides facilities for managing UWP apps access to app capabilities as well as checking an app's access to specific app capabilities	Running	Manual	Local System	
		CaptureService_Sae1b38c	Enables optional screen capture functionality for applications that call the Windows Singhics Capture API.		Manual	Local System	
		Cellular Time	This service sets time based on NTC messages from a Mobile Network		Manual (Ripper Start)	Local Service	
		Certificate Propagation	Copies user certificates and root certificates from smart cards into the current user's certificate store, detects when a smart card is inserted into a smart card r.	Running	Manual (Trigger Start)	Local System	
		Cisco AnyConnect Secure Mobility Agent	Cisco AnyConnect Secure Mobility Agent for Windows	Surring	Automatic	Local System	
		Chent License Senice (ClipSVC)	Provides infrastructure support for the Microsoft Store. This service is started on demand and if disabled applications brought using Windows Store will not		Manual (Propper Start)	Local System	
		Clapboard User Service, 3ee 1558c	This user service is used for Clipboard scenarios	Ranning	Manual	Local System	
		CriWebAdmin	CintillebAdmin Service	Running	Automotic	Local Service	
		CNG Key Isolation	The CNG key isolation service is hosted in the LSA process. The service provides key process isolation to private keys and associated oryptographic operation	Running	Manual (Rigger Start)	Local System	
		CockeMeter Runtime Server	CodeMeter Runteres Server	Ranning	Automatic	Local System	
		CODESIS Gateway V3 Version 3.5.18.40	Gateway Senser as a Windows senses to connect to CDDESYS programmable devices	Ranning	Automatic	Local System	
		CODESIS ServiceControl Venion 35/3840	Senice for starting/stopping the seniors of CODESYS Control Win V3 and CODESYS Gateway Seniors V3	Running	Automatic	Local System	
		COM+ Event System	Supports System Event Notification Service (SENS), which provides automatic distribution of events to subscribing Component Object Model (COMI compo	Durning	Automatic	Local Service	
		COM+ System Application	Manages the configuration and tracking of Component Object Model (COM)+-based components. If the service is stopped, most COM+-based component.	Running	Manual	Local System	
		ConfigMgr Task Sequence Agent	ConfigMgr client agent for task sequence execution		Manual	Local System	
		Configuration Manager Ramote Control	Provides the ability to remote control the system to authorized users	Running	Automatic	Local System	
		Connected Devices Platform Service	This service is used for Connected Devices Platform scenarios	Ranning	Automatic (Delayed Start, Trigger Start)	Local Service	
		Connected Devices Platform User Service, 3aa1b38c	This user service is used for Connected Devices Platform scenarios	Running	Automatic	Local System	
		Connected User Experiences and Telemetry	The Connected User Experiences and Telemetry service enables features that support in application and connected user experiences. Additionally, this service.	Running	Automatic	Local System	
		ConsentUX_3as7b38c	Allows ConnectUX and IPC Settings to Connect and Par with Will steplays and Bluetooth devices.		Manual	Local System	
		Contact Data_laa1bSRc	Indexes contact data for fast contact searching. If you stop or disable this service, contacts might be missing from your search results.		Manual	Local System	
	l	Corehlessaoino	Manages communication between system components.	Furning	Automatic	Local Service	

If this both entries are not available, we need to install them.

2.2 Install Gateway service

Navigate to:

C:\Program Files (x86)\ABB\AutomationBuilder\GatewayPLC

These both files will be available when Automation Builder is installed:

