Knowledge Base



Applying non-legacy security to Exaquantum and Exaopc-RD

KB-0048-22

Document Summary				
Article Type	User Guide			
Products Affected	Exaquantum/PIMS			
Versions Affected	R3.20 onwards			
Function Affected	Installation			
Available Resolution	Procedure			
Audience	Administrators			
Summary	Once Exaquantum and Exaopc-RD are installed using a non Legacy security model, the IT Security Setting tool defaults to Legacy and does not allow an alternative security model to be selected.			
Review Date	Document to be reviewed before May 2023			



KB-0048-22 Applying non-legacy security to Exaquantum and Exaopc-RD Issue 1.0 17th May 2022 Blank Page

Table of Contents

Table of Contents	1
Chapter 1 Introduction	2
1.1 Audience	2
1.2 About this Document	2
Chapter 2 Running the IT Security Setting Tool	3
2.1 Overview	3
2.2 Limitation of a Cohabitation installation	3
2.3 Why would the IT Security Setting Tool need to be rerun?	4
2.4 Running the IT Security Setting Tool in a cohabiting system	4
2.5 Standard Recovery option	4
2.6 Alternative Recovery option	5
Chapter 3 Further Reading	9
Copyright and Trademark Notices	10
Highlights	11

Chapter 1 Introduction

This document provides guidance for using the IT Security Setting Tool on an R3.20 or later Exaquantum system that uses an Exaopc-RD Gateway.

1.1 Audience

This Technical note is provided for Exaquantum Administrators.

1.2 About this Document

Historically any cohabitation of Exaquantum and ExaOPC-RD was only possible in Legacy mode.

Cohabitation in non-Legacy security models was only addressed on case-by-case basis and made possible by the release of specific JOB patches.

Since the release of Exaquantum R3.20 Cohabitation of Exaquantum and ExaOPC has been possible in non-Legacy security models by following a procedure documented in the Exaquantum installation guide without the need for a specific JOB patch.

This document describes the limitations that can occur after the initial installation and how they can be overcome.

Chapter 2 Running the IT Security Setting Tool

2.1 Overview

- Running the IT Security Setting Tool after installation, only allows the Legacy security model to be selected.
- There are instances where re-running the IT Security Setting Tool might be required, for example after the installation of windows/office updates to correct the DCOM permissions/settings or user configuration mistakes.

2.2 Limitation of a Cohabitation installation

After the initial installation of both ExaOPC-RD and Exaquantum the IT Security Setting Tool only allows the selection of the Legacy Security model.

Security Setting Tool - Security Model Selection	<				
Please select Security Model.					
When you want to apply Strengthened Model, please change IT environment settings manually after applying Standard Model.					
O Domain: Apply security settings for Domain User Management (Standard Model)					
O Standalone: Apply security settings for Standalone Management (Standard Model)					
Prioritizes collaboration with previous versions and products that are not supported by IT security. (Legacy Model)					
< Back Next > Cancel					

2.3 Why would the IT Security Setting Tool need to be rerun?

Under normal circumstances it is not necessary to run the IT Security Setting Tool after the system has been installed. However, it might be required in the following cases:

- DCOM changes by third party product installations including Microsoft Operating system and Office updates.
- Domain policies applied on the server that affect user access permissions.
- User misconfiguration.
- P3200_002 or future patch installation that specifically requires the IT Security Setting Tool to be run.

2.4 Running the IT Security Setting Tool in a cohabiting system

Running the IT Security Setting Tool in a cohabiting system can have serious effects on such systems.

As the IT Security Setting Tool is locked in Legacy security the entire setup of systems utilizing the Standard Security models will be compromised.

The service users for both Exaquantum and ExaOPC-RD will be changed back to Quantum and EXA respectively resulting in both systems failing to function correctly and collect data from their configured data sources.

User access to the system will also be compromised as users will be unable to read or write any data as they will no longer be members of the Windows Security Groups that grant access to the system.

