SIEMENS

Industry Online Support

NEWS

Kom igång med Runtime Collaboration.

WinCC Unified

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Siemens Teknisk support



Säkerhets-	Detta är ett tips/exempel på en lösning som ska hjälpa användaren att komma
mormation	igång och se möjligheterna med Siemens industriprodukter.

Användaren måste själv anpassa detta tips/exempel till sin applikation.

Användaren ansvarar för att förhindra obehörig åtkomst till sina anläggningar, system, maskiner och nätverk. System, maskiner och komponenter bör endast anslutas till företagsnätverk eller internet om och i den utsträckning det är nödvändigt och med lämpliga säkerhetsåtgärder på plats (t.ex. brandväggar och nätverkssegmentering).

Dessutom bör Siemens vägledning om lämpliga säkerhetsåtgärder beaktas. För mer information om industriell säkerhet se <u>www.siemens.com/industrialsecurity</u>

Siemens tar inget ansvar om materiel och/eller personal skadas i samband med användning av detta tips/exempel.

Vi kan heller inte garantera att innehållet är helt felfritt och vi förbehåller oss rätten att ändra tipset/exemplet vid behov.

1 Kom igång med Runtime Collaboration

1.1 Sammanfattning

Det här exemplet beskriver hur en Unified Comfort Panel kan dela bild och larm med andra paneler eller PC Runtime. PC applikationen kommer att hämta bild från en MTP700 och en MTP1500.

MTP1500 panelen kommer att hämta bild från en MTP700.

MTP700 ligger i ett annat projekt.

1.2 Produkter och mjukvaror som använts

Produkter och mjukvaror som använts vid framtagande av tipset

Produkt	Version	Beställningsnummer
CPU1518F-4PN/DP	fw 2.9	6ES7518-4FP00-0AB0
MTP1500 Unified Comfort	V17.0.0.1	6AV2128-3QB06-0AX0
MTP700 Unified Comfort	V17.0.0.1	6AV2128-3GB06-0AX0
Step7 Professional	V17 Upd1	
WinCC Unified	V17 Upd1	
WinCC Unified Collaboration licens	1 per deltagare	6AV2154-0BR01-7LB0

Till tipset tillhör följande filer

Typ av fil	Filnamn
Projekt	Unified_Collaboration.zap17
Projekt	Unified_Collaboration_MTP700.zap17

2 Beskrivning

2.1 Skapa certifikat för Runtime Collaboration

2.1.1 Skapa certifikaten på din dator med Unified Certificate Manager



SIEMENS Totally Integrated Auton	- 🗆 X	🜇 WinCC Unified Certificate Manager	
English	Totally Integrated Automation	SIEMENS Totally Ir	
Siemens Automation WinCCUnifed Destant CA	English V		
Image: Add device Image: Export all Image: Recreate all Image: Note that the second	A certificate A certificate ice all all Close	Certificate Revocation List	

PC med engineeringsmjukvaran och där PC runtime-applikationen skall köras.

📕 New device		×
Computer name:	JOHAPGM5	
IP address:	192.168.0.199	
	Create Cancel	

Panel MTP1500.

📕 New device		×
Computer name: IP address:	192.168.0.150	
	Create Cancer	:

Panel MTP700 som finns i ett eget projekt.

📕 New device		×
Computer name: IP address:	192.168.0.70	
	Create Cancel	



Name:	Simatic WinCC Unified Runtime
Organization:	Siemens AB
Organization unit:	CS TT
Locality:	office
State:	Moelndal
Country:	SE
Applicant name:	CN=Simatic WinCC Unified Runtime/O=Siemens AB/OU=CS TT/L=office/S=MoeInda
Key length:	2048 Service life (months): 72
	Create Cancel

WinCC Unified Certifi	cate Manager	-		×
SIEMENS	Totally In	tegrated	Automa	tion
		English	\sim	0
Siemens.Automation.Wi	nCCUnifed ProjectCA on List 58.0 199)			
Simatic WinCC	Unified Runtime			
	Install all certificates			
	Export device certificates	_		
	Add OPCUA server certificate			
	Add OPCUA exporter certificate			
	Add Webserver certificate			
-	Add Runtime Collaboration certificate			
25	Add Audit Trail system certificate			
×	Delete			
		_		
			Clo	se

📇 New Runtime C	ollaboration certificate X
Name:	Simatic WinCC Unified Runtime
Organization:	Siemens AB
Organization unit:	CS TT
Locality:	office
State:	Moelndal
Country:	SE
Applicant name:	CN=Simatic WinCC Unified Runtime/O=Siemens AB/OU=CS TT/L=office/S=MoeIndz
Key length:	2048 Service life (months): 72
	Create Cancel

Gör sedan likadant för MTP700 (ip: 192.168.0.70).

