

Application Description • 11/2016

Integration of Process Historian / Information Server in a Domain



https://support.industry.siemens.com/cs/ww/de/view/66579062

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Preface

Objectives

This document describes the steps that are to be carried out during the integration of a combined Process Historian (PH) and Information Server (IS) in a PCS 7 environment.

Core contents

The following topics will be discussed in detail:

- Including an ES/OS Single Station in a domain
- Including an OS server in a domain
- Including a combined Process Historian / Information Server in a domain

Validity

The instructions were generated using:

- SIMATIC PCS 7 V8.0 SP1
- Process Historian 2013
- Information Server 2013

The contents of this document also apply for Process Historian 2014.

Note The configuration example for the ES/OS Single Station is carried out using the Windows 7 (64 bit) operating system. Windows Server 2008 R2 (64 bit) was used for the combined Process Historian / Information Servers.

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1 Introduction

In general, the recommendation to install a Process Historian (PH) in the environment provided, e.g. a workgroup or domain, should be followed. This procedure reduces the complexity of integration into the productive PCS 7 environment.

PCS 7 systems are frequently pre-installed in another environment or computer network and prepared as they are operated.

A typical example here is the installation and configuration of a PCS 7 system including Process Historian in a system integrator. Following a successful FAT (Factory Acceptance Test), the system is transported to the end customer and integrated into the customer environment.

The instructions below describe how a Process Historian installed in the workgroup is added to a domain and which configuration steps need to be carried out.

For a hands on approach, the following PCS 7 configuration is implemented as an example:



- **Note** The operator stations and the Process Historian must be either operated together in a domain or together in a workgroup. It is not permitted to have a mixed configuration of domains and workgroups.
- **Note** In case of a workgroup, the users of that particular workgroup should be used. In case of a domain, the domain users should be used.

2 Installation

Note In the description below, the term 'workgroup' will be used.

Carry out the installation in the environment provided.

able 2-1
able 2-1

Environment	Note
Workgroup	Install the Process Historian with a user account with administrator rights
Domain	Install the Process Historian with a domain user that has local administrator rights

If you would like to operate a Process Historian within a workgroup, the simplest method is to install and operate the Process Historian in this workgroup together with the workgroup administrator.

Note The description "Installation and commissioning of Process Historian / Information Server in the PCS 7 environment" describes all the necessary steps for the installation and setup of Process Historian. You can find the description at the following link:

https://support.industry.siemens.com/cs/ww/en/view/66579062

3 Inclusion in the domain

This section describes how an OS Single Station, an OS server and a combined Process Historian / Information Server are included in the domain.

The following names are predefined for the configuration:

- Domain name = pcs7sv.local
- Computer name OS = ESOS03
- Computer name PH / IS = PH03

The following users have been created for the domain:

- User login with local authorizations on the OS server and Process Historian = pcs7sv\OSUserDom
- CCCAPHServer login with local administrator authorizations on the OS server
 = pcs7sv\PHReadyUserETest

Note Knowledge about managing and adding domain users (in the domain controller) is taken for granted and is therefore not described in this document.

3.1 ES/OS Single Station

3.1.1 Including an ES/OS Single Station in the domain

Operating instruction

1. Open the Windows Start menu. Right-click on "Computer" and select "Properties" from the shortcut menu.



2. Click on "Change settings".

Figure 3-2



3. Click the "Change" button.



4. Enter the domain and click the "OK" button.

Figure 3-4

Computer Name/Domain Changes	×
You can change the name and the membership of this computer. Changes might affect access to network resources More information	
Computer name: ESOS03	_
Full computer name: ESOS03.pcs7sv.local	
<u>M</u> ore	
Member of Domain: pcs7sv.local	
C <u>W</u> orkgroup:	
OK Cancel	

5. Restart the computer.

3.1.2 Extending the local user groups

In this chapter, the domain user "OSUserDom" is included into the following user groups:

- SIMATIC HMI
- Users
- Siemens TIA Engineer
- SIMATIC NET

The instruction below describes the inclusion in the user group SIMATIC HMI. The procedure is identical for the other user groups.

