

OPCUA使用者權限設定

SINUMERIK 828D / 840D sl

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1 注意事項與責任

本文件及範例所包含文字檔、PLC 程式、機器可執行程式(MPF、SPF、...)、電路 圖,可能與使用者實際使用不同,使用者可能需要先對相關程式做修改和調整,才能 將其用於測試。本範例的作者和擁有者對於該程式的功能性和相容性不負任何責任, 使用該範例程式的風險完全由使用者自行承擔。由於它是免費的,所以不提供任何擔 保,錯誤糾正和熱線支援。

對於在使用中發生的人員、財產損失本公司不承擔任何責任,由使用者自行承擔風險。以上聲明內容的最終解釋權歸西門子股份有限公司所有,後續內容更新不做另行通知。

2 功能概述

開啟 OPCUA 功能後,使用者常因 OPCUA 通訊的權限限制問題,而無法讀取或 變更控制器參數。本文件會以常見的 OPCUA Client 軟體來操作說明。

- 3 功能需求
- 3.1 硬體需求
 需確認該硬體是否有支援 OPCUA 通訊。
- 3.2 參考系統版本

以下為官方手冊 "SINUMERIK 840Dsl/828D SINUMERIK Access MyMachine / OPC UA" 08/2019。

1.4 OPC UA 伺服器版本及 CNC 軟體版本的相容性							
最新的 OPC UA 伺服器版本與好幾個 CNC 軟體版本相容。在下面您可以找到經過 OPC UA 伺服器版本成功測試過的 CNC 軟體版本:							
CNC 軟體版本 OPC UA 版本							
4.5	V2.2 and V3.0 SP1						
4.07 - SP2SP5	V2.2 and V3.0 SP1						
4.08 - SP2SP3 V2.2 and V3.0 SP1							
4.92 and 4.92 - HF2 V3.0 SP1							
	OPC UA 伺服器版本及 CI 最新的 OPC UA 伺服器版本與好 伺服器版本成功測試過的 CNC 可 CNC 軟體版本 4.5 4.07 - SP2SP5 4.08 - SP2SP3 4.92 and 4.92 - HF2						

4 注意事項

1.注意事項

請準備 OPCUA Client 已便確認是否成功開啟 OPCUA 通訊。

(註: 本文件應用範例會使用 UaExpert、OPCUA Sample Client。這二款皆可在網路 下載取得。)



5 權限功能說明

詳細說明可參考官方手冊。

- 1. OPCUA 管理員帳號才有權限去變更其他 OPCUA 使用者帳號權限。
- 2. 管理員帳號才可新增其他使用者帳號。
- 3. "匿名"連線也是有權限問題,此帳號為"anonymous"。
- 4. OPCUA 管理員帳號預設權限為 SinuReadAll (可讀取所有支援變數) 其餘新增帳號預設皆無任何權限

5.權限種類請參考官方手冊。SinuReadAll (可讀取所有支援變數)、 SinuWriteAll(可寫入所有支援變數)。

SIEMENS	SINUMERIK ONE 06/25/21	ک رک الم
Authentication		
Authentication		
Admin User:	ABCDEFGH 此為管理員帳號	
Password:		
Allow anonymous access:		
Accept certificates automatically:		
	Ch	ange
	B	lack
Setup I Li- archive R censes Work	Safety >	1 2

6 應用操作範例

6-1. 使用 UaExpert 軟體操作

1. UaExpert 連線設定

Unified Automation UaExpert - The OPC Unified Architecture Clie	nt - 02_UaExpert*					-	- 🗆 🗙
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	3 Dex_840Ds	Configuration Name	OPCUA_ONE		[0]		1
	4 Dex_840Ds		-		armNo		
OPCUA ONE	6 Dex_840Ds	Server Information			armNo		
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Log						6.2
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Timestamp So	Server	Message				· · · · · · · · · · · · · · · · · · ·
6/25/2021 10:42:15.634 AM Att	tribute Plu OPCUA_ONE	Read attributes o	f node 'NS2 String /Methods/GetMyAccessRights' succeed	ed [ret = Good].		
6/25/2021 10:42:23.047 AM Me	ethod Plu OPCUA_ONE	The method has	only output arguments			
6/25/2021 10:42:23.047 AM Typ	peCache OPCUA_ONE	Reading type info	o of Nodeld NS0 Numeric 12 succeeded			
6/25/2021 10:42:24.934 AM Me	ethod Plu OPCUA_ONE	Call succeeded				
6/25/2021 10:43:04.344 AM Me	ethod Plu OPCUA_ONE	The method has	only output arguments			
[6/25/2021 10:43:07.533 AM Me	ethod Plu OPCUA_ONE	Call succeeded				

2. 查詢此帳號權限 (路徑:Sinumerik/Methods/GetMyAccessRights)

3.給予帳號權限 (路徑:Sinumerik/Methods/GiveUserAccess)