Hardware Software	Server Information Switching Histo	ry OPC Server Log N	umber of File Home	← ⇒ 2 	?		
EXAOPC-RD	Information		$\leftarrow \rightarrow \times \uparrow$	Console Root EC	litor		
B K DA-BD	Computer Name	W2K16R3	320A	> Systen	Performance	Tag Information	
Q DA(10.34.73.141)	IP Address	nal 10.34.71.2	21 SThis PC	> 🦲 Tag Cc 😭	OPCTag001	Name:	OPCT
DA(stn0215)	Redundancy Status	Bad	a Desktop	> 🚰 Tag Ed		Description:	Temp
A&E(10.34.73.141)	StartTime	ERROR	Documents	> 🦳 Advan		Tag Template Name:	OPC
A&E(stn0215)	CurrentTime	ERROR	🔈 Downloads	> 🗃 Help a		Lock Status:	Unloc
HDA(10.34.73.141)	Number of Clients	ERROR	🚺 Music			Originator:	Creat
	Number of Group Object	ERROR	📜 Pictures			Value: No Data Rece	iverDe
	Number of ItemID	ERROR	🖀 Videos			Quality:	Bad /
OPC Server Viewer and Data Recover	ry .		🐛 Local Disk (C	3)		Timestamo	1957-
PC Gateways Data Recovery Add OP	C Downtime		EXA			Enginaasing Uish	200
OPC Gateway			Explorer W				14/21
No Data	source Access		🧵 inetpub	Quantumuser	11		VV21
			Logs	Nou	iser/client Access	12/10/2019	4:49 PM
Gateway Computer	DA-Status A&E-Status	Last DA-Status Li Update U	ast A&E-	You are n	ot authorized to run this app	lication! 12/10/2019	4:49 PM
MyRD W2k16r320a		12/11/2021 12:25:49 12	2/11/202 Program Fi	le		12/10/2019	6:13 PM
			📔 Program Fi	le		OK 12/10/2019	6:13 PN
			ProgramDa	ite		12/10/2019	6:13 PN
			🧵 sysprep	IDtoPath	1	12/10/2019	6:13 PN
			Users	S LiveXplo	re	12/10/2019	6:13 PM

2.5 Standard Recovery option

In the scenario where the IT Security Setting Tool was run in a non-Legacy cohabitation environment the only documented recovery option was to re-install the entire system from scratch including ExaOPC-RD and Exaquantum.

In most cases reinstallation of a production system is undesirable and a more viable alternative is required.

2.6 Alternative Recovery option

An alternative recovery option that will not normally require a reinstallation of the system will be to follow the procedure laid in section "2.27 Installation of Exaquantum with Exaopc-RD software" of the R3.20 Exaquantum Installation manual, but without (re)installing the products.

if Exaquantum is usually started automatically ensure that this is disabled whilst carrying out the following procedure.

- 1. Sign-in to the server as a user with administrative rights.
- 2. Insert the "Exaquantum Software Medium" Disc 1 in CD/DVD drive.
- Copy the files in the location "<DVD Drive>\Patch\ExaopcRD_coexistence\" to the following folder, and overwrite as necessary: "C:\ProgramData\Yokogawa\IA\iPCS\Platform\Security\system\default\2.0" Note: The folder "C:\ProgramData" may be hidden.
- Open a command prompt using "Run as Administrator", and execute "EqInstallationSetup.js" script directly from the CD/DVD drive using the following command: "WScript.exe <DVD Drive>\Patch\ExaopcRD coexistence\EqInstallationSetup.js"
- 5. Confirm the "Setup complete." message dialog is displayed, as shown below:

Windows Script Host X
Setup complete.
ОК

6. Run the IT Security Setting Tool and select the appropriate Security model.

The IT Security Setting Tool is located under Yokogawa Exa in the Start Menu as shown below.



- 7. After the server has been restarted sign in as an administrative user.
- 8. Re-copy the files from "<DVD Drive>\Patch\ExaopcRD_coexistence\" to the folder again, and overwrite as necessary:

"C:\ProgramData\Yokogawa\IA\iPCS\Platform\Security\system\default\2.0"

Applying non-legacy security to Exaquantum and Exaopc-RD

9. Click on the Windows "Start" button. Then click "YOKOGAWA Security" - "IT Security Tool".



10. Click on the "Restore" button, as shown below:

IT Secur	ity Tool	_	[Х
IT S	ecurity	Тоо	Infe	omatic	n
		Setup			
		Save			
Г		. .			1
L		Hestore			
	Chan (Enc	ge Pass ryption	sword Key)		
	Imp	ort or Ex	port		
				Close	