Operating instruction

1. Open the Start menu. Right-click on "Computer" and select "Manage" from the shortcut menu.

Figure 3-5



2. Navigate to "Local Users and Groups > Groups". In the central area, select the group "SIMATIC HMI" and select "Properties" from the shortcut menu.

ile Action View Help	?			
Computer Management (Local)	Name	Description	Actions	
👔 System Tools	Administrators	Administrators have complete and u	Groups	
🕀 🕑 Task Scheduler	🚈 Backup Operators	Backup Operators can override secu		
🛨 🚺 Event Viewer	👰 Cryptographic Operators	Members are authorized to perform	More Actions	
🔬 Shared Folders	A Distributed COM Users	Members are allowed to launch, acti	SIMATIC HMI	
E 🕭 Local Users and Groups	🕭 Event Log Readers	Members of this group can read eve	SIMATIC HMI	
Users	🕭 Guests	Guests have the same access as me	More Actions	
Groups	A IIS_IUSRS	Built-in group used by Internet Infor		
Device Manager	Network Configuration Operators	Members in this group can have som		
Storage	Performance Log Users	Members of this group may schedule		
Disk Management	Arr Performance Monitor Users	Members of this group can access p		
Services and Applications	A Power Users	Power Users are included for backw		
	Amote Desktop Users	Members in this group are granted t		
	A Replicator	Supports file replication in a domain		
	A Users	Users are prevented from making ac		
	Siemens TIA Engineer	Administration of Siemens TIA products		
	SIMATIC HMI	Add to Group		
	SIMATIC HMI CS	Infiguration		
	A SIMATIC HMI VIEWER	All Tasks		
	A SIMATIC NET	Delete		
	SQLServer2005SQLBrowserUser\$ES	Rename have the requ		
	SQLServerMSSQLServerADHelperUs	have the requ		
	SQLServerM55QLUser\$E50503\$WIN.	Properties have the requ		
	SQLServerSQLAgentUser\$ESOS03\$	Help		

3. Click the "Add..." button to add. Figure 3-7

1ATIC HMI Pro	perties		?
General			
	TIC HMI		
Description:	SIMATIC HMI GROUP		
Members:			
🛯 🝋 Administrat	or		
ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا	or		
	, Changes to	a user's group	o membership
Add	, Changes to	ctive until the	o membership next time the

4. Click the "Locations..." button. You will need to be logged on to the domain for authentication.

Figure 3-8

Select Users, Computers, Service Accounts, or Groups	Windows Security
Select this object type: Users, Service Accounts, or Groups From this location: pcs7sv.local Locations	Enter Network Password Enter Network Password of an account with permissions for pcs7sv.local. For example user, user@example.microsoft.com, or domain/user name PHAdmin
Enter the object names to select (examples): Check Names	Domain: PCS73V
Advanced OK Cancel	OK Cancel

5. Select a domain location and click "OK" to confirm.

Locations	? ×
Select the location you want to search.	
Location:	
Entire Directory	_
🕀 💷 Domain Controllers	
😟 💼 PCS7-S SUP PA	
PCS7-V71SP2	
PUSA-Projects	
😟 💼 Saudi-Aramco	
🗄 💼 SV-Infrastruktur	-
	OK Cancel

6. Enter the domain user ("OSUserDom" in the example) that will be logged on to the PC at the execution time and click the "OK" button.

Figure 3-10		
Select Users, Computers, Service Accounts, or Gro	oups	? ×
Select this object type:		
Users, Service Accounts, or Groups	Object Types	
From this location:		
pcs7sv.local	Locations	
Enter the object names to select (<u>examples</u>):		
OSUserDom	<u>Check Name</u>	s
		1
Advanced	OK Cancel	

7. To extend the user group click "Apply" followed by the "OK" button.

Figure 3-11	
SIMATIC HMI Properties	>
General	
SIMATIC HMI	
Description: SIMATIC HMI GROUP	
Members:	
Administrator PCS7SV\DSUserDom	
Add Changes to a user's group membership are not effective until the next time the user logs on.	
OK Cancel Apply Help	

8. Repeat steps 2 to 7 for the remaining user groups and, once finished, restart the ES/OS Single Station.

3.1.3 Configuring the "CCCAPHServer" service

The "CCCAPHServer" service required for Process Historian is started with a domain user. Follow the configuration steps in the following operating instruction.