När det är klart skall det se ut enligt nedan.

WinCC Unified Certificate Manager			-		×
SIEMENS	Totally In	tegrate	ed Au	tomat	ion
		English		\sim	0
Stemens Automation. WinCCUnifed ProjectCA Certificate Revocation List JOHAPGM5 (192.168.0.199) Simatic WinCC Unified Runtime 192.168.0.150 Simatic WinCC Unified Runtime Simatic WinCC Unified Runtime Simatic WinCC Unified Runtime					
				Clos	se

2.1.2 Installera certifikat på pc och exportera till panel

Installerar certifikatet på pc:n där runtime-applikationen skall köra.



För att kunna installera certifikatet på en panel så måste det först exporteras.

WinCC Unifie	d Cert	ificate Manager	•			-		×
SIEMENS		Tot	tally l	nteg	rate	ed A	utoma	tion
SIEMENS	Anation.1 Revoc 5 (192 WinC	Tot WinCCUnifed ProjectCA ation List Its8.0.199) C Unified Runtime Install all certificates Export device certificates Add OPCUA server certificate Add OPCUA exporter certificate Add OPC UA client certificate Add Webserver certificate Add Runtime Collaboration certificat Add Audit Trail system certificate Delete	te	Eng	rat(lish	ed A		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Export cert Encryption pass Confirm passwo	ificat word	:es					Ck)se .:: X
Refer to the doo	cumer	Itera	ation co ertificat	es.	ort	1		00÷ €
 ■ USB Drive (H) File name: 192, 162 Save as type: Aide Folders 	v 150.en	2				2	246	 V Cancel ai
Organice ▼ New tolder This PC D Objects D Destop Deventedt D	 Из 	me ^ Date modified No items me	t stch your sei	nch.		Size	li=	• 6
Save As ← → ∨ ↑ = → This Almost Almost Almos	PC > US	8 Drive (H)		^	ç	Search	USB Drive (H:)	ور مر ×

Gör sedan likadant för MTP700 (ip: 192.168.0.70).

2.1.3 Importera certifikatet på panelen

	SIMATIC F
	Security \ Certificates
Start Runtime	Certificates on the device
System Properties	Certificate store: Certificate Authorities
Nuntime Properties	
Network and Internet	
Security	
 External Devices and Input 	
Language, Region	
Service and Commissioning	Revoke Delete Delete
Import certif	ficate
Sel	ect storage media X61 (Size:7.49 GB/Free: V
192_168_0_	150.enc
192_168_0_	_70.enc
	Password: *******
	Iteration: 25000
	Import Cancel
Import certificate	
The certi	ficate was successfully imported
	incate was successfully imported
	ОК
	SIMATIO
	Security \ Certificates
Start Runtime	Certificates on the device
System Properties	Certificate store: Certificate Authorities
Properties	9E4EC6F.0
Internet	
Security	
 External Devices and Input 	
S Language, Region and Formats	
Service and Commissioning	Revoke Import Delete

2.2 Skapa projekt

2.2.1 Aktivera Collaboration för hmi som skapas i ett externt projekt

System ID och Collaboration name måste vara UNIKT för alla ingående deltagare. System ID: sista siffrorna på ip adressen för HMI:et. Collaboration name: HMI:ets namn i projeket. IP Address/Hostname: Här anges samma som i certifikatet.

Aktivera i MTP700:

Project tree		UCP_RT_collaboration_	_TEST + MTP700 [MTP700 Unified Comfort] + Runtime settings
Devices Plant objects			
1 1 1	🔲 🖻	General	Collaboration
		Alarms	
▼ □ UCP RT collaboration MTP700	^	Services	General settings
Add new device		Language & font	
Devices & networks		 Remote Access 	Enable collaboration
MTP700 [MTP700 Unified Comfort]	=	Collaboration	
Device configuration		Web client	Identification
9. Online & diagnostics		Smart Server	
Duntime settings		Storage system	System ID: 70
Screens	ŝ	Tag settings	Generate collaboration name automatically
HM tags		Good Manufacturin	Collaboration name: mtp700
Connections		User administration	
Connections			IR Address / Hestmanney 102 168 0 70
	_		
 Farameter set types 			

Skapa bild i MTP700 som skall delas:

