

# TC Router SMS via XML Guide - PLCnext

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## Introduction:

## **Objectives:**

This guide explains how to use the XML socket server of the TC Router to send and receive SMS messages from a Phoenix Contact PLC using PLCnext Engineer.

This guide <u>DOES NOT</u> provide instruction on how to send/receive SMS messages using the native I/O on the TC Router. The guide that covers this topic can be found at: <u>www.phoenixcontact.com/tcrouter</u>

#### **Requirements:**

Users are required to have an active cellular data plan that supports SMS, a Phoenix Contact TC Router, a 4G LTE antenna, a Phoenix Contact AXC F 2152, PLCnext Engineer, and the two libraries linked to this document below.

4G SMS Req V1 0.pcwlx 4G SMS V1 0.pcwlx



#### Library notes:

The 4G\_SMS\_V1\_0.pcwlx enables you to pull status information from the TC Router and send/receive SMS via the XML socket server.

InfoReg4GTcRouter		Receive	+Ooms5 MGSims	Send4GSims		
xEnable	strSerialNum	xEnable xError		Enable xSmsAccept		
xReginfo	StrHardware	iListeningPort	iStatus 🖷	×SendSms	×Error	
strPicip	StrFirmware	strPicip	strPhoneNumb	strMobileNr	iStatus 🖷	
ITcpPort	strWbm		strTimestamp	strSmsText		
strModemIP	Strimei		strSmsMessage	strPicip		
liListeningPort	strProvider					
	iRssi			strModerniP ListeningPort		
	strCreg					
	strLac					
	strCi					
	strPacket					
	strSimStatus					
	strip					
	strRxBytes					
	strTxBytes					
	strMtu					
	strGsm					
	strinet					
	strVpn					

The 4G\_SMS\_Req\_V1\_0.pcwlx has prebuilt functions that simplify the commands to send and receive SMS messages, provide password protection security, control PLC variables, and provide I/O status.

Sec	urity3 urity	RecvS	ms3 ims	Alarm	rigger4 Trigger	InputSt InputS	tatus3 Status		OutputControl3 OutputControl	Choos	eResponse4
xEnable	×Secure	Enable	xInvalidInput	×Enable	strResponse	ExEnable	strResponse	×Enable	e strResponse	×Enable	xSendSms
IstrPhoneNumb	strSecurityMsg	strPhoneNumb	×NewMsg	strAlarmMsg		xNewMsg		×NewM:	sg ×Output	strin1	strSmsText
strSmsMessage		strSmsMessage	strMessage	×AlarmInput		strMessage		strMess	age	strin2	
strTimestamp		strTimestamp				strExpectedMsg		strExpe	ctedMsgOn	strin3	
strMobileNumb		strValidSms				strOnResponse		strExpe	ctedMsgOff	strin4	
strPassword		strMobileNumb				strOffResponse		strReply	/On	strin5	
tTimeout						strTimestamp		strReply	ηOff	strin6	
						CnstRply		strTime	stamp	strin7	
						xInput				strin8	
										totE	llockNum
										iN-	ewString
										aM	essages <b>essag</b> es



## Procedure:

## **Configure the TC Router**

- 1. Enable the TC Router Socket Server by navigating to Device Services >> Socket Server >> Configuration
  - Note: For Firmware older than 2.05.1, the Socket Server configuration menu is located under I/O
     >> Socket Server



 Enable SMS forward by navigating to Wireless network >> SMS configuration. Set the Server IP address as the PLC IP address.





## **Configure PLCnext Engineer**

- 3. Download each library to C:\Users\Public\Documents\PLCnext Engineer\Libraries
- 4. Open PLCnext Engineer, select an empty project with your correct PLC version

PLCnext Engineer File Extras Help		E CERTAINS
III Start Page		
	PLCn	ext Engineer 2019.6
Recent projects C:UsenPlact:Projects/ICP/EST poer: C:UsenPlact:Projects/ICP/EST poer: C:UsenPlact:Projects/IdPL_SPpoer C:UsenPlact:Projects/IdSMS_Ret_V1_0 poer C:UsenPlact:Projects/IdSMS_V1_0 poer	Try one of our sample projects       Image: try one of our sample project	Needer blagt? Welcoms to PLChest Engineer Revert project Revert pr
	Empty AXC / 2152 v00 / 2018.4.0 project Empty AXC / 2152 v00 / 2018.4.0 project Empty Empt	
	demonstrating HMI User Management.	stightly for more samples, forgulates, and updated

5. On the bottom right of the screen, click the drop down for libraries and then right click and add user library

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	Pa	HŒNIX ONTACT
COMP	ONENTS	
50 XK	Search	đ
> 💼 Programming (285)		
> 😑 PLCnext Components & Pr	rograms	
> 💕 Network (326)		
> 🔏 HMI (33)		
✓		
Add User Library		
Add Library		



6. Select the two libraries and click open. The function blocks will populate in the Programming section of the Components Window

	COMPONENTS					
53	ж. "	Search	<u>व</u> ्			
<b>~</b> 🖻	Programming (296)					
>	Con Local (1)					
>	4G_SMS_Req_V1_0 (7)					
>	4G_SMS_V1_0 (4)					
>	Extended (69)					
>	📃 IEC 61131-3 (127)					
>	PLCnext Controller (32)					
>	Safety IEC 61131-3 (56)					

7. Open the dropdowns until you get to a function block. Right click on any block and select help for the help file. Read these help files for information on the function blocks and programming examples



# **Change Notes**

08/06/2019: Initial release

10/12/2020: Replaced the embedded source code files with the complete library files