Operating instruction

9. Open the configuration wizard from the Start menu "Siemens Automation > SIMATIC > PH-Ready > PH-Ready Configuration".

Figure 3-12



10. Click the "Next" button. Figure 3-13

Welcome	
Welcome to the Service Configuration	on Wizard.
	This wizard guides you through the configuration of the CCCAPHServer service.
SIMATIC Process Historian	The Service Configuration Wizard enables a Windows service to access networks, files, databases, and other resources, which require special user credentials.
	Please ask your administrator for relevant user credentials.
	Previous Next Finish

11. Use the "CCCAPHServer" user (local administrator) in the form "domain\user name" and click the "Next" button.

Service configuration Please set up the service settings will	th the required credentials.
	Service to configurate
SIMATIC	Name: CCCAPHServer
Process Historian	Current state: Running
	New security setting C Run as local system C Run as network service Run as network service C Run with user cardentists
	User: pcs7sv.local/PHReadyUserETest
	Password: ••••••

12. To finish, click the "Finish" button.

Summary Please verify the settings.	
SIMATIC Process Historian	Configuration summary. The settings for the ECCAPHServer service with the current state will be changed. The following user credentials will be enabled for the service: Logim party viceodYHFRedyUseETest Password: ************************************

13. After completing the configuration, click the "Close" button.

Figure 3-16	
Configurating service	
Confi	guration completed.
	Close

Result

The domain user "PHReadyUserETest" has been configured as logon user for the "CCCAPHServer" service.

Figure 3-17

3						
🛃 Computer Management						
File Action View Help						
🗢 🔿 🗾 🖬 😫	🛛 🕞 🕨 💷 🕕 🕩					
Computer Management (Local)	😋 Services	-				
🗄 🕑 Task Scheduler	CCCAPHServer	Name 🔺	Description	Status	Startup T	Log On As
🗉 🛃 Event Viewer		BitLocker Drive Encryption Service	BDESVC ho		Manual	Local System
🗉 👸 Shared Folders	Stop the service	Block Level Backup Engine Service	The WBEN		Manual	Local System
	Restart the service	Bluetooth Support Service	The Blueto		Manual	Local Service
Users		BranchCache	This servic		Manual	Network Service
Groups		CCAgent		Started	Automatic	Local System
		CCArchiveManagerService			Manual	Local System
Device Manager Storage		CCCAPHServer		Started	Automatic	pcs7sv.local\PHReadyUserETest
Storage Disk Management		CCDBUtils		Started	Automatic	Local System
Services and Applications		CCEClient		Started	Manual	Local System

3.1.4 Extending the administrator group to include the "CCCAPHServer" user

- 1. Open Computer Management.
- 2. Navigate to the "Local Users and Groups > Groups" folder.
- 3. In the central area, select the group "Administrators" and select "Properties" from the shortcut menu.
- 4. Add the "CCCAPHServer" user (in this example, "PHReadyUserETest") to the local administrators group.

Figure 3-18

	Properties	
neral Normal Adm	inistrators	
escription:	Administrators have compl to the computer/domain	ete and unrestricted access
embers:		
🖶 Administra 토 ESAdmin 兆 PCS7SV\ 소 PCS7SV\	Domain Admins	
🛃 PESZSVA	PHReadyUserETest	
Add	,, Changes t	o a user's group membership ective until the next time the on.

Note

The "CCCAPHServer" user must not be logged on when the visualization is propagated to the OS system.

3.1.5 Extending the local user group "SIMATIC HMI" to include the "CCCAPHServer" user

- 1. Open Computer Management.
- 2. Navigate to the "Local Users and Groups > Groups" folder.
- 3. In the central area, select the group "SIMATIC HMI" and select "Properties" from the shortcut menu.
- 4. Add the "CCCAPHServer" user (in this example, "PHReadyUserETest") to the local "SIMATIC HMI" group.

