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Chapter 1

WinCC 6.2

1-1 Set up OPC Server

Modbus30CFG.mdb - Modbus30CFG						
<u>File Edit View Go T</u> ools <u>F</u>	<u>File Edit View Go Tools H</u> elp					
🗋 🗅 😂 😽 🚱 🚰 😓 🔿 🖻	3 X 🖻 💼 🏝 🤃 🏥 🕇	📰 🚍 🔁 60° 🤋 🕕				
🖃 📲 Address Space 📃	Name 🛆 Si	mulate Simple Tem Param	ieterize Location Type 🛛 🔺			
E Port1	AI_01 No	5	Input Register (wor			
Device1	AI_02 No	0	Input Register (word			
	AI_03 No	0	Input Register (won			
	AI 04 No) 	Input Register (won			
			<u> </u>			
			<u> </u>			
AI_06	<u>N</u> ame: Device1					
AI_07	Address: 1	_	Simulate			
AI_08	Device Tyme	- Timeoute (me)				
AI_09		Read: 100	0 Wivite: 1000			
AI_10	Custom		Suspend			
AO_U1		suspend:	3 period: 10000			
		- Uptimizations	1:			
A AO 05		data can be transferred	in one message to merge			
AO_06	Parameters:	together addresses that	are close but not adjacent.			
AO_07	Image: Construction of the second					
Ready		40 Object(s)	Mode: Run NUM			

Please create tags according to the Configuration Manual.

Later, click [File] \rightarrow [Make Active] to activate new created configuration file.

😳 Modbus30CFG.mdb - Modbus30CFG			
<u>File E</u> dit <u>V</u> iew <u>G</u> o <u>T</u> ools <u>H</u> elp			
New Cttl+N	₽ **** 1	📲 🔁 60° 🤋 🕀	
Open Ctrl+O	Simulat	e 🛛 Simple Tem 🛛 Paran	eterize Location Type 🔺
Save <u>A</u> s	No		Input Register (wor
<u>C</u> onnection Properties	No		Input Register (word
Export (WinCE, Embedded, WinNT)	No		Input Register (wor
	No		Input Register (wor 🔼
CSV Export			<u> </u>
CSV Import			•
XML Export	Device1		
XML Export Schema	1		🗔 Simulate
XML Import		– Timeouts (ms) –––––	
XML Validate		Read: 100	0 Write: 1000
		Timeouts to	Suspend
<u>M</u> ake Active		suspend:	3 period: 10000
1 Modbus30CFG.mdb		On the line time to	
– 2 Database.mdb		The numbers below in	dicate how much unused
		data can be transferred	in one message to merge
Exit		together addresses that	are close but not adjacent.
AO_07 -			
Make current database active for using by OPC server		40 Object(s)	Mode: Run NUM

1-2 Connect OPC Client to OPC Server through WinCC 6.2

🖉 WinCCExplorer -	
File View Help	
🗅 New Ctrl+N 🐰 🖻 😭 🖭 🗁 🏭 📅 😭 📢	
Gpen Ctrl+0	
Recent File	
Exit	
Creater a new document	
	//_

Start SIMATIC WinCC Explorer; then click [File] \rightarrow [New]

Select [Single-User Project] and then choose [OK].

WinCC Explorer	<u>? x</u>
Create a New Project	
🔄 💿 Single-User Project	
■ <mark>矣</mark> ⊙ Multi-User Project	
C Client Project	
C Open an Existing Project	
OK Cano	el

Write down the project name; then click [Create].

Create a new project		<u>? ×</u>
Project Name: OPC New Subfolder: OPC You can use this dialog box	Project Path c:\\wincc\winccprojects Folder: [] [test]	Create Cancel Help
to create a new WinCC project.	Drive:	

Press the right key on [Tag Management] choosing [Add New Driver...].

WINCCExplorer - C:\PROGRAM FILES\SIEMENS\WINCC\WINCCPROJECTS\OPC\OPC.MCP				
File Edit View Tools Help				
] 🗅 📽 ■ ► % 🖻	B 🕒 🗄 🏥 🏢	B N		
⊡~ ኛ OPC	Name		Туре	
	🔁 Internal tags		Internal tags	
⊡ ∰ Tag Management ⊡ 🚰 Internal tags	Add New Driver			
Structure tag	Find			
Menus and toolba	Properties			
Alarm Logging				
Tag Logging				
Report Designer				
User Administrator				
Cross-Reference				
Load Online Change				
•	J			
OPC\Tag Management\			External Tags: 0 / License: DEMO	

Select "OPC.chn"

Add new driver	<u>? ×</u>		
Look in: 🗀 bin	- = = 🛉		
DLCache	🗟 SIMATIC S5 Ethernet TF.CHN		
DPC.chn	🗟 SIMATIC S5 Profibus FDL.chn		
🖬 Profibus DP.chn	🗟 SIMATIC S5 Programmers Port A		
🖬 Profibus FMS.chn	🗟 SIMATIC 55 Serial 3964R.CHN		
SIMATIC 505 TCPIP.chn	🖻 SIMATIC S7 Protocol Suite.chn		
🗟 SIMATIC S5 Ethernet Layer 4.CHN	國 SIMATIC TI Ethernet Layer 4.CF		
	Þ		
File name: OPC	Open		
Files of type: WinCC Communication Drive	er (*.chn) 🔽 Cancel		

Press the right key on [OPC Groups] selecting [New Driver Connection...].