- ServiceControl.exe
- GatewayService.exe

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$\leftarrow \rightarrow$	 This PC > System (C:) 	> Program Files (x86) > AB	B > Automation	Builder > GatewayPLC	~	U	, Search GatewayPLC	
1	Name	Date mor	lified	Тура	Sizo			^
	S CmpEL6751CanDrv.dll	21.07.202	21 12:02	Application extension	314 KB			
	CmplxxatCANDrv.dll	21.07.202	21 12:02	Application extension	319 KB			
	CmpKvaserCANDrv.dll	21.07.202	21 12:02	Application extension	320 KB			
	CmpPCANBasicDrv.dll	21.07.202	21 12:02	Application extension	318 KB			
	CmpUsbMpdUsbLib.dll	21.07.202	21 12:02	Application extension	315 KB			
1	Gateway.cfg	03.08.202	22 09:44	CFG File	1 KB			
	GatewayService.exe	21.07.202	1 12:02	Application	3.244 KB			
	GatewaySysTray.exe	21.07.202	21 12:02	Application	1.045 KB			
	🔊 libusb.dll	21.07.202	21 12:02	Application extension	590 KB			
	📓 qt.conf	10.02.202	21 16:42	CONF File	1 KB			
	ServiceControl.exe	21.07.202	1 12:02	Application	552 KB			
	SysGraphicWindowQt.dll	21.07.202	21 12:02	Application extension	664 KB			
	SysNativeCommonControlsQt.c	JII 21.07.202	21 12:02	Application extension	324 KB			
	SysPipeWindows.dll	21.07.202	21 12:02	Application extension	315 KB			
2	SysSvgRendererQt.dll	21.07.202	21 12:02	Application extension	316 KB			
	SysSvgRendererWin.dll	21.07.202	21 12:02	Application extension	578 KB			
	SysWindowFileDialogQt.dll	21.07.202	21 12:02	Application extension	312 KB			~

Open the "Command Prompt" with admin rights. For that navigate to:



Start→Insert "Command Prompt" and select "Run as administrator".

Insert the path to the Gateway directory:

cd C:\Program Files (x86)\ABB\AutomationBuilder\GatewayPLC



We are in the directory, where the ServiceControl.exe and GatewayService.exe are stored. Now, we are installing the ServiceControl as a service by insert:

ServiceControl.exe -i



Now, we are installing the GatewayService as a service by insert:

GatewayService.exe -i





Note: A reboot of the computer is required to load all services.

After reboot, you can check if the service is running: Check Gateway service is running.

3 CODESYS Gateway V2

The Gateway will be installed together with: **CoDeSys OPC Server 3.5** in Automation Builder Setup via **"Install Additional Tools**":

ABB Automation Builder 2.6.0 Build 343 - Start Page	- 🗆 X
Automation Builder	
Engineering Productivity	ABB
Automation Builder	
Version 2.6.0.343 64 Bit Installed Version 2.6.0.343	Holp
Instal Automation Builder	Links and Information
Installer Options and Additional tools	
Prepare Offline Installation Automation Builder	
Install Additional Tools	
Prepare Offline Installation Additional Tools	
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	Cancel

Select CoDeSys OPC Server 3.5 and click Download and Install

igineering Productivity		ABB
Il Software Packages for: ■ Automation Buider Standarone Tools ■ Automation Buider Standarone Tools ■ Actionation Buider Standarone Tools ■ Coolssys CPC Server 2.3 ■ Coolssys CPC Server 2.3 ■ MultiOnitencChange Tool ■ Half ■ Half ■ Half ■ Control Panel - CP600	Description Release Notes Packages CODESYS OPC Server 3 Standard Interface to access the IEC (131-3 process act of ACS500 PLCs via OPC (OLE for process control) This software package contains the following main and featurese: Multi-citent support and multi-PLC support OPC connection to ACS50 V2 and V3 PLCs	^

Keep installation path



Select all options

CODESYS OPC-Server V3.5SP10 - InstallShield V	Vizard X
Select Features Select the features setup will install.	
Select the features you want to install, and desel	ect the features you do not want to install.
CODESYS OPC Server 3 CODESYS Gateway V3	Description AE Configurator needs a .NET installation
100.70 MB of space required on the C drive 518281.71 MB of space available on the C drive InstallShield	
[< Back Next > Cancel

Install option: install files and install service

CODESYS OPC-Server V3.5SP10 - InstallShield Wizard	×
Gateway Service	
There is already running a Gateway Service from another version. What do you want to o with the service of this setup?	o
install files and install service	
◯ install files, but do not install as service	
\bigcirc do not install the files	
InstallShield	
< Back Next > Car	icel

Installation successfully finished.