3.2 OS server

The procedure for including an OS server in a domain is identical to the procedure for the ES/OS Single Station. In contrast to the ES/OS Single Station, the domain user for the OS server is inserted into the following user groups:

- Users
- SIMATIC HMI
- SIMATIC NET

3.3 Combined Process Historian / Information Server

3.3.1 Configuration as a domain user

Operating instruction

1. Open the Windows Start menu. Right-click on "Computer" and select "Properties" from the shortcut menu.



2. Click on "Change settings".

Figure 3-20



3. Click the "Change" button.

Figure 3-21 System Properties Computer Name Hardware Advanced Remote Windows uses the following information to identify your computer on the network. Computer description: WickOPI2904 Basis For example: "IIS Production Server" or "Accounting Server". Full computer name: PH03 pcs7sv.local Domain: pcs7sv.local To rename this computer or change its domain or workgroup, click Change. DK Cancel Apply

4. Enter the domain and click the "OK" button.

Figure 3-22

Computer Name/Domain Changes	х
You can change the name and the membership of this computer. Changes might affect access to network resources. More information	
Computer name:	-
, Full computer name: PH03.pcs7sv.local	
More	
Member of Domain: pcs7sv.local	
C Workgroup:	
OK Cancel	

5. Restart the computer.

3.3.2 Creating an SQL server login with authorizations

In the following section, the domain user "PHReadyUserETest" will be added to the SQL server. The domain user starts the "CCCAPHServer" service on the OS.

Note The domain user that is added to the OS server for the "CCCAPHServer" service does not need sysadmin / DB_Owner authorization in the SQL database.

Creating a user ID

1. Open the Windows Start menu and start the application via "Microsoft SQL Server 2008 R2 > SQL Server Management Studio".

Figure 3-23

AIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		
🤏 Internet Explorer		
🖉 Windows Update		
Accessories		
Administrative Tools		
Greenshot	Administrator	
Aaintenance		
Microsoft SQL Server 2008	Documents	
Microsoft SQL Server 2008 R2	Computer	
🔛 Import and Export Data (32-bit)	Computer	
🔜 Import and Export Data (64-bit)	Network	
😭 SQL Server Business Intelligence Develo		
👯 <u>SQL Server Management Studio</u>	Control Panel	
🍌 Analysis Services	control anos	
🍌 Configuration Tools	Devices and Printers	
Integration Services		
Performance Tools	Administrative Tools 🔹 🕨	
🎍 Microsoft SQL Server 2008 R2 Report Builde		
🄑 Microsoft Visual Studio 2008	Help and Support	
Siemens Automation		
🕌 SIMATIC 📃	Run	
◀ Back	Windows Security	
Search programs and files	Log off	
🎢 Start 🛛 🐫 🖉 📜		

2. Connect to the SQL instance "HISTORIAN" by clicking the "Connect" button. Figure 3-24

🛃 Connect to Server	X		
Microsoft* SQL	Server: 2008 R2		
Server type:	Database Engine		
Server name:	PH03\HISTORIAN		
Authentication:	Windows Authentication		
User name:	PH03\Administrator		
Password:			
	Remember password		
Connec	t Cancel Help Options >>		

3. Within the SQL server, navigate to the "Security > Logins" folder.



4. To create a new user ID (login) select "New Login..." from the shortcut menu.



5. Click the "Search..." button.

Figure 3-27

🧮 Login - New				_ 🗆 🗡
Select a page	🔄 Script 👻 🚺 Help			
General				
🚰 User Mapping	Login <u>n</u> ame:	1		S <u>e</u> arch
Securables	Mindows authentication			
🚰 Status	C SQL Server authentication			
	Password:			_
	Confirm password:			_
	Specify old password			
	Old password:			_
	Enforce password poli	sy.		
	Enforce password exp	iration		
	🔽 User must change pas	sword at next login		
	C Mapped to certificate			~
	C Mapped to asymmetric key			T
	Map to Credential			▼ <u>A</u> dd
Connection	Mapped Credentials	Credential	Provider	
Server: PH03\HISTORIAN				
Connection: PH03\Administrator				
View connection properties				
Progress				Remoye
C) Ready	Default <u>d</u> atabase:	master		•
Tag per	Default language:	<default></default>		•
<u>ر</u>			OK	Cancel