Connection p	roperties	×
General		
Name:	OPC	Properties
Unit:	OPC Groups (OPCHN Unit #1)	
Server List		
Please m national s	ake certain that the connection name doe special characters or the characters §, ' or	s not include any
	OK Can	cel Help

Write down the OPC Server to be connected; then click [Test Server].

NewConnection Properties	×
OPC Group Setting	
OPC Server Name 🔲 XML DA server	
OPCTechs.Modbus30DA.3	
Run the server on another computer: Server	
Read data from:	
Cache C Device	
In here, specify the OPC server and, if necessary, the computer	
that you want to access.	
OK Cancel Help	

Under normal connection

NewConnection Properties	×			
OPC Group Setting				
OPC Server Name 🔽 XML DA server				
OPCTechs.Modbus30DA.3	T			
Run the server on another computer:	Server			
<local></local>				
Server Test				
Test OK. This server supports the OPC inter	face.			
Read data from: Cache C Device				
In here, specify the OPC server and, if necessary, the computer that you want to access.				
OK Cancel	Help			

Press the right key on OPC selecting [New Tag].

WinCCExplorer - C:\PROGRAM FILES\SIEMENS\WINCC\WINCCPROJECTS\OPC\OPC.MCP				
File Edit View Tools Help				
🗅 🥔 = 🕨 X 🖻 💼 🏪 🖽	III 🖆 🕅	?		
E & OPC	Name	Туре	Parameters	Last Cha
Computer Tag Management Tag Management OPC OPC OPC Groups (OPCHN Unit #1) Computer Structure tag OPC New Group New Tag New Tag New Tag Menus and toolb		No objec	ts exist	
Alarm Logging Tag Logging Cut Copy Paste Text Library User Administrat Cross-Reference Load Online Charges	•			Þ
OPC\Tag Management\OPC\OPC Groups (OPCHN Unit	#1)\OPC\	External Tags: 0	/ License: DEMO	11.

Define the tag name and click [Select] to define the path.

General Limits/Reporting Properties of Tags Name: DataType : Length: Address:	NewTag Signed 1 2	6-bit value	•			
Properties of Tags Name: DataType : Length: Address:	NewTag Signed 1 2	6-bit value	3			T
Name: DataType : Length: Address:	NewTag Signed 1 2	6-bit value	•			•
DataType : Length: Address:	Signed 1 2	6-bit value)	-	Ţ	
Length: Address:	2				<u> </u>	
Address:						
	01 17 5				Sele	ect
Adapt format :	ShortToS	SignedWo	rd			-
Project-wide undat	e	O Cor	mouter-l	ocal undate	2	
Process Value Range Value1 Value2			ag Valu alue1 alue2	e Range		
When using tags in the dy tag does not begin with a	ynamic dia number.	alog, pleas	e make	certain that	t the nam	e of the Help

Click [OK] after the path is confirmed.

NewTag Proper	ties 2
OPC Address	
Item Name:	Port1.Device1.AI_01
Access Path	
Data Type:	Signed 16-bit value
Please enter t its data type.	he name and the access path of the OPC item and select
	OK Cancel Help

Create new picture and add in the tag.



Open the item.

WinCCExplorer - C:\PROGRAM FILES\SIEMENS\WINCC\WINCCPROJECTS\OPC\OPC.mcp				
File Edit View Tools Help				
] 🗅 😅 = 🕨 🐰 🌬 🔁 🖦 🗁 :	≌ 🗊 😭 🕅			
	Name	Туре	Last Change	
 Computer Tag Management Structure tag Structure tag Graphics Designer Menus and toolbars Alarm Logging Tag Logging Global Script Global Script Text Library User Administrator Cross-Reference Load Online Changes 	}∱ NewPdI0.PdI		3/24/2008 7:59:26 PM	
I OPC\Graphics Designer\		1 object(s) se	lected	

Choose [I/O Field].



Press the right key on the icon and select [Configuration Dialog].



View all the tags

I/O-Field Configur	tion ?X
Tag:	
Update	2 s 💌
– Туре – – –	
O Output	C Input Both
Format Font Size Font Name. Color	. 12 Arial
	OK Cancel

Select the tag you have created.

Tags - Project: C:\PROGRAM FILES	SIEMENS\WINCC\	WINCCPROJECTS\(DPC\OPC.mcp	<u>? ×</u>
Filter:	Data source:	nCC Tags		
🖃 🟐 WinCC Tags	Name	Туре	Parameter	Last modific
Internal tags List of all structure instances List of all tags ⊖ OPC ⊡ OPC Groups (OPCHN Unit	NewTag	Signed 16-bit v	"Port1.Device1	3/25/2008 3
	•			
		ОК	Cancel	Help

Run the SCADA program.



Under normal condition

WinCC-Runtime -	×
55.000	