AB Automation Builder 2.6.0 Build 343 - Finish Page Automation Builder Engineering Productivity	•	×
ACSDI-Tools CoDeSys OPC Server 3.5 CoDESYS OPC-Server V3.5SP10 [3.5.10.41] OCOESYS OPC-Server V3.5SP10 [3.5.10.41]	Installation Success Setup has successfully installed Additional Tool for Automation Builder on your computer. Show log Links And Information	
	Fin	iish

3.1 Check Gateway service is running

Check first if you have "**CoDeSysOPCDAService**" running as a service. For that navigate to: Start \rightarrow Control Panel \rightarrow Administrative Tools \rightarrow Services.

If the service is not running, as you can see below on the picture, click on Status and select **Start**. In addition, the Startup Type must be Automatic.

on View	Help					
1 111 1						
Tarrell		(m.				
POCH!	C Services (Local)				10 m	
	Data Sharing Service	Name	Description	Status	Stortup Type	Log On As
		Sase Filtering Engine	The Base Filtering Engine (BFE) is a service that manages frewall and Internet Protocol security (Psec) policies and implements user mode filtering. Stopping	Running	Automatic	Local Servic
	Stop the service	BitLocker Drive Encryption Service	BDESVC hosts the BitLodker Drive Encryption service. BitLocker Drive Encryption provides secure startup for the operating system, as well as full volume encr.	Running	Manual (Frigger Start)	Local Syste
	MALSES THE METCLE	BitLocker Management Client Service	BitLocker Management Client Service	Running	Automatic (Delayed Start)	Local Syste
		Sa Block Level Backup Engine Service	The WBENGINE service is used by Windows Backup to perform backup and recovery operations. If this service is stopped by a user, it may cause the currentL.		Mercual	Local Syste
	Description:	Calibration Barteway Service	Service supporting the audio gateway role of the Bluetooth Handsfree Profile.	Running	Manual (Trigger Start)	Local Servi
	Provides data brokening between	Bluetooth Support Service	The Bluetooth service supports discovery and association of remote Bluetooth devices. Stopping or disabling this service may cause already installed Bluet.	Running	Manual (Rigger Start)	Local Servi
	appressions.	Bluetooth User Support Service, 3aa1b38c	The Bluetooth user service supports proper functionality of Bluetooth features relevant to each user session.	Running	Manual (Trigger Start)	Local Syste
		a BranchCache	This service caches network content from peers on the local subnet.		Manual	Network Se
		Capability Access Manager Service	Provides facilities for managing UWP apps access to app capabilities as well as checking an app's access to specific app capabilities	Running	Manual	Local Syste
		CaptureService_3aa1b38c	Enables optional screen capture functionality for applications that call the Windows Graphics Capture API.		Manual	Local Syste
		Colular Time	This service sets time based on NITZ messages from a Mobile Network		Manual (Trigger Start)	Local Servi
		Certificate Propegation	Copies user certificates and root certificates from smart cards into the cument user's certificate store, detects when a smart card is inserted into a smart card r_	Running	Manual (Frigger Start)	Local Syste
		Cisco AnyConnect Secure Mobility Agent	Cisco AnyConnect Secure Mobility Agent for Windows	Running	Automatic	Local Syste
		Client License Service (ClipSVC)	Provides infrastructure support for the Microsoft Store. This service is started on demand and if disabled applications bought using Windows Store will not		Manual (Trigger Start)	Local Syst
		Clipboard User Service, 3aa1b38c	This user service is used for Clipboard scenarios	Running	Manual	Local Syst
		CmWebAdmin	CmWebAdmin Service	Running	Automatic	Local Serv
		CNG Key Isolation	The CNG key isolation service is hosted in the LSA process. The service provides key process isolation to private keys and associated proptographic operation	Running	Manual (Trigger Start)	Local Syst
		CodeMeter Runtime Server	Code/Meter Runtime Server	Running	Automatic	Local Syste
		CODESYS Gateway V3 Version 3.5.100	Gateway Server as a Windows service to connect to CODESYS programmable devices	Running	Automatic	Local Syst
		CODESYS ServiceControl Version 3.5.10.0	Service for starting/stopping the services of CDDESYS Control Win V3 and CDDESYS Gateway Service V3.	Running	Automatic	Local Syst
		CoDeSysOPCDAService			Manual	Local Syst
		GLCOM+ Event System	Supports System Event Notification Service (SENS), which provides automatic distribution of events to subsoritions Component Object Model (CDM) compon-	Running	Automatic	Local Servi
		COM+ System Application	Manages the configuration and tracking of Component Object Model (CDM)s -based components. If the service is stopped, most COM+-based component,	Running	Manual	Local Syste
		ConfigMar Task Sequence Agent	ConfigMor client agent for task sequence execution		Manual	Local Syste
		Configuration Manager Remote Control	Provides the ability to remote control the system to authorized users	Running	Automatic	Local Syste
		Connected Devices Platform Service	This service is used for Connected Devices Platform scenarios	Running	Automatic (Delayed Start, Trigger Start)	Local Serv
		Connected Devices Platform User Service_3aa1b38c	This user service is used for Connected Devices Platform scenarios	Running	Automatic	Local Syst
	1	Connected User Experiences and Telemetry	The Connected User Experiences and Telemetry service enables features that support in application and connected user experiences. Additionally, this servic.	Running	Automatic	Local Syst
		ConsentUX 3aa1b38c	Allows ConnectUX and PC Settings to Connect and Pair with WFi displays and BLatooth devices.	10120404060	Manual	Local Syst
		Contact Data 3aa1b38c	Indexes contact data for fast contact searching. If you stop or disable this service, contacts might be missing from your search results,	Running	Manual	Local Syst
	1	CoreMessaging	Manages communication between system components.	Running	Automatic	Local Servi
	1	Conductini Mananar	Provides sense strong and retrieval of mediantick to users analizations and sensity sensite packages.	Running	Manual	Local Syste