6. Click the "Locations..." button. You will need to be logged on to the domain for authentication.

Figure 3-28

Select User or Group	? 🗙	Windows Security
Select this object type:		Enter Network Password Enter the name and password of an account with permissions for pcs7sv.local.
User or Built-in security principal	Object Types	For example user, user@example.microsoft.com, or domain\user name
From this location:		
PH03	Locations	User name Password
Enter the object name to select (<u>examples</u>):		Domain: PC575V
	Check Names	Insert a smart card
Advanced	OK Cancel	
Auvanceu		OK Cancel

7. Select the appropriate domain.



8. Enter the user and accept the changes with "OK".

rigure 3-30		
Select User or Group		? ×
Select this object type:		
User or Built-in security principal		Object Types
From this location:		
pcs7sv.local		Locations
Enter the object name to select (examples):	1	
PHReadyUserETest		Check Names
P		
		_
Advanced	OK	Cancel
		//,

9. Click "OK" to create a new login.

Figure 3-31

📕 Login - New			
elect a page 🚰 General	🖾 Script 👻 🚺 Help		
≝ General ≇ ServerRoles ≇ UserMapping	Login name:	PCS7SV\PHReadyUserETest	Search
Securables	Windows authentication		
🚰 Status	SQL Server authentication		
	Password:		-
	Confirm password:		-
	Specify old password		
	Old password:		-
	Enforce password poli	CV .	
	Enforce password exp		
	🔽 User must change pas	isword at next login	
	C Mapped to certificate		-
	C Mapped to asymmetric key	,	-
	Map to Credential		▼ Add
Connection	Mapped Credentials	Credential Provider	ξ
Server:			-
PH03\HISTORIAN			
Connection: PH03\Administrator			
View connection properties			
Progress			Remove
C Ready	Default database:	master	-
	Default language:	<default></default>	-

Result

A new SQL server login (user ID) has been created.



Assigning authorizations

The following section includes the necessary steps for assigning the necessary authorizations to the SQL server login (user ID).

10. In "Microsoft SQL Server Management Studio" select the new login and select "Properties" from the shortcut menu.

Figure 3-32

	Properties
	Refresh
	Delete
	Rename
🕀 📆 SQL Server Agent	Reports
🛨 📴 Kepication 🛨 📴 Management	-
	Start PowerShell
🕀 🧰 Server Audit Specifications	Facets
 E a Cryptographic Providers Audits 	Policies 🕨
🛨 🚞 Credentials 🕀 🛅 Cryptographic Providers	Script Login as
🛨 🚞 Server Roles	
🐣 PCS7SV\PHReadyUserETe	New Login
	ers
Might PH03\SIMATIC Report Pul	
pH03\SIMATIC Report Da	
M PH03\SIMATIC Report Ad	ministrators
A PH03\Administrator	ISTORIAN
MT SERVICE\MSSQL\$HIST	
📥 historianbulkwriter	
BUILTIN\Administrators	ncogin##
##MS_PolicyEventProces ##MS_PolicyTsqlExecutio	
Logins Market Delign Events	cical a cicatat
🖃 🧰 Security	
🕀 🛅 Databases	
E The second	2550 - PH03\Administrator)

11. Select "Server Roles" from the index and check "Server roles:" "public". Figure 3-33

🚪 Login Properties - PCS75¥\	PHReadyUserETest	X
Select a page	🔍 Script 🕶 📑 Help	
General Server Roles User Mapping Securables	Server role is used to grant server-wide security privileges to a user.	
Status		
Connecian	Severar roles: bulkadimin diskadimin processadimin processadimin severar dimin severar dimin di dimin di dimin di dimin dimin dimin dimin d	
Server: PH03\HISTORIAN		
Connection: PH03VAdministrator		
View connection properties Progress Ready		
The second secon		
	OK Cancel	

 Select "User Mapping" from the index. Map all project databases (typical structure is DB_Master_XY) to the new login. Additionally, in the field "Database role membership for: ReportServers\$HISTORIANTempDB", check "public".