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4. 重複步驟 2. 查詢權限

Call Get	MyAccessRights on Methods				?	\times
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Output Arg	juments					
Name	Value	權限已成功新增		DataType	Descrip	tion
AccessRights	SinuReadAll;SinuWriteAll;		 . Save as	String	_	_
Result						
Succeeded						
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6-2. 使用 OPCUA Sample Client 軟體操作

1. Sample Client 連線設定

OPC Unified Architecture Technology	– 🗆 X 🔍	
F 0 U N D A T I 0 N OPC Unified Architect Welcome Dashboard OPC UA NET API Build: 12,336.0	ure Technology Samples	
HE Data Server HE Data Clerit HE Data Clerit Arms & Conditions AC Server	OPC UA Technology Sample www.opdfoundation.org UA Sample Client	
AC Client Dector: //127.0.0.1:4840 - [None:Binary] 2.寫入 IP, 按下 Cor	nect Connect r
Generic Server Generic Client Reference Server 日本ere開始 Sam De Client	Operator Configuration Operator 122 0.0.148401 - None - None - Brnay Protocol operator 127 0.0.148401 - Sign - Basic256 - Binay Security M operator 127 0.0.148401 - Sign - Basic256 - Binay Security M operator 127 0.0.148401 - Sign - Basic256 - Binay Security M operator 127 0.0.148401 - Sign - MatErcoyt - Basic256 - Binay Security M operator 127 0.0.148401 - Sign - MatErcoyt - Basic256 - Binay Security M	- C X opc.top [127.0.0.14840] ode None None None None None None None Non
Info / Status State: Info:	Application 3.可選擇 Server 支援的加密成 Application Application	incoding Binay Sinumerik Server@DESKTOP-JULRPCJ Type Server URI um.DESKTOP-JULRPCJ:SiemensAG:Sinumerik/Server
	Product U Transport Gateway 2	RI Lum:Semens/AG: Sinumerik/Server Vortile URI http://opdoundation.org/UA-Profile/Transport/uatop-uasc-uat enver URI
	Control of the second secon	ty Policies UserName, UserName, Certificate, Certificate, Anorymous vel 0
00:00:00	Configuration options are up to date. Warring Selected Endpoint has no security. OK 化存下OK Refresh	

2. 管理員帳號連線

Client UA Sample Client		- 🗆 X
File Task Discovery Help		
F O U N D A T I O N Unifed Architecture demonstration app	gy Sample Sample Client	
opc.tcp://127.0.0.1:4840 - [None:None:Binary]		Connect
00:00:00	Certificate could not validated: BadCertificateUntrusted Subject: CN=SINUMERIK OPC UA Server, OU=DF, O=Siemens AG, L=Erlangen, S=Bavrai, C=DE Issuer, SEH*Signed Valid Tor:::3/2/2021;417:29 PM Valid Tor::3/2/2021;417:29 PM Thumbprint: 5B3A750018CB2601590CDD224B0A956E84F14007 Accept anyways? Yes No	1.填入管理員帳號密碼 2.此為憑證說明, 第一次連線時需取得憑證,按下 Yes GRATED AUT(

K UA Sample Client	-	- 🗆 ×
File Task Discove	ry Help	
F O U N D A T Unified Architecture demon	OPC UA Technology Sample www.opcfoundation.org UA Sample Client	Leam more
opc.tcp://127.0.0.1:4840 -	[None:Binary]	Connect
MySession 2		
Create a subscription to opc.tcp://127.0.0.1:4840	e → DeleteUser → DeleteUserAccess → GetMyAccessRights → GetUserAccessRights → GetUser	•

3. 查詢帳號權限 (路徑:Sinumerik/Methods/GetMyAccessRights)

4. 給予帳號權限 (路徑:Sinumerik/Methods/GiveUserAccess)

UA Sample Client	_		\times
File Task Discovery Help			
F O U N D A T I O N UNIFED Architecture demonstration app		CER M	
oc.tcp://127.0.0.1:4840 - [None: Knone: Binary]	/	Conne	ct
MySession 2 → AddUser → AddCetflicateUser → ChangeMyPassword → CopyFileFromServer → CopyFileFromServer → CopyFileFromServer → DeleteUser → DeleteUserAccess → DeleteUserAccess			~
Create a subscription to see notifications			
opc.tcp://127.0.0.1:4840 (None) UABinary Server Status: Running 2021-06-25 11:21:31 0/0			.:

5. 重複步驟 3. 查詢權限

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This method has no input arguments.								
			凝眼已式功新增					
Name	DataType	Value	准化 U 成 为 利 指	Description				
- Access Rights	String	SinuRea	dAll;SinuWriteAll;					
Call 1. 按下 Call Cancel							icel	

7 參考文件

1. SINUMERIK 840Dsl/828D SINUMERIK Access MyMachine /OPC UA Configuration Manual, 08/2019

8 版本紀錄

版本	日期	作者	附註
V1.0	2021.06.25	Sammy Wang	初版