If this entry is not available, we need to install the service. See chapter: Install Gateway service.

3.2 Install Gateway service

Navigate to:

C:\Program Files (x86)\3S CODESYS\CODESYS OPC Server 3

This •	file •	e should WinCol	be ava DeSysC	aila OPC	ble: Cexe	erver 3						_	×
Pin to Quick access	Copy	Paste View Paste Copy path Paste shortd	Move Copy to • to •	Delet	te Rename	New folder	New Easy New	item • access •	Properties Copen	en • Files Select al t Select n tory Files Invert se Select	l one lection		
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	- R G	Client.dll	_osel_oulde.put		09.12.201	6 00:57		Appl	cation extension	204 KB			
	₿ G	Util.dll			09.12.201	6 00:57		Appli	cation extension	172 KB			
	S 6	wClient.dll			08.12.201	6 00:57		Appl	cation extension	335 KB			
	۰	PCConfig.exe			09.12.201	6 00:57		Appli	cation	3.642 KB			
	<u> </u>	PCServer.ini			20.04.201	2 11:59		INI Fi	le	1 KB			
	🗾 Se	ettings.ini			07.11.201	6 15:13		INI Fi	le	1 KB			
	OPC VI	/inCoDeSysOPC.exe			09.12.201	6 00:57		Appl	cation	3.335 KB			
11 items	1 iter	m selected 3,25 MB											

Open the "Command Prompt" with **admin rights**. For that navigate to:

Start→Insert "Command Prompt" and select "Run as administrator".

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7	Bes	t match					
8 . 1 . 7		Comman _{App}	d Prompt				
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14 .	Sea	rch the web					
-	Q	com - See we	eb results		>		
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Seite 3 v	Q	com mand P	rompt				

Insert the path to the CODESYS OPC Server 3 directory:

cd C:\Program Files (x86)\3S CODESYS\CODESYS OPC Server 3



We are in the directory, where the **WinCoDeSysOPC.exe** is stored. Now, we are installing the WinCoDeSysOPC as a service by insert:

WinCoDeSysOPC /Service



In some cases, it could happen that the service was wrongly installed. Mostly this can happen when no admin rights are granted during the installation. In this case it is required to uninstall the service. This can be done with the following command:





Note: A reboot of the computer is required to load all services.

After reboot, you can check if the service is running: Check Gateway service is running.



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