Applying non-legacy security to Exaquantum and Exaopc-RD

11. Click on the file browsing button for "Setting file" on "Select Security Setting File" dialog, as shown below:

ecurity Tool - Restore		
Select S	ecurity Setting File	
Satting File		
Description of Setting File		
Setting Item	Description	
	Back Next	Cancel

12. Set the file type filter type to "Security Setting File (*.csf)", then navigate to the location: "C:\ProgramData\Yokogawa\IA\iPCS\Platform\Security\system\default\2.0\" For IT Security "Standard Standalone" select the file "Coexistence_RD_EQ_Standard_Standalone.csf" for "Standard Domain" select the file "Coexistence_RD_EQ_Standard_Domain.csf"

10

Organize 💌 Ne	w folde	r			800 -	
1.0.1		Name	Date modified	Туре	Size	
Cuick access			5/30/2018 11:37 AM	CSF File	132 KB	
Desktop	18	hardeningReserve_en.csf	5/30/2018 11:37 AM	CSF File	40 KB	
Downloads	- 18	hardeningReserve_jp.csf	5/30/2018 11:37 AM	CSF File	49 KB	
Documents	1	unhardening.csf	5/30/2018 11:37 AM	CSF File	120 KB	
Pictures	18	unhardening standard.csf	5/30/2018 11:37 AM	CSF File	111 KB	
2.0		Coexistence_RD_EQ_Standard_Standalone.csf	8/9/2018 4:34 PM	CSF File	3 KB	
This DC		Coexistence_RD_EQ_unhardening_Standard.csf	5/8/2014 3:36 PM	CSF File	72 KB	
ins rc		Coexistence_RD_EQ_unhardening_Standard_def.csf	5/8/2014 3:36 PM	CSF File	39 KB	
Network		OPC_Reserve_en.csf	3/23/2017 7:02 PM	CSF File	4 KB	
		OPC_Reserve_jp.csf	3/23/2017 7:02 PM	CSF File	4 KB	
		OPC_Standard_Combination.csf	3/23/2017 7:02 PM	CSF File	5 KB	
		OPC_Standard_Domain.csf	3/23/2017 7:02 PM	CSF File	5 KB	
		OPC Standard Standalone.csf	3/23/2017 7:02 PM	CSF File	4 KB	
	File na	mes Comistence RD ED Standard Standalone.csf			Security Setting File (%)	-fl

13. Click on "OK" button without entering a password on the "Please type password (encryption key)." Dialog.

Please type password (encryption key).	
	1
ΟΚ	

14. Confirm the following description is displayed within the "Description of Setting File" and click on "Next" button.

For IT Security "Standard Standalone": "ExaopcRD/Exaquantum Coexistence StandardModel StandaloneManagement"

For IT Security "Standard Domain": "ExaopcRD/Exaquantum Coexistence StandardModel DomainManagement

Security Tool - Restore		
Select Security Setting File		
Setting File [C:\ProgramData\Yokogawa\IA\PCS\Platform\Security\system\defa.it\2.0\Coexistence		
Description of Setting File		
Setting Item Description Identification Name EcoopoRD/Ecoquantum Coexistence StandardModel StandaloneManagement		
Back Next Cancel		

- 15. Click on "Next" button on "Confirm Setting Information" window.
- 16. Click on "Finish" button with checking "Restart now" on "Setup Completed" window.
- 17. After the automatic restart, security settings are completed.

Chapter 3 Further Reading

For more information on Exaquantum cohabitation with ExaOPC RD please refer to the following document.

 IM 36J04A13-01E Exaquantum Installation Guide (section 2.27 "Installation of Exaquantum with Exaopc-RD software")

More support is available at <u>www.ymx.yokogawa.com\support</u> or from <u>support@ymx.yokogawa.com</u> email address.

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Highlights

The Highlights section gives details of the changes made since the previous issue of this document.

Summary of Changes

This is Issue 1.0 of the document related to Product Library version 1.0.

Detail of Changes

The changes are as follows:

Chapter/Section/Page	Change