	\PHReadyUserETes				
elect a page 😤 General	🔄 🔩 Script 🝷 🚺 H	elp			
Server Roles					
😤 User Mapping	Users mapped to this login:				
Y Securables	Map Datat		User	Default Schem	
P Status		Master_Pro_His_MP_PH03	PCS7SV\PHReadyUserETest		
		rianStorage			
	1	nationserver			
	master master				
	node				
	msdb				
		rtServer\$HISTORIAN			
		rtServer\$HISTORIANTemp			
	Repo temp	ntServer\$HISTORIANTemp	ISTORIANTempDB		
	Guest accour	xtServer\$HISTORIANTemp db * enabled for: ReportServer\$H mbership for: ReportServer\$HI			
Connection	Guest accour	xtServer\$HISTORIANTemp db x enabled for: ReportServer\$H mbership for: ReportServer\$HI min			
connection Server	Guest accour balabase jole me db_accessad db_backupop	vtServer\$HISTORIANTemp db k.enabled for: ReportServer\$H mbership for: ReportServer\$HI min servlor			
Server: PH03\HISTORIAN	Guest accour db_accessad db_backupo db_datreade db_datreade	vtServer\$HISTORIANTemp db k.enabled.for: ReportServer\$H mbership.for: ReportServer\$HI min erator *			
Server: PH03\HISTORIAN Connection:	Guest accourt db_accessad db_accessad db_ackupg db_dstareade db_dstareade db_dstareade	ktSever\$HISTORIANTemp db k enabled for: ReportServer\$H mbership for: ReportServer\$HI min min k			
Server: PH03\HISTORIAN Connection: PH03\Administrator	Guest accour Database jole me db_accessad db_backupo db_dataread db_dataread db_dataread db_dataread	atServerGHISTORIANTemp db t enabled for: ReportServerSH mbership for: ReportServerGHI mm erador r eader			
Server: PH03\HISTORIAN Connection: PH03\Administrator	Guest accourt db_accessad db_accessad db_ackupg db_dstareade db_dstareade db_dstareade	atServerGHISTORIANTemp db t enabled for: ReportServerSH mbership for: ReportServerGHI mm erador r eader			
Server: PH03/HISTORIAN Connection: PH03/Administrator PH03/Administrator	Rept temp temp temp d Gluest accour Database gole me db_accesses db_backupog db_datareade db_datareade db_datareade db_datareade db_datareade db_acympaa	AtServer(HISTORIANTemp db enabled for: ReportServer(HI mbership for: ReportServer(HI min min erator er eader witter			
Server: PH03VHISTORIAN Connection: PH03VAdministrator 21 View connection propetities rogress	Rep2 Rep3 Rep3 Rep3 Guest accourt Detabase gole me do_accessa do_backupg do_adatwite do_adatwite	AtServer(HISTORIANTemp db enabled for: ReportServer(HI mbership for: ReportServer(HI min min erator er eader witter			
Server: PH03\HISTORIAN Connection: PH03\Administrator	Rept temp temp temp d Gluest accour Database gole me db_accesses db_backupog db_datareade db_datareade db_datareade db_datareade db_datareade db_acympaa	AtServer(HISTORIANTemp db enabled for: ReportServer(HI mbership for: ReportServer(HI min min erator er eader witter			

13. Do the same for the databases "HistorianStorage",

"ReportServer\$HISTORIAN" and "ReportServer\$HISTORIANTempDB".