Project tree		UCP_RT_collaboration_MTP700 → MTP700 [MTP700 Unified Comfort] → Screens → mtp700_Collaboration400x400
Devices Plant objects		
	💷 🐋	金 ダ ぞ か ほ 書 当 皿 時 雨 全 田 田 田 田 田 田 田 田 田 田 田 田 田 田 田 田 田 田
 UCP_RT_collaboration_MTP700 	^	
Add new device		
devices & networks	-	screen
 MTP700 [MTP700 Unified Comfort] 	=	mtp/00_Collaboration400x400
Device configuration		Which as been shared
🖳 Online & diagnostics		from the MTP1500 project as been shared.
🍟 Runtime settings		
 End Screens 		
Add new screen		
mtp700_Collaboration400x400		
Screen_1		
Screen_2		
HMI tags		
Connections		
Hivi alarms	~	
Parameter set types	1.0	
Details view		
Name		

Välj bild som skall delas och exportera ut till en fil.

Devices Plant objects										
		>	Export collaboration device s	ettings					_	ī
Add new screen	^	HM_RT_2 Screens	← → ∽ ↑ — This PC	> Data (D:) > SUPPO	RT		v Č Se	arch SUPPORT		
mtp700_Collaboration400x400		mtp700_Collaboration400x400	Organize - New folder							
Screen_2		Screen_2	Downloads	Name		Date modified	Туре	Size		
Connections	=		Music	A929_Klabin_Cl	4090	2021-11-25 08:21	File folder			
HMI alarms			Pictures	svg		2021-11-26 07:22	File folder			
Logs			System (C:)	UCP_synkaTidN PU051	fedPLC_V17	2021-12-01 15:54 2021-12-07 09:11	File folder File folder			
Scheduled tasks			🚛 Data (D:)	C58003_Avtråd	ning_V16.backup	2021-12-07 09:40	File folder			
Collaboration data			JOHA_USB (E:)	C58003_Avtråd PLC_Xylem_206	sing_V16 21_V17	2021-12-07 09:44 2021-12-07 13:38	File folder File folder			
Text and graphic lists			Samsung_15 (Pt)	700_sharedScre	ens.xml	2021-12-07 16:44	XML Document	1 KB		
Generative settings	~		File name: 700_share	dScreens.xml						
Details view			Save as type: XML files	(*.xml)						
			a Mida Baldera					Save	Cancel	
			in the course							

I huvudprojektet, importera den exporterade filen för att bild från MTP700 skall vara valbar.

Project tree	UCP_RT_coll.						
Devices Plant objects							
199	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						
	Devices	for collaboration SystemID IP address / computer name					
UCP RT collaboration TEST	^			_			
Add new device		Import collaboration device settings		×			
Devices & networks				- 1			
CPU1518 [CPU 1518F-4 PN/DP]	-	This PC > Data (D:) > SUPPORT Support	 Search SUPPORT 	P			
 MTP1500 [MTP1500 Unified Comfort] 		Occupite # New folder	Ro - 10	•			
 C PC-System_1 [SIMATIC PC station] 		Organize • Ivew folder	Bi • 1	U			
Ungrouped devices		Documents	^ Name	Da 🔨			
Security settings		Downloads	Projecti	204			
Cross-device functions		Music	A929_Klabin_CL4090.backup	201			
🕶 📑 Common data			A929_Klabin_CL4090	207			
Collaboration devices		 Pictures 	svg	20;			
Alarm classes		Videos	UCP_synkaTidMedPLC_V17	207			
💱 System diagnostic settings		System (C:)	PU051	20;			
Supervision settings		- Data (D:)	C58003 Avtrådning V16.backup	20;			
Logs			C58003 Avtrådning V16	200			
Instruction profiles	~	JOHA_OSB (E)	PLC Xvlem 20621 V17	202			
Details view		Samsung_T5 (F:)	700 sharedScreens yml	201			
		JOHA_USB (E)	< <	>			
		File name: 700_sharedScreens.xml	VML files (*xml)	~			
name			Open Cancel				
				-			

2.2.2 Aktivera Collaboration för hmi inom samma projekt

Aktivera i UPC:

Project tree		UCP_RT_collaboration	TEST PC-System_1 [SIMATIC PC station] UPC [WinCC Unified PC RT] Runtime settings
Devices Plant objects			
11	😐 🖻	General	Collaboration
UCP_RT_collaboration_TEST Add new device	^	Services Language & font	General settings
Devices & networks CPU1518 [CPU 1518F-4 PN/DP]	=	Collaboration Storage system	Enable collaboration
MTP700 [MTP700 Unified Comfort] MTP1500 [MTP1500 Unified Comfort]		Tag settings Good Manufacturin	Identification
PC-System_1 [SIMATIC PC station] Device configuration		User administration	System ID: 199
Online & diagnostics	_		Collaboration name: UPC
Device configuration			IP Address / Hostname: johapgm5
Aktivera i MTP1500: Project tree Devices Plant objects		UCP_RT_collaboration	_TEST → MTP1500 [MTP1500 Unified Comfort] → Runtime settings
1	🔳 🖻	General	Collaboration
UCP_RT_collaboration_TEST Add new device Devices & networks	^	Services Language & font	General settings
CPUIDS & Incensions CPUIDS IS (CPUIDS F-4 PN/DP) CPUIDS (MTP700 Unified Comfort) MTP700 [MTP700 Unified Comfort]	=	Collaboration Web client Smart Server	Identification
MIPISOU [MIPISOU Unified Comfort] Device configuration Online & diagnostics		Storage system Tag settings	System ID: 150 🗢
 		Good Manufacturin User administration	Collaboration name: mtp1500
HMI tags Connections			P Address / Hostname: 192.168.0.150

Därefter ange mot vilka hmi:er som den skall aktivt anslutas mot.

UPC: Skall hämta bild både från MTP700 och MTP1500.

Project tree	UU N	UCP_KI_collaboration	TEST • PC-System_T[SIMATIC PC station] • OPC [WINCC Unified PC RT] • Runtime setting
Devices Plant objects			
1	🔲 🖻	General	Collaboration
		Alarms	
UCP RT collaboration TEST	^	Services	General settings
Add new device		Language & font	
Devices & networks		Collaboration	Chable collaboration
CPU1518 [CPU 1518E-4 PN/DP]	=	Storage system	
MTP700 [MTP700 Unified Comfort]		Tag settings	Identification
MTP1500 [MTP1500 Unified Comfort]		Good Manufacturin	
PC-System 1 [SIMATIC PC station]		User administration	System ID: 199
Device configuration			Generate collaboration name automatically
Quine & diagnostics			Collaboration name: UPC
UPC [WinCC Unified PC RT]			
Device configuration	_		P Address / Hostname: johapgm5
Y Runtime settings			
Screens			
HMI tags			Connect actively to
Connections			
MI alarms	~		Devices for collaboration System ID IP address / hostname
✓ Details view			mtp1500 150 192.168.0.150
			mtp700 70 192.168.0.70

MTP1500: Skall hämta bild från MTP700.

i lojoet dee		o di_iti_conabolation	Circol : millisee [millisee ennied	connord - m	and the sectings
Devices Plant objects					
 歯		General	Collaboration		
		Alarms			
UCP RT collaboration TEST	~	Services	General settings		
Add new device		Language & font			
A Devices & networks		▼ Remote Access		🛃 Enable c	ollaboration
CPU1518 [CPU 1518F-4 PN/DP]	=	Collaboration			
MTP700 [MTP700 Unified Comfort]		Web client	Identification		
 MTP1500 [MTP1500 Unified Comfort] 		Smart Server			
Device configuration		Storage system	System	1D: 150	•
V. Online & diagnostics		Tag settings		Generate	collaboration name automatically
Y Runtime settings		Good Manufacturin	 Collaboration name 	me: mtp1500	
Screens		User administration			
🕨 🔚 HMI tags			IP Address / Hostna	me: 192.168.0.1	50
2 Connections					
🖂 HMI alarms					
Parameter set types			Connect actively to		
Logs					
5 Scheduled tasks	~		Devices for collaboration	System ID	IP address / hostname
✓ Details view			mtp700	70	192.168.0.70
			UPC	199	johapgm5
	_				

Skapa bild i MTP1500 som skall delas.

		ocr_n_conaboration_rest v mirrisoo (mirrisoo onined connord v screens v mitprsoo_conaboration+oox400
Devices Plant objects		
巒	😐 🖻	今 びでん 同学問題 外田田 田田 印田 印石 目行 自当 戸村
CUP_RC_collaboration_TEST Add new device bevices a networks Constant Constan		screen *mtp1500_Collaboration400x400* Which as been shared from the MTP1500 project
100 - Resolution independant		

2.3 Att visa den delade bilden

För att kunna visa den delade bilden så används objektet "ScreenWindow".



2.4 Att visa larm från delad hårdvara

För att visa larm från en deltagare så väljs detta i larmkontrollen.