	Script ·	• 🖪 Help			
General	T) coupt				
Server Boles User Mapping	Users mapped to this login:				
Securables	Map	Database	User	Default Schema	
Status	V	DB Master Pro His MP PH03	PCS7SV\PHReadyUserETest	Í	
	v	HistorianStorage	PCS7SV\PHReadyUserETest		
		Informationserver			
		master			
		model			
		msdb			
	V	ReportServer\$HISTORIAN	PCS7SV\PHReadyUserETest		
		ReportServer\$HISTORIANTemp	PCS7SV\PHReadyUserETest		
	Gues	tempdb	ISTORIANTempDB		
neerlive	C Gues	t account enabled for: ReportServer\$H e role membership for: ReportServer\$H			
nnection	Database	t account enabled for: ReportServer\$H e jole membership for: ReportServer\$H ccessadmin			
nnection Inver IOSHISTORIAN	Database	t account enabled for: ReportServer\$H e tole membership for: ReportServer\$H ccessadmin ackupoperator saterador			
irver: 103\HISTORIAN	Database Database db_a db_b db_d db_d	t account enabled for: ReportServer\$H e jole membership for: ReportServer\$H ackupperator stareader stareader stareader			
rver: 103\HISTORIAN nnection:	Database Database db_a db_d db_d db_d	t account enabled for: ReportServer\$H e tole membership for: ReportServer\$H ccessadmin ackupoperator saterador			
rver: 103\HISTORIAN nnection:	Database Database db_a db_d db_d db_d db_d db_d db_d	L account enabled for. ReportServer\$H e gole membership for. ReportServer\$H achuspoperator adareader adarwine dadmin enydatareader enydatareader			
rver: 103\HISTORIAN Innection: 103\Administrator	Databass Databass db_a db_d db_d db_d db_d db_d db_d	t account enabled for: ReportServer\$PI cestadrin cestadrin dataseder dadrinn erydataseder erydataseder erydataveter wrver			
rver: 103/HISTORIAN nnection: 103/Administrator View connection properties	Grues Detabass db_a db_d db_d	t account enabled for. ReportServer\$H e gole membership for. ReportServer\$H achupoperator adavateed adavatee mydatarader enydatarader enydatarader wrver casthedmin.			
rver: 103\HISTORIAN Innection: 103\Administrator	Databass Databass db_a db_d db_d db_d db_d db_d db_d	t account enabled for: ReportServer\$PI coestadnin coestadnin daveder dadmin explatarader enydatarader enydatarader enydatarader enydatarader enydatarader S			

14. The PH Services will be started as "Local System".

Figure 3-36

🌼 Process Historian Discovery Service	Provides services	Started	Automatic	Local System
*****	Provides services	Started	Automatic	Local System
🔍 SIMATIC Process Historian	Provides Central	Started	Automatic	Local System

Note Carry out the following actions if you require a domain user with full access rights to the databases:

- In the "Server Roles" index (step 11) check "Server roles:" "sysadmin"
- In the "User Mapping" index (step 12), in the field "Database role membership for: ReportServers\$HISTORIANTempDB", check "db owner"

3.3.3 Redundant Process Historian

For a redundant installation, PH Master (Principal), PH Standby (Mirror) and, to control availability, the Information Server (Witness) are required. The necessary actions are set out below.

1. The Process Historian Redundancy Service must be started with the new domain user on the redundant PH. This service implements functions that are necessary for data exchange between two redundant server systems.

Figure 3-37

Automatic PHReadyUserETest@pcs7sv.local

2. An SQL server login with the necessary user mapping should be applied to all systems (PH and IS/Witness).

3.3.4 Authorizations on the Process Historian

The domain user "OSUserDom" only has local user rights on the PH, which do not allow it to open SQL Server Management Studio. This prevents the local user from accessing SQL Server Management Studio and protects the database from tampering.

The figure below shows the message that appears if login is attempted using local user rights.

Connect to Serve		
Server type: Server name:	Database Engine	
Authentication: User name:	Windows Authentication	
Password:	Remember password	
Con	nect Cancel Help Options >>	
Connect to Server		×
Cannot connect to PH03\HIS' Additional information: L→ Login failed for user 'PCS'	TORIAN. 75V(OSUserDom'. (Microsoft SQL Server, Error: 18456)	
0 - 4 1	ОК	

If the domain user logs in to the PH with local user rights after a restart (operating system login), the Process Historian Management Console (PH MMC) does not start automatically. In this case, the application must be executed with administrator authorization. The operating instruction below describes the necessary steps.

Operating instruction

 Open the Windows Start menu and open the path to the application "Siemens Automation > SIMATIC > Process Historian > Process Historian Management Console".

Figure 3-39

SUserDom ocuments
ocuments
omputer
omputer
etwork
SCOVOTIX
ontrol Panel
ond of Parlor
evices and Printers
dministrative Tools 🔹 🕨
elp and Support
Jn
indows Security
og off 🔸

2. Right-click on "Process Historian Management Console" and select "Run as administrator" from the shortcut menu. For authentication, you have to be logged in as an administrator.

Figure 3-40

	Open
	Author
	Open file location
0	Run as <u>a</u> dministrator
	Open wit <u>h</u>
	Pin to Tas <u>k</u> bar
:	Pin to Start Men <u>u</u>
	Restore previous <u>v</u> ersions
	Send to
	Cu <u>t</u>
	⊆ору
	Delete
6	Rena <u>m</u> e
	P <u>r</u> operties

Note

If you want PH MMC to start automatically after restarting the PC, the domain user must be included in the local group "Administrators".

4 Further notes, tips and tricks, etc.

Domain users and passwords

Passwords of domain users which are used to execute the "CCCAPHServer" service should not be changed. In the event of a change, the logon information for the "CCCAPHServer" service on the OS servers must be updated after changing the password. The systems must also be restarted.

The same applies for the "Process Historian Redundancy Service" on the redundant Process Historian and the Information Server (Witness).

Domain users and authorizations

For security reasons, the operating system login for the OS server and the Process Historian should only have local user authorizations.

If an OS system is operated in a domain, the user who is entered for the "CCCAPHServer" service must be a domain user. This domain user must also be included in the local user group "SIMATIC HMI" on the OS system.

If an OS system is included in a domain, the domain user should be included in different local user groups.

Domain users and services

The logged-in domain user may differ from the domain user with which the "CCCAPHServer" service is started.

The domain user which starts the "CCCAPHServer" service must have corresponding authorizations in the SQL Server for the Process Historian and must be a member of the local group "Administrators".

For the purpose of administration and installation, a domain user should be applied to the OS and PH as local administrator.

5 Appendix

5.1 Service and Support

Industry Online Support

Do you have any questions or need assistance?

Siemens Industry Online Support offers round the clock access to our entire service and support know-how and portfolio.

The Industry Online Support is the central address for information about our products, solutions and services.

Product information, manuals, downloads, FAQs, application examples and videos – all information is accessible with just a few mouse clicks at: https://support.industry.siemens.com/ .

Technical Support

The Technical Support of Siemens Industry provides you fast and competent support regarding all technical queries with numerous tailor-made offers – ranging from basic support to individual support contracts.

You send queries to Technical Support via Web form: <u>www.siemens.com/industry/supportrequest</u>.

Service offer

Our range of services includes, inter alia, the following:

- Product trainings
- Plant data services
- Spare parts services
- Repair services
- On-site and maintenance services
- Retrofitting and modernization services
- Service programs and contracts

You can find detailed information on our range of services in the service catalog: <u>https://support.industry.siemens.com/cs/sc</u>

Industry Online Support app

You will receive optimum support wherever you are with the "Siemens Industry Online Support" app. The app is available for Apple iOS, Android and Windows Phone:

https://support.industry.siemens.com/cs/ww/en/sc/2067

5.2 Links and Literature

Table 5-1

	Торіс	Title
\1\	Siemens Industry Online Support	https://support.industry.siemens.com
121	Download page of the item with: "Installation, Operation and Maintenance of Process Historian/Information Server in a PCS 7 Environment" "Setup a new Process Historian with an existing Historian Storage Database" "Configuring access protection for a Process Historian database"	https://support.industry.siemens.com/cs/ ww/de/view/66579062
/3/	Process Historian 2013 - Administration	https://support.industry.siemens.com/cs/ ww/en/view/68099510
\4\	Information Server 2013 - Administration	https://support.industry.siemens.com/cs/ ww/en/view/68099525
\5\	Information Server 2014:Operating Instructions	https://support.industry.siemens.com/cs/ ww/en/view/68099543

5.3 Change documentation

Table 5-2

Version	Date	Modifications
V1.0	01/2014	First version
V1.1	10/2016	notes on user rights administration, chapter 3.1.5