2.5 Felsökning

2.5.1 Ingen kontakt med deltagare

Bilden visar att UPC:n inte får kontakt med MTP700.

S WinCC Unified RT × +	
← → C	
🗰 Apps 📃 Siemens 👩 My InCharge < Telenor Stream 🔇 👌 Streama det du älsk	WinCC Unified Vie
Screen_1 Screen_3	
Screen from MTP700 192.168.0.70	Screen from MTP1500 192.168.0.150
Error	screen "mtp1500_Collaboration400x400" Which as been shared
No start screen was found This can occur if no start screen is configured	from the MTP1500 project

Titta också efter systemmeddelande i Larmkontrollen. Texten "DistManager_70" hänvisar till Runtime Collaboration System ID.

	ID	Alarm class	Alarm text	Raise time	Status text
1	600196	SystemAlarm	Computer1 (JOHAPGM5): Manager (DistManager_70) is not connected	12/9/21 10:49:15 AM	Incoming
2					
3					
4					
5					
6					
7					
8					
D			• 💷 😴 🖶 🔂 🖨 🔃 🗹		
3	₹¥				

Detta kan bero på att certifikatet saknas i MTP700:an eller att det inte finns någon anslutning mellan dem.

Se över kablar och anslutningar Installera certifikatet.

Tänk på 3

Asynkron klient Anslutningen är asynkron vilket innebär att klienten och servern visar olika bilder.

Bildbyte

Om det finns en knapp för att byta bild på den delade bilden så kommer den att fungera och klienten kommer åt allt.

Skyddade objekt

WinCC Unified Machine A



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4 Referensmaterial

4.1 Relevanta manualer, FAQs m.m.

- Hjälpen i TIA Portal
- SIMATIC HMI HMI devices Unified Comfort Panels <u>https://support.industry.siemens.com/cs/se/en/view/109773257</u>
- Security guidelines for SIMATIC HMI operator devices and SIMATIC WinCC Unified https://support.industry.siemens.com/cs/nl/en/view/109481300
- Questions and answers about the new security features in TIA Portal V17 https://support.industry.siemens.com/cs/bd/en/view/109799540
- How do you create a certificate structure for the WinCC Unified V17 System so that other terminal devices can communicate encrypted with the Runtime? https://support.industry.siemens.com/cs/us/en/view/109777591

4.2 Andra länkar

- Siemens Sverige Digital Enterprise Services
 <u>https://siemens.se/di-services</u>
- Siemens Sverige Tips & trix från Tekniska Supporten <u>https://siemens.se/industritips</u>
- Siemens Industry Online Support
 <u>https://siemens.se/sios</u>
- Siemens utbildning Sverige
 <u>https://siemens.se/sitrain</u>
- TIA Portal Tuturial center
 <u>http://www.siemens.com/tia-portal-tutorial-center</u>
- Where do you procure the current trial software for STEP 7, WinCC and Startdrive for TIA Portal V17? https://support.industry.siemens.com/cs/ww/en/view/109798506
- Programming Guidelines and Programming Styleguide for SIMATIC S7-1200 and S7-1500 <u>https://support.industry.siemens.com/cs/ww/en/view/81318674</u>
- TIA Selection Tool
 <u>http://siemens.com/tia-selection-tool</u>
- Guide for switching from Comfort Panels to Unified Comfort Panels <u>https://support.industry.siemens.com/cs/se/en/view/109768002</u>
- SIMATIC WinCC Unified Tutorial Center (Videos) <u>https://support.industry.siemens.com/cs/us/en/view/109782433</u>
- SIMATIC WinCC Unified Tips and Tricks for Scripting (JavaScript) <u>https://support.industry.siemens.com/cs/se/en/view/109758536</u>
- How do you use the Trace Viewer with the Unified Comfort Panel?
 <u>https://support.industry.siemens.com/cs/se/en/view/109777593</u>
- Filtering of messages and alarms in SIMATIC WinCC Unified <u>https://support.industry.siemens.com/cs/se/en/view/109760056</u>

- Demoproject for SIMATIC WinCC Unified and SIMATIC HMI Unified Comfort Panels <u>https://support.industry.siemens.com/cs/se/en/view/109776633</u>
- HMI design with the HMI Template Suite
 <u>https://support.industry.siemens.com/cs/se/en/view/91174767</u>
- SIMATIC WinCC Unified Toolbox
 <u>https://support.industry.siemens.com/cs/se/en/view/